

MACROECONOMICS 201
Spring 2019
NOTES 4

UNEMPLOYMENT AND ITS CAUSES

- A. How employment is measured
- B. Structure of unemployment
- C. Helping unemployed workers find jobs

Reading Assignments:

Principles of Economics: Chapter 14.5 and 14.6, 21
Madariaga: 30, 31

Introduction:

The study of macroeconomics, in its present form, mostly originated during the 1930's with the introduction of Keynesian economics. Prior to that time, many economists had a rather rosy view of a market economy. It was assumed that, via the invisible hand (Adam Smith), that the economy was self adjusting. Prices were constrained by the gold standard since the gold standard prevented the government from creating new money whenever it did not want to raise taxes (since the supply of gold was limited). Unemployment was assumed to be self-correcting (so it was believed) because most unemployed workers would accept lower wages, eventually, if necessary in order to find work, the types of products produced were governed by consumer sovereignty, and industry would be propelled by competition to achieve a high level of productive efficiency. Later, in notes 7 ,we will identify these beliefs as the basis of “classical economics.”

Of course, not all economists were this optimistic. Most knew that there were periodic problems of unemployment, but they felt that in the *long run* these unemployment issues would be self correcting. Remember the term, *the long run*. It will become very important in a few weeks. But you need to begin thinking about it now. Few of you can go for more than a day or two without food, and many of you have to pay a monthly rent or mortgage payment. If you did not have an income, you might find little comfort in listening to a cheerful economist, secure in a tenured university job, explain that you only need to be patient, and a job will eventually come around, at some unknown future time that would enable you to meet your expenses.¹

In the decade following World War I, the economy in the U.S., and most of Europe, prospered. And then came the great depression of the 1930s where hardships caused by a weak economy and unemployment caused suffering to reach unbearable levels. It was so bad that it might have caused the demise of capitalism in this country had it continued. There appeared to be some recovery in the later 1930's, but it was not until WWII, when the need for workers reached unprecedented levels and virtually eliminated unemployment, that the economy fully recovered. During the war, even some people in institutions caring for people with disabilities , sometimes severe, were released and employed. The following data shows unemployment in the U. S., *as*

¹A wealthy U.S. Secretary of Commerce recently wondered why government workers, in the absence of a paycheck due to a government shutdown, couldn't simply borrow money to tide them over. Some people still believe in the classical approach.

measured by the U.S. Department of Labor from 1926 to 1944.

1926	1.8%
1927	3.3
1928	4.2
1929	3.2
1930	21.4
1931	15.9
1932	23.6
1933	24.9
1934	21.7
1935	20.0
1936	16.9
1937	14.3
1938	19.0
1939	17.2
1940	17.4
1941	9.9
1942	4.7
1943	1.9
1944	1.2

The swings in the percentage of the population unable to find work during this period are astonishing. And for reasons to be discussed shortly, unemployment rates show only *part* of the extent of idleness and misery that were generated during the great depression. For example, they do not show the extent to which some people might have wished to work but were not counted as unemployed, or the extent to which many others were underemployed, e.g., working fewer hours than they wished, or working on very low-paying jobs below their skill levels. Make no mistake about it. A very substantial part of the population (but not all) was impoverished and exceedingly unhappy.

The Depression led to the fall of a presidency (Herbert Hoover) and a shift in political power from the Republican party to the Democratic party that lasted 20 years. It also led to a search for ways of reducing unacceptable levels of unemployment and underemployment. At first, the task seemed hopeless. Solutions did not come easily. In Roosevelt's first campaign (He became president in 1932), one of his chief issues was that deficit spending was dragging the economy down. Sound familiar. As we will see, nothing could have been further from the truth.

Fortunately, during the great depression of the 1930's, revolutionary methods for reducing the level of unemployment were developed, mostly inspired by John Maynard Keynes, and economists have been both arguing about, and improving on these methods, ever since. But before we get into these methods, we must first understand how unemployment (and a little about underemployment) is defined and its causes. As we will see, it has multiple causes, and because it has multiple causes, *different* methods of reducing unemployment (and underemployment) are required, in addition to those developed by Keynes during the great depression. Maintaining a

low level of unemployment (and underemployment) is, as we have seen, a major goal of macroeconomics.

1. How is the Labor Force Defined in the U.S. and most European countries?

The *labor force* in the U.S. (And in most European countries) is defined, logically enough, as: **both** (1) the number of people *employed*; (2) **plus** the number of people *unemployed* (but who are looking for work). **All** other citizens are not counted as being in the labor force, although, as we shall show shortly, a substantial number of these individuals desire gainful employment **or** improved gainful employment. As we will show, **rigid criteria** are used to measure who is employed and who is not employed? As we will also see, these rigid definitions have serious limitations (as do many important national statistics, e.g., the level of gross domestic output which will be discussed in the next set of notes), causing the official statistics to undercount the number of persons not counted in the labor force but who wish to find work, and equally important, to not measure the number of employed people who are underemployed, or wish to locate higher paying jobs.

Some useful data to keep in mind are:

World Population	7,623,000,000	12/11/20
U.S. Population	329,575,000	1/11/20
U.S Labor Force	164,007,000,	12/19 (not seasonally adjusted)
employed	158,504,000	12/19(not seasonally adjusted)
unemployment rate	3.4	12/19 seasonally adjusted

Note that the current unemployment rate in the U.S. is considerably below the 10% it reached at the beginning of the great recession. In fact, some people think the economy has largely recovered from the great recession. Do you? For **all** people?

2. How do we measure the number/percentage of persons employed?

Each month, the **Bureau of the Census (U.S. Department of Commerce)** collects data on the labor force for the **Bureau of Labor Statistics of the U.S. Department of Labor**. The Bureau of the Census collects this data through **The Current Population Survey (CPS)**. The CPS is a monthly survey of about 72,000 households. The survey has been conducted for more than 70 years. How is it conducted. Simple? Each household in the survey is interviewed 8 times in 8 different months (months are not consecutive). In almost all cases, the initial interview is by personal interview. Different methods are used for subsequent interviews of the same household, but the primary contact **after** the initial interview is by telephone (Textbook has a more detailed description).

The CPS is the primary source of information on the labor force characteristics of the U.S. population. The sample is **scientifically** selected (using a cluster sample) to represent the **civilian noninstitutional** population. Respondents are interviewed to obtain information about the employment status of each member of the household selected who is 15 years of age and older. (However, published data is based only on those aged 16 and over). The survey obtains information on the employment and unemployment status, earnings, hours of work, and other economic indicators for each person in the household during the **previous** calendar week, the **reference week**.

The data are also available for a variety of demographic characteristics e.g., age, gender, race, marital status, educational attainment, occupation, industry, class of worker and other important variables. Some day some of you will make extensive use of these statistics. They are easily (?) accessible (this may be optimistic) over the internet.

As noted above, the Bureau of Labor Statistics (BLS) calculates labor force statistics **only for the civilian noninstitutional population**. *The civilian noninstitutional population is defined* as all persons 16 years of age and older residing in the 50 States and the District of Columbia who are: 1) **not** inmates of institutions (e.g., penal and mental facilities, homes for the aged - concepts that are hard to define clearly); and 2) who are **not** on active duty in the Armed Forces. **Remember these exclusions** from published statistics.

Employment Status: A persons is counted as **employed if, and only if**, during the **reference week** (the week prior to the interview), he or she (a) did any work at all (at least **1 hour**) as a **paid** employee, **or** b) worked in his or her own business, profession, **or** on his or her own farm (even if no income) ; **or** c) worked 15 hours or more as an unpaid worker in an enterprise operated by a member of the family, **or** d) was not working but who had a job or business from which he or she was **temporarily** absent because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons. Individuals in the last category (all those under d) are counted as employed, whether or not the individuals were paid for the time off or were seeking another job, as long as they have a job to return to. **Question, were the Federal workers who do not work during a government shutdown counted as employed or unemployed.** **Full-time** homemakers **who have no paid activity** are **not** counted as being in the labor force, irrespective of the importance of the work they perform or the number of hours they work in the household. Also excluded are persons whose only activity consisted of work:

- around their own house (painting, mowing, repairing, child care (or other oversight, e.g., for a chronically ill person), or housework in their own home):
- **or** persons engaged in volunteer work for religious, charitable, and other organizations., regardless of how important you may think these activities are.

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These exclusions may or may not seem reasonable to you. If you pay a person to put a new roof on your house, he (or she) is considered employed. If you yourself put a new roof on your house, and this is your **only** productive activity, you are **not** counted as employed.

Each employed person is counted only once, even if he or she holds more than one job. For purposes of occupation and industry classification, multiple jobholders are counted as employed in the job at which they worked the greatest number of hours during the reference week.

Nota bene (repetitive): The labor force *does not* include full-time students who do not work at all, prisoners (regardless of how much they produce in jail), or full-time homemakers or full time members of the military. It also is usually unable to count as employed some individuals engaged in criminal activities, and some others who conceal their work in order to evade taxes, although I suspect that the Department of Labor would like to include them as employed, and the IRS would certainly like to subject their income to the Federal income tax.

3. How do we measure the number of persons who are unemployed?

Individuals are counted as "unemployed" *if and only* if they meet *all* of the following criteria:

- they had no paid employment or were not in another status (see above) during the reference week (the week prior to being interviewed) that would cause them to be counted as employed;
- *were available* for work, (or would be except for temporary illness, such as a flu); and
- had *made specific efforts* to find employment at some time during the *4-week-period* ending with the reference week - a pretty minimal requirement. The only exception to the looking for work criterion is that persons who were waiting/ to be recalled to a job from which they had been temporarily laid off did not need have been looking for work to be classified as unemployed - a confusing area, *maybe* government workers who were told not to work during the shutdown should have been counted as unemployed.

Workers expecting (hoping?) to be recalled from temporary layoff are counted as unemployed, even if they have not engaged in a specific job seeking activity.

Persons may be regarded as having actively sought work if they:

- had a job interview or otherwise contacted an employer;
- sought work at a public or private employment agency;
- sought work from friends or relatives;
- went to a school or university employment center;
- sent out resumes or completed work applications;
- placed or answered a job advertisement;
- checked union or professional registers
- or used some other means of active job search

The percent of persons unemployed in the U.S. was about 3.4% during December, 2020 , a drop from an earlier peak of over 10% during the great recession A welcome change, but note that this has partly occurred because some people became discouraged and dropped out of the labor force (so that they are not counted as unemployed in our statistics) . Note that all numbers are approximate. They change from month to month.

4. What is the labor force participation rate?

The labor force participation rate (LFPR), a critical variable, is defined as the number of persons in a specific demographic category divided into the number of persons in that demographic category who are counted either as employed *and* unemployed., i.e. whether working or seeking sork The LFPR for men and women in the U.S. are as follows. These data are not seasonally adjusted.

Labor Force Participation Rate (U.S. 16 & over) 63..0% 12/19

Total, 16 & over - men	68.7%	12/19
Total, 16 & over - women	57.7%	12/19
Total., 16 - 19, men and women	33.9%	12/19

Notice the high LFPR for women. It is much higher than in many other countries, and much higher than when I was a teenager. In part, our high standard of living is based on the fact that many households have two earners. Some labor force participation rates have declined slightly since the beginning of the recent recession which is part of the reason why unemployment rates have declined - fewer people are looking for jobs. Some of the decline has resulted because people applied and received disability or retirement benefits. Few of these individuals will ever actually return to gainful work, so one residual effect of the prolonged recession is that taxpayers will be responsible for income support for a larger number of persons on disability and retirement programs than would otherwise have occurred. If we broke the data down further, we would find that in the prime working years, 35 to 44, the great majority of men (90.7%) are in the labor force unless they are ill, disabled, malingerers, or fortunate enough to belong to the idle rich

People are not working and not in the labor force for numerous reasons among which are:

- retirement
- full-time students with no part-time paid employment
- full-time homemakers with no paid employment
- severe (and sometimes not so severe) disability
- engagement in criminal activity
- they do not want to work
- gave up on finding jobs (discouraged workers)
- et cetera, et cetera, et cetera

We have talked about the Labor Force participation Rate and the Unemployment Rate, We have not talked about the employment **rate**, although this is an easily available, and important piece of data. In fact, it is simply the LFPR minus the unemployment rate Keep it in mind.

5. Do these unemployment data understate the number of persons who would work if they could find jobs or the number who could work on more productive jobs?

Absolutely. These are major shortcoming of the official unemployment rate. Consider the following omissions from the labor force, i.e, they are counted as *neither* employed or unemployed. But many would accept suitable work if they could find it. *Note, all data below are not seasonally adjusted.*

1. **Persons not in the labor force but who say they want a job:** During December, 2019 there were 4,643,000 persons, 16 and over in the U.S. who were not counted as being in the labor force *because* they had not sought work during the previous 4 weeks, but who *indicated* that they were available for and want work, almost 2.8% of the labor force. .

Some of these potential workers did not seek work because of school attendance, illness, family responsibilities, etc. but nevertheless indicated that they would accept work if it became available. Probably some would reject a job if it were not of a type, pay rate, and/or not performed during times that was suitable to them, a luxury available to nonworking individuals

who do not need to work to survive so this statistic overstates, by an unknown amount the number who would actually likely accept a job if it became available - certainly some would not accept any job.

There is, however, on very important subcategory of persons among these workers, “discouraged workers.” Among the above individual who say they would work if a job became available, there were 277 000 persons during December, 2019 who were not currently looking for work specifically because they believed no jobs were available that they could fill, and who are termed “discouraged workers.” In fact, as noted above, people who leave the labor force because they are discouraged about work prospects are one reason for the decline in the published unemployment rate. Many of these workers eventually apply for, and receive, disability or retirement benefits. If these workers were included in the official measure of unemployment it would add about .17% to the official rate of 3.4%. Remember these numbers change monthly.

2. Underemployed workers who wish to work more hours. There are many part time jobs among employed persons - i.e, persons working 1-34 hours per week. I suspect that many of you work part time. There were 2,742,000 persons, 16 and over, who worked part time during December, 2019 *due to* slack work or business conditions, or they could only find part-time work (almost 1.2 million indicated they could only find part-time work). We must assume that many of these individuals would work full-time if they could locate such work. However, we also assume that some of these individuals would decline full-time work if it required inconvenient hours or was not the type of work they desired.

Many other individuals, about **22 million** people, work part-time by choice. Reasons for voluntarily working less than full-time work include the following: Child-care; other family or personal obligations; health or medical limitations; in school or training; retired, Social Security limits on earnings; etc. Many of you, I suspect, are voluntary part-time workers.

3. Underemployed workers, would like to upgrade jobs. As an example, a computer programmer who is working as a clerk in a retail store until he or she can find a permanent job. I haven’t found data on the number of **underemployed** workers that I feel comfortable with citing, but most people have heard of anecdotal cases, e.g., Ph.D.s working as taxi drivers.

4. Retired workers who would like to return to work. Potentially, this consists of **millions** of Americans who, while not always possessing perfect health, still wish to work in occupations not precluded by their medical conditions. Many, in fact, are perfectly healthy.

Persons retired because of age constitute a growing number of Americans and are likely to become a significant drain on our pension programs. The retirement age is in the process of being raised from its initial age of 65 to 67, and by the time most of you are ready to draw Social Security, it may be even higher. Don’t complain. You are also likely to live longer than persons in the past. In fact, working longer may be an essential part of protecting your future Social Security Retirement. Aged workers may fill an important niche in the labor force in the future as the number of younger workers declines, and jobs become less strenuous, particularly if immigration is restricted. I suspect that the ideal approach is not simply to raise the retirement age or reduce benefit levels or raise social security taxes, but to encourage retired workers to work part-time while drawing their pensions. Remember, about 15% of all earnings are subject to Social Security or Medicare taxes (this combines the employer and employee share), and many people will also pay a large percentage of their part-time earning as federal or state income taxes.

Some individuals who do not qualify for Social Security Retirement (or civil service or railroad retirement) end up on the Supplemental Security Income program as retirees. The difference is that most of you will probably be given a Social Security pension as a matter of right based on your or your spouses contributions to Social Security. However, a few people, most of whom do not work, will not become eligible for Social Security and will go on SSI (Supplemental Security Income), but can do so only after spending down most of their assets (they are allowed to keep their house, a few thousand dollars, a car, and a burial plot). Since Social Security payments are based on the number of years people pay into the system, and their level of earnings during these years, some people receive a very low Social Security pension and will be forced to supplement this pension by a supplemental SSI payment. If individuals receiving SSI are tempted to return to significant employment they may jeopardize their eligibility for SSI (and Medicaid) which deters some, perhaps many, from considering work, particularly if the available work pays little, is insecure, and lacks health insurance. In any event, regardless of their desire to work, age discrimination, and declining health make it difficult for many retired workers to find employment.

5. Disabled Individuals and Workers. There are **millions** of persons, below retirement age, with disabilities, many on Social Security Disability Retirement or Supplemental Security Income payments, who are discouraged from attempting to find paid work or who are reluctant to accept paid work for fear of jeopardizing their benefits. There are many reasons why these recipients remain on these programs:

- One of the most important being the need to maintain access to medical care. Many low paying jobs do not offer medical benefits. Moreover, applicants with significant ongoing medical expenses or significant pre-existing conditions are often unable to afford insurance carrier premiums (even with the government subsidy under the Affordable Care Act), or are unable to pay the co-pay required under most private insurance policies. Receipt of SSDI or SSI usually confers eligibility for cost-free or low cost medical benefits. The Affordable Care Act (Obamacare) has partly alleviated this problem for people with very low income, but has not eliminated it since noncitizens are not covered, and some States have refused to extend Medicaid coverage to very poor people. Moreover, the Affordable Care Act does not ensure dental, hearing, optometry, or long-term care (nursing home) coverage. And currently, the future of the Affordable Care Act and insurance coverage of many Americans is uncertain.
- In addition, many people with significant disabilities face significant, sometimes insurmountable, difficulties in locating jobs. Even if one is available, often the wages are meager and there is uncertainty about the permanency of these jobs. It is important to note that many of these obstacles to employment derive from causes *other than physical or mental limitations*, e.g., advanced age, transportation difficulties, etc. This greatly complicates job finding activities.
- Finally, in time of recession, there is inevitably a spike in applications for disability benefits, as many older workers can claim qualifying disabilities. Unfortunately, once these benefits are granted, most people adjust to their new and generally secure status and very few return to work when the job market improves, a problem that is exacerbated by the dysfunctional public programs

that are available to aid them to return to work (repetitive).

Concluding Comment: During December, 2019, an alternative measure of unemployment was 6.7%. This was based on total unemployment as measured above, plus discouraged workers, plus all other persons marginally attached to the labor force (i.e., persons not counted as unemployed but who had sought work during the previous year), plus the total number employed part time for economic reasons. This was slightly less than twice the official unemployment rate. I believe the number who would like to find jobs, or different jobs, could be substantially higher than even this alternate measure of unemployment, particularly when you consider underemployed persons and persons not working due to age or disability. This is a speculative figure that you can expect the Department of Labor to continue to refine.

6. What are types/causes of unemployment and why are different types of unemployment important?

The text distinguishes between short-term and long-term unemployment, a useful distinction, and correctly points out that the long-term unemployed constitute a minority among persons counted as unemployed, approximately 20-25%. This distinction is important because the long-term unemployed usually face significant obstacles in locating employment (because of limited work skills, discrimination, etc.) and the remedies for long-term unemployment differ significantly from most remedies for most people who have been unemployed for a short time.

The text also identifies a concept called "*the natural rate of unemployment.*" This is a vaguely defined (but one you must know) term which the text defines as the "normal rate" around which the actual rate tends to fluctuate. I suppose by normal rate, the text means the rate that would be expected in a well functioning economy with low unemployment which is as good a definition as any, and certainly better than most that I have seen. The only problem is that I do not know what a normal rate should be, but I presume in the 4.5% to 6% range (both of which I regard as too high). The text does note that the natural rate of unemployment may differ among countries, and over time, due to differences in the demographic characteristics of the labor force, differing safety nets (e.g., unemployment benefits, workers compensation, required notice of dismissal, etc.) The following are more specific causes of unemployment.

A. Frictional causes, usually termed "normal" unemployment. At any point of time, even in a strong economy, some people will become unemployed because the establishment for which they work declines or goes out of business, or the establishment adopts a different production technology for which their skills are not adequate, or they decide to change jobs (perhaps to seek a better job, or a job in another location), or they have a temporary illness, etc. Many of these individuals will seek and locate another job within a reasonable period of time. What is a reasonable period of time is, unfortunately, not clearly defined. In general, we can assume that normal unemployment refers to short term unemployment described above.

Some frictional unemployment is desirable, *believe it or not*, even though included in labor force data on unemployment. In fact, it is critical /helpful to the efficient functioning of a market economy. It is the way in which workers relocate (sometimes are compelled to relocate) from failing firms to prosperous/growing firms which offer more productive jobs. It may not seem that way to workers who unexpectedly lose their jobs, but remember, what is bad for the individual may be good for the economy (the fallacy of composition in reverse). Some frictional

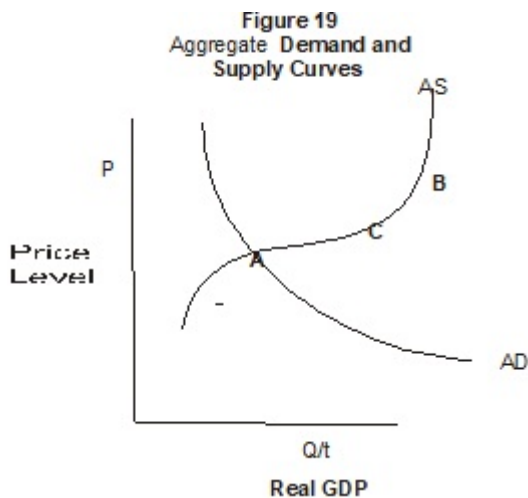
unemployment is probably essential to the smooth functioning of a technologically dynamic economy where there is an ongoing need for workers to move to firms which are economically healthy and employing the most advanced technology?

Actually, no one knows what an ideal level of frictional unemployment would be. Employers are likely to favor higher levels of frictional unemployment than workers since it makes it easy to hire workers when needed, which is part of the reason why many employers favor ongoing immigration to the U.S., especially of people with scarce skills, or persons who are willing to work for low wages and minimal benefits. Although any unemployment is almost always painful to the unemployed person, whether the average length of unemployment is four weeks, or six weeks, or some other low number is probably not too important in the long run, as long as individuals are able to locate new, well paying, jobs within a reasonable time. In fact, If frictional unemployment fell too low, we would unquestionably see a significant rise in inflation, as it would indicate that there are too few candidates for available jobs and employers would be forced to begin to raise wage rates to attract workers. Eventually higher costs of production would compel higher prices to consumers.

The question as to what would be the maximum number of weeks that would represent a reasonable maximum for frictional unemployment cannot be answered, but it should be noted that unemployment insurance provides benefits to workers for up to 26 weeks after a worker is unemployed, This is almost certainly *too long*. After this long of a period of idleness and frustration, workers are increasingly unlikely to find a suitable job.

B. Seasonal causes, usually termed seasonal unemployment. Seasonal unemployment is typical in agriculture, where employment reaches a peak during the spring, summer, and fall, and then declines dramatically during the winter. Another example is heating oil delivery. We obviously need seasonal workers in the U.S., but off and on again employment is very hard on most seasonal workers (possibly excepting where some family members only want to work sporadically, since there is already a full time worker in the family).

C. Cyclical causes, often termed “demand” unemployment. Cyclical or demand unemployment refers to unemployment of persons *able and willing* to work on jobs that would

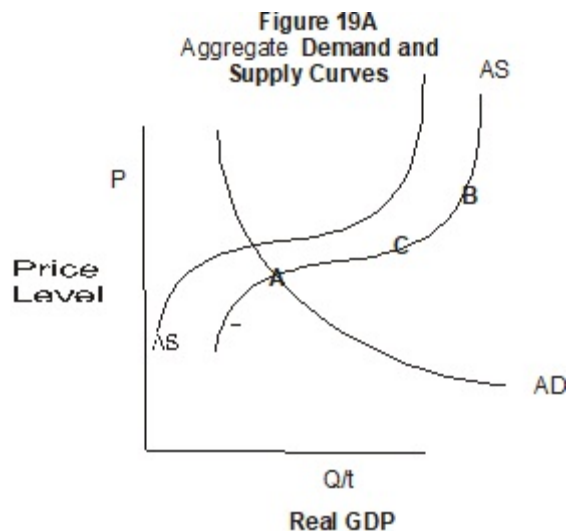


normally be available, but do not exist, or at least are in short supply, usually because of a weak economy. There are two major ways in which cyclical/demand unemployment can arise. The first occurs when something happens to cause the Aggregate Demand Curve to shift to the left (recall notes 3). This was clearly the original problem during the great depression of the 1930's, hence the origin of the terms, cyclical or demand unemployment. This is the classic cause of unemployment. Cyclical or demand unemployment still remains the primary focus of macroeconomics as a cause of unemployment. Most of the increase in unemployment during the recent recession, from 5% to as high as 10% is due to cyclic or demand unemployment. After all, the

rise in unemployment consisted of individuals gainfully employed until the job market collapsed.

If we recall our preliminary model of aggregate demand and aggregate supply, (AD and AS), we can show graphically how cyclical unemployment arises. Remember how we drew our AS curve with a substantial range of real GDP (the lower part of the AS curve) where the price level rose very slowly as output/employment rose. If the AD demand curve crosses the AS curve in this section of the AS curve, say between points A and C, it is almost certainly the case that many unemployed persons are unemployed for cyclical or lack of demand reasons, *as occurred during the recent great recession*. If the demand curve for goods were to shift gradually to the right, prices would remain relatively stable while employment rose as appears to have happened during the great recession, but for how long, I do not know. Note how the AD curve is drawn so that it crosses the AS curve considerably to the left (figure 19). This represented the situation during the great depression of the 1930's and gave rise to Keynesian economics which will be discussed below. You might wonder why wages didn't fall as unemployed workers sought jobs. Good point. We will discuss it below.

A second way in which cyclical/demand unemployment can arise is a shift upwards (or to the left) of the AS curve. You can see from Figure 19A that this causes a reduction of real GDP which necessarily leads to business slowdowns and failures and a reduction of employment even though it is obvious that the unemployed workers are capable of productive work since they were gainfully employed. This was the initial cause of the great recession that began in 2009 (when the housing *and credit* markets collapsed), and some economists believe that it may have been the initial cause of the great depression of the 1930's. The AS curve shifted upwards (or to the left) during 2009 because the credit crunch either greatly increased the cost of producing goods, or caused some companies to not be able to obtain needed financing to continue their business operations. At a given price level, less would be produced. We will explain this process again in later discussions.



These increases in unemployment then caused Americans to purchase less, causing declines in AD (causing a leftward shift of the AD curve) and the process continued with successive leftward shifts of the AD curve creating what we will later describe as a negative multiplier effect. Although the initial leftward shift of the AS curve indicates that there should be a rise in prices, it usually will not happen because the AD curve will almost certainly shift left also, which is exactly what happened during the great recession beginning in 2008.

D. Structural causes - Mismatch between job skills needed by employers and the capabilities of potential workers. The mismatch between needed job skills and the capabilities of potential workers was initially recognized during the 1960's, to the astonishment of many economists and other professionals, who were accustomed to focusing on cyclical/demand causes

of unemployment. This mismatch refers to situations, where, even when aggregate demand is enhanced, and new jobs are created, some unemployed individuals will *not* have the skills to perform the jobs that are available and will remain unemployed. Instead of enabling these workers to return to work, increasing aggregate demand in order to increase the number of jobs will cause growing inflation as employers have difficulty finding and/or training workers that can *perform* the needed work, which may well describe the current situation in the U.S. Note how low the unemployment rate is currently, even though there are still unemployed workers. Instead, employers may raise their prices due to an increase in production costs due to raising wages for the qualified workers they need, shifting the AS curve leftwards (or upwards). In effect, the most qualified workers will have found jobs and the ones that are left have limited skills and have difficulty locating employers who need these limited skills (potentially becoming long term unemployed). This is a classic problem where you have persistent long term unemployment and increasing inflation, sometimes termed “stagflation.”

Look back at AS and AD (figure 19A above). If the AD curve crossed the AS curve at the *rapidly rising* part of the AS curve, it is likely that most of the remaining unemployment after this level of real GDP would be due to a mismatch between the job skills needed by employers and the limited job skills possessed by unemployed workers. Further reductions of unemployment from this point are most effectively achieved by methods other than shifting the AD curve to the right (e.g., through retraining, changing technology).

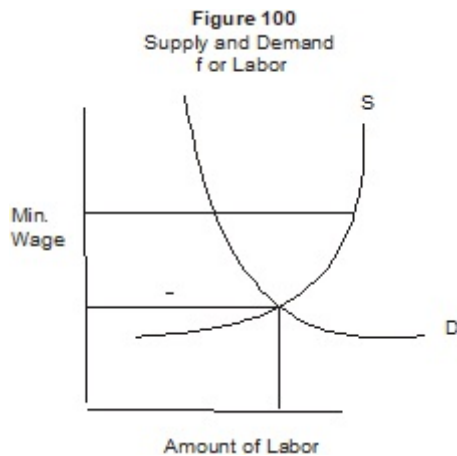
A mismatch between the skills that a job requires and applicant capabilities is largely a consequence of a highly technological society. Before 1960 (or so), most young workers could expect to find good paying, but technologically undemanding, jobs on assembly lines or other jobs that stressed strong backs and/or repetitive work tasks more than mental acuity. During this time, industrial unions (comprised of mostly unskilled workers) were powerful. Thanks to strong industrial unions that had the ability to bring large firms to their knees, workers bargained for high wages and generous benefits. But as jobs became more automated, and employers increased their demand for workers who could maintain, repair, and operate sophisticated machinery, some workers, especially those who did not develop needed technical skills, or were incapable of learning these skills, found it increasingly difficult to locate well-paying jobs. As an example, in the 1950's, most bowling alleys used human pin setters, hard work, but work that actually enabled some people to make a living. Then bowling alleys purchased automated pin setters, and some of these individuals, many of whom weren't prepared for the change, were no longer employable in bowling alleys since their employers needed technically skilled workers who could maintain and repair the pin setting machines and not workers who could only set up pins after each frame. A mismatch between job needs and applicant capabilities is particularly troublesome among persons with limited education, or who are aging, or who are disabled, or who face biases in the job market, or who resist learning new skills (*you know people like that*). Even high paid and productive workers may become part of the structurally unemployed if their jobs become obsolete because of technological change and they are incapable of learning new skills (or unwilling to).

It is important to emphasize that young persons who resist developing needed skills are likely to become part of an apparently rising impoverished segment of the population.

In recent years, it appears that a significant portion of unemployment in the U.S. is structural. Even during the great recession, there were jobs available for most skilled workers,

e.g., plumbers, electricians, etc. but lower skilled jobs were in short supply (unless wages were very low). We have not learned how to create a sufficient number of well-paying jobs for growing numbers of unskilled workers in our modern highly technological economy. Improving worker skills is key to achieving a lower “normal” unemployment rate

E. Minimum wage laws. To understand the usual approach to this issue, we must return to demand and supply analysis. We assume that the **supply** of unskilled labor will increase as wages rise and the **demand** for unskilled labor by businesses will increase as wages fall (see figure 100). If the minimum wage is set above the equilibrium wage for unskilled workers, it appears obvious from the graph that unemployment will increase.



I will not argue with this analysis but note that most jobs in the U.S. pay well above the minimum wage and, in consequence, higher minimum wages are likely to affect only persons with extremely limited skills or ability to work and frankly, only jobs that have low value to the employer, e.g., a supermarket will decide to reduce or eliminate workers standing outside to help customers place groceries in their vehicles. In some cases, employers may reduce minimum wage jobs by investing in technology - e.g., replacing a person washing dishes with an automatic dishwasher.

Optional: If an unemployed worker has the potential to earn at least the minimum wage, one might ask if he or she should be helped to earn this wage, e.g., by vocational training or job search assistance. If not, there are provisions in the law to pay less than the minimum wage to workers with very limited abilities, although they are discouragingly complex. I might also note that if employers are enabled to pay very low wages to workers, this will discourage adopting advanced technology that might enhance productivity. Remember, many of these workers are very young, are not in high demand, and often have limited job seeking skills.

There is currently a vigorous debate about the effects of raising minimum wages to enable workers to make a living wage. Economists are divided as to the effects of a higher minimum wage on employment. *Aside: My own opinion is that it might reduce employment by a small amount (e.g., in a fast food establishment), I also expect that this loss of employment could be counterbalanced by improved job training and assistance in locating suitable work.*

F. Unions. Unions create the same problem in that they set a wage above the equilibrium wage which causes an excess supply of labor to the unionized industry. As noted in an earlier text (not the one for this course), this may cause the industry to hire fewer workers than seek to work in the industry, but the effect on the national unemployment is unclear. It may prevent hiring many job applicants, but note that there is nothing to stop a capable but unsuccessful job applicant from accepting a lower paying job elsewhere, which many/most do, so it may not reduce national employment. What union demands may do is cause some redistribution of **real** income. A strong union, such as the UAW used to be, may drive up wages in that industry causing the rest of you to pay higher prices for the cars that they produce, which **lowers** the real income of nonunionized workers. This used to occur when unions were more

powerful and employers, such as automobile producers, were concentrated in a few large firms with little meaningful competition and could pass along higher costs to consumers. Unfortunately, it all came undone when these firms began to face stiff competition from foreign imports, reducing their sales and the size of their labor force. *Aside: In my opinion, it is doubtful if union pressure on wages makes a significant impact on the national unemployment rate*

G. Efficiency wages). Some economists (but not the text) argue that some employers pay relatively high wages which has the effect of causing more people to seek jobs with those employers than those employers have jobs available. Various reasons have been given as to why employers might not wish to lower wages. Among them are: a) higher wages might improve a worker's diet and health care creating a more productive worker (some employers might even offer health insurance for this reason); b) higher wages might reduce worker turnover which reduces the possibility that the employer might lose his best workers and incur the expense of recruiting and training replacement workers; c) higher wages (including those negotiated by unions) might enable the employer to select the best applicants among a wider range of job applicants; and d) higher wages might encourage worker loyalty and **increase productivity** (remember Henry Ford, the production line, and the \$5 a day wages in the text).

There is, however, little reason to believe that efficiency wages increase national unemployment. There will, of course, be disappointed workers, if they are not hired by a particular high paying firm, but there is nothing to prevent them from accepting other available jobs, even if lower paying. It is likely that employers who **voluntarily** pay high wages do so in order to ensure the ability to hire and maintain a labor force that is most suited to the employer's needs.

H. Unemployment Compensation: Unemployment compensation clearly increases, somewhat, the level of unemployment as it reduces the pressure on the job seeker to accept job offers that may pay too little, or be inconsistent with his or her career plans. It enables some unemployed workers to take longer to survey available job opportunities before accepting a job (do you see anything wrong with that), Unfortunately, it also enables some people to take what amounts to paid vacation time, such as housewives and house husbands and possibly students who sometimes have a less urgent need for higher income. Note that persons receiving unemployment compensation are included as unemployed in official unemployment statistics since they must be seeking work (or pretend) to remain eligible for workers compensation.

6. Do all unemployed fit neatly into one of these categories?

Absolutely not. Most workers, **even those with limited skills**, will locate jobs if the economy is strong enough causing the demand for workers to be high. A strong aggregate demand will encourage employers to modify jobs, if necessary, **or to increase training** of workers, and sometimes to accept less productive or less reliable workers. In fact, most employers expect to provide some training to newly hired workers. In times of **exceptionally** high aggregate demand, usually caused by a war, most individuals do find work, no matter how limited their skills, albeit often at the price of significant inflation.

But suppose a worker, even if skilled in his/her job, becomes unemployed because of technological change (a frictional cause). The worker may lack additional skills needed to carry out an existing available job, particularly if at the same time he/she is an older worker who will

have difficulty learning new skills, or is reluctant to (structural causes). A seasonal worker may lose his/her job at the end of the crop picking season, but in a strong economy, will have little trouble finding a new job, but in a weak economy, will remain jobless, even though capable of many types of work (cyclical causes). A worker who loses his/her job because of a weak economy (cyclical causes), may, particularly if he/she has limited skills and is older, find it difficult to locate a job when the economy strengthens (structural causes). Many other examples can be given. Thus, many unemployed persons, probably most, are unemployed due to multiple causes and cannot be neatly categorized. This is why I describe these categories as causes of unemployment rather than types of unemployment.

One point should be *emphasized*. Study after study has shown that the longer a worker remains unemployed, the less likely he/she is to return to work, or to want to return to work. This will almost inevitably be a problem as we continue to recover from periodic recessions. For example, some unemployed individuals who can qualify for a disability annuity, enroll in welfare/SSI or SSDI and are unlikely to ever leave the public dole. This is also true for people who retire earlier than they otherwise would have because of difficulty in locating paid work due to age discrimination.

8. What are the characteristics of persons unemployed?

There are significant differences among different demographic groups in terms of unemployment. During December, 2019, these were the approximate percentages of persons in the U.S. labor force who were unemployed by different demographic groupings. Note, data are *not* seasonally adjusted. Unless otherwise noted, they encompass people 16 and over.

Men:3.5%

Women: 3.2

White European men: 3.3%

White European women: 2.8%

African American men: 6.0%

African American women 5.2%

Hispanic/Latino men 3.6%

Hispanic/Latino women: 4.8%

Asian American men :and women 2.4

less than HS, 25 and over: 5.9%

HS, 25 and over: 3.7%

some college - no degree , 25 and over: 2.8 %

associates degree: 2.4%

bachelors or higher, 25 and over 1.8%

The data below represent the percentage of the total number unemployed, a little over 11 million people

unemployed out of work less than 5 weeks: 36.4%

unemployed out of work 5 to 14 weeks: 30.0%

unemployed out of work 15 weeks to 26 weeks: 13.7%

Unemployed 27 weeks and over: 19.9%

8. What do these data on characteristics of the unemployed tell us about unemployment and its causes?

Clearly (almost), there are *categories* of people who are unemployed due to significant problems which could and should be remedied. Keep in mind that these numbers are constantly changing depending upon the strength of the economy.

1. High rates of unemployment among African-Americans and Hispanic-Americans, *to the extent* that it is due to job discrimination, is clearly unacceptable. To what extent do you believe job discrimination is a major problem? Do you think there is also discrimination against aged persons, against women?

2. Quite clearly, the higher the level of education and other skills development methods (e.g., apprenticeships, on the job training, self study, etc.), the greater the likelihood that a person is employed. It is almost certainly true that many (but not all) persons with lower levels of education are willing and physically able to work, and that their higher unemployment rate is attributable to the difficulties that many encounter in locating work due to limited technical skills. But it is also probable that some persons with limited skills and education have *limited motivation* to develop improved skills, which is a *very difficult* issue to deal with.

3. The most telling indicator of problem unemployment is the large number of individuals, over one fifth of the unemployed, who were unemployed for over six months when surveyed. As mentioned above, there is ample evidence to indicate that the longer people are unemployed, the less likely they are to ever return to employment. If we included “discouraged workers,” and people who say that they want to work if jobs were available, but who are not included among the unemployed because they have ceased to look for work, the number of long-term unemployed would rise considerably.

4. It should be emphasized that these unemployment statistics tell only part of the problem. Many people also are underemployed either because they work fewer hours than desired, or work at low-paying jobs, or both.

5. It also needs to be emphasized that the reasons for age, education, and ethnic differences in unemployment rates are complex.

- Discrimination, by itself, by ethnic group, gender, or other characteristic alone cannot be blamed for all ethnic differences. Educational attainment, a major cause of job difficulties, is, on average, lower among African Americans and Hispanic-Americans, a difference that needs to be redressed. A topic for another class.
- Substance abuse, e.g. drug addiction, alcoholism, also creates important, sometimes insurmountable, employment difficulties.
- Some people have unreal expectations as to the type of job that they can reasonably expect to be offered.
- A major problem is that some individuals live in economically depressed areas, or areas with limited types of jobs available (e.g., mining towns). Frequently, they do not want to move, or are unable to do so because of limited resources.
- Lack of motivation is, unfortunately frequently a problem.
- Another important problem is that our welfare and income support programs are often operated in ways that discourage work.
- Transportation, especially among workers with disabilities, may well be the single most important impediment to their finding work, not the limitations caused by their disabilities. For example, how would a person in a wheelchair access the MARC train at a station stop. It is impossible. Yet a taxi would eat

up most of a days earnings for many.

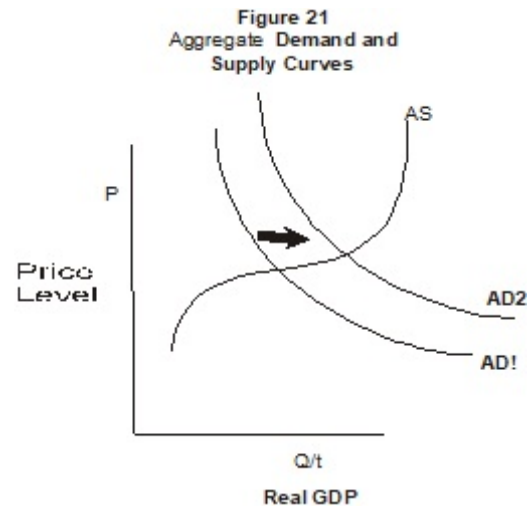
Disentangling and assessing the relative importance of these and other factors is difficult and has not been well accomplished. But it should be clear that our present unemployment and underemployment rates signify the loss of a large amount of potential work hours, output, and income. **Major** improved efforts are needed to assist many of these individuals to locate jobs. Equally important: it must emphasized that the needs of unemployed persons differ greatly and no single, simple minded, approach,, will suffice.

9. How can we help unemployed persons to locate jobs?

One point needs to be made clear. Business will not hire workers *unless* they believe that there is a market for the goods and services that they produce. This is the *sine quo non* for increasing employment regardless of the initial cause of employment. One way or another, the economy must maintain a high level of **aggregate demand** if it wishes to have a high level of employment.

Now we will examine this issue of reducing unemployment according to the major causes of people not working.

A. Cyclical/demand causes. This was the main issue that emerged during the depression of the 1930's and in the recent recession. Using techniques that we will discuss later in the course, the primary goal is to increase **aggregate demand** for goods/services (by increasing aggregate expenditures) and thereby increasing the need by employers to hire workers to produce these goods and probably also increasing the hours they work and the wages they are paid. This is illustrated in figure 21 with the shift of AD1 to AD2. This will also enable discouraged workers to come back into the labor force and will assist underemployed workers to improve their jobs by increasing the number of jobs they may choose among. We know a number of ways of enhancing aggregate demand and increasing the number of jobs although we do not seem to utilize them as effectively as we could. We will discuss them later. This is the primary way that Keynes prescribed for increasing employment among able bodied workers able to perform the jobs that increasing AD will generate.



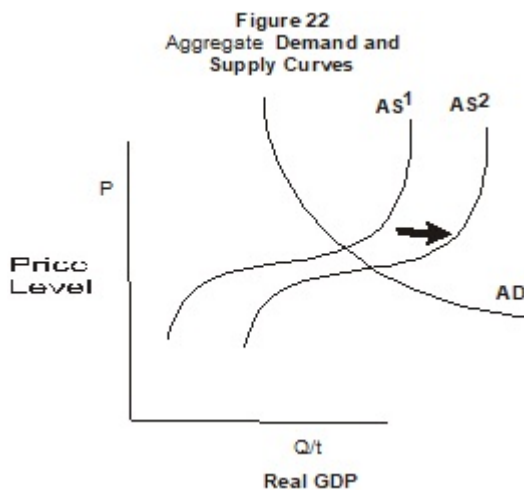
We might also increase employment among these workers by shifting the AS curve to the right, i.e., lowering the costs of investment and production (see figure 22). In fact, increasing aggregate demand alone will not be effective if the jobs that are created require skills that unemployed individuals do not possess, a problem that will probably increase as unemployment rates decline. Four ways of doing so (among many) are:

- Lowering interest costs to business. The Federal Reserve, which we will study later in the course vigorously pursued this policy during the great recession.
- Reducing burdensome and unnecessary regulations on business which has been

vigorously advocated by people who identify themselves as conservatives. Note that President Obama ordered all Federal agencies to examine existing regulations to see if their benefits outweigh their costs, especially the cost of compliance. President Trump is looking vigorously for federal regulations that can be eliminated. Regulations usually have a purpose desired by some and changing or eliminating them can be controversial.

- Reduce the corporate income tax to increase business profits and hopefully encourage increased investment, strongly advocated by many politicians. The recent federal tax revision assumes that this will be the case.
- Improve skill levels among workers by vocational training, more apprenticeships, and other methods, discussed further below.

Opinions differ, but I regard it as unlikely that shifting the AS curve alone to the right



could, by itself, be done sufficiently to solve our unemployment problems. Nonetheless, as technology advances and increases the need for skilled workers, methods for reducing unemployment must also evolve. Increasingly, it will be insufficient to simply use the old Keynesian approach of simply expanding aggregate demand. In addition, we must also shift the aggregate supply curve to the right by increasing the skills of workers (making sure they are the right skills for the job market) and maintaining a favorable climate for business (e.g., eliminating unnecessary and burdensome regulations, maintaining the infrastructure of the nation, assuring that taxes do not become too burdensome, etc). In the modern world, we must

be concerned with both the AD and the AS curves, not the AD curve alone for many workers to be able to find jobs. Note that lowering interest rates and/or taxes will shift both the AS and AD curve to the right resulting in a double employment effect.

In addition, if ever we become concerned about assuring jobs for retired or disabled individuals who wish to work, we will need to identify ways to expand AD that will result in more part-time, less stressful, and less vigorously demanding jobs. This is a lengthy topic which must be deferred to another semester of work

B. Frictional causes: We know that some frictional unemployment is good for the economy, but intuitively most of us also feel that too high a level of frictional unemployment is harmful, particularly if it causes some unemployed workers to become discouraged and quit looking for jobs. The best solutions are to maintain a reasonably high level of employment (by maintaining a vigorous level of AD), and help temporarily unemployed workers by providing unemployment compensation and assistance in locating available jobs. We currently provide some help in searching for jobs through the United States Employment Service, which maintains a data base of some job openings and helps guide unemployed workers to them. The internet is increasingly helping employers and potential employees to find each other, but is not very helpful for unskilled workers.

C. Seasonal causes: One can provide unemployment compensation. One can also provide programs to train workers for jobs that offer year round work. Many seasonal workers are migrant workers and our farms appear to need them, particularly if they wish to keep producing some types of crops at low cost. However, the current practice of using migrant workers when they are needed, and then setting them adrift is not a very humanitarian solution. One solution would be to pay them higher wages that will help them through the lean season. You should realize, however, it is very likely this would lead to greater imports of seasonal crops (much of what we consume is imported now) and higher prices.

D. Structural Causes: This is a toughie and is overlapping with our discussion of cyclical/demand causes above. *As noted earlier, this type of unemployment refers to the mismatch between job requirements and workers capabilities.* One obvious solution to this problem is to provide these individuals with vocational training so that at least some of them can acquire the skills they need to meet the requirements of jobs that would be created as the economy generates new jobs in the normal course of expansion. The Department of Labor has operated such programs under a variety of different legislative authorities over the years. Currently, the Department of Labor manages the Federal Workforce Investment Act (WIA). Under this legislation, the Department of Labor offers a comprehensive range of workforce development activities, such as various types of job training through statewide and local organizations, including Montgomery College. This, in turn, improves (hopefully) the quality of the workforce, reduces welfare dependency, and improves the productivity and competitiveness of the nation. This is equivalent to shifting the AS curve to the right (fig. 22), e.g., AS1 to AS2, which may not only reduce unemployment, but may also help constrain inflation. A shift of the AS curve to the right means that more can be produced at the same price level. This is because additional skills should increase the productivity of workers to firms so that at the same price level, they could produce more.

Skills training can be provided in numerous ways. Publicly and privately funded classrooms can be used to teach vocational skills. Corporate funded classrooms serve the same purpose. On the job training and apprenticeships are also important ways of increasing worker skills. Experience is also a powerful teacher as many of you are currently realizing as you become increasingly skilled at your jobs.

Note that we must still maintain a high level of aggregate demand (as noted above). As noted above, the higher the level of aggregate demand, the more that private companies are incentivized to provide skills training in classrooms, apprenticeships, etc. Moreover, it may lead some employers to modify jobs so that they are within the capacities of disabled, aged, or otherwise disadvantaged workers.

E. Minimum wage: One purpose of the minimum wage is to redistribute a small part of a firm's revenues to very low paid workers. Whether you believe we should do so is largely dependent on your personal values. You might wish to consider whether workers displaced due to a higher minimum wage should be given additional assistance and possibly training so that they become more productive.

F. Long term unemployment: All of the above and much more, particularly in all phases of education (and maybe some tough love) before this is resolved.

G. Other: Finally, we need to mention the problems that arise when job seekers have unrealistic expectations about jobs they can obtain, or, in some cases, simply do not wish to work on available jobs. I have no idea what to do in these cases.

Aged and disabled workers: We do need to consider changing the structure of income and medical support programs, e.g., so that we encourage people to seek work rather than discourage them. The principal programs are the Social Security, Supplemental Security Income, Medicare, and Medicaid programs. For example, once a person finally qualifies for a disability benefit, by allegedly proving that he or she is incapable of Substantial Work (\$1,220 per month in 2019, \$2,040 if blind) it is nearly impossible to convince him or her to return to a job that is insecure, may pay no benefits, and may pay less than the public benefit he or she receives.

In addition, we will undoubtedly need to learn to modify jobs so that they are within the capacities of persons who are aged and/or disabled. Also, we will probably need to create millions of new part-time, less stressful, and less physically demanding jobs, particularly for aged and/or disabled persons who wish to only partially retire.

As noted, we need another semester for these topics.

Optional Discussion for the Curious: *In addition, every state has a vocational rehabilitation program for workers with disabilities. Despite the apparent logic of these programs, there is considerable controversy over whether they could be made more effective.*

Sometimes, some workers have such severe physical, intellectual, or emotional limitations that they cannot be employed on existing jobs, even after vocational training. In these cases, the requirements of the jobs that these workers are placed on must be re-defined so that they are within the capabilities of persons with severe disabilities, and other severe work limitations. So far, the country is still struggling to find the best way to do this. There are many community rehabilitation programs which seek to place people with significant disabilities on jobs by changing the job requirements of the job, and/or providing other significant assistance. For example, they may have a job coach, or co-workers may provide assistance. The technology for these programs is still evolving.

11. What is Investment in Human Capital? (REPETITIVE)

Investment in human capital is a term used by economists to describe expenditures that increase the ability of individuals to produce goods and services. Some economists use it in a broader sense to include improvement in the ability to manage households, raise children, or, in general, to enjoy life. Investments in human capital always include education and training, and sometimes other expenditures, such as physical restoration (e.g., providing a prosthetic to an amputee). In my opinion, it should include even earlier expenditures such as free breakfast and lunch programs for school children, preventive health care. Actually, it is impossible to draw a hard and fast line between what is and what is not human investment, but... you get the idea (see also notes 2 for additional discussion of this term).

The **stock of human capital**, another term that you will sometimes run into, is defined as the sum total of investments in human capital over the lifetimes of living persons. If I think about it, perhaps this total should be adjusted to allow for the loss of useful human capital as changing technology makes some skills obsolete.

The two terms are the human capital counterparts to yearly investments in plants and equipment, and the total value of physical capital.

Review Questions

1. Do you believe that our unemployment statistics understate the number of persons who would like to work? Explain your answer.
 2. Do you believe that some people currently working are underemployed? Explain your answer.
 3. Briefly state the definition of employment used by the Bureau of Labor Statistics of the Department of Labor. Briefly state the definition of unemployment.
 4. Distinguish cyclical from structural unemployment caused by a mismatch between job skills and job requirements. Identify several ways to reduce cyclical unemployment? Identify the most important method of reducing structural unemployment?
 5. What important purpose does frictional employment serve? Do you think we know the optimal level of unemployment in the U.S.? Why or why not? Is some unemployment unavoidable in a capitalist economy. If so, explain.
 - 6.. What is meant by the term “discouraged worker?” Are discouraged workers counted as part of the labor force?
 7. What is a seasonal work?
 8. What is an underemployed worker? Identify two categories of “underemployed workers” Do you think that it is a serious problem.
 9. What is the Current Population Survey and how does it measure the number of employed workers?
 10. Why do you think unemployment is concentrated among individuals with lack of education or lack of skills? Why is unemployment higher for minorities?
 11. What do the terms “investment in human capital” and the “stock of human capital” mean?
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