Problem: Every country, including the U.S has, in theory, the goal of assuring that all residents who desire work can locate employment at wages that enable them to support themselves, and their dependents, in a reasonably comfortable style. Unfortunately, despite a plethora of public information published by the U.S. Department of Labor (DOL) in the United States, it is, at any point in time, highly uncertain as to the number and types of jobs that must be generated to achieve this goal.

In the U.S., the most commonly cited statistic is the unemployment rate. The unemployment rate rarely falls below $4 \%$, and has ranged as high as $25 \%$ (during the great depression of the 1930 's). After World War II, it has reached $10 \%$ several times. One might believe that the unemployment rate indicates the percentage of people for whom jobs need to be created. However, everyone who has taken a survey course in economics is aware that some unemployment, probably around $2 \%$ (a guess) is short-term and doesn't represent a significant problem. It is termed "normal" or "frictional" unemployment and consists of workers who lost their jobs because of technological change, a failed employer, or perhaps they are individuals who are seeking a different job than they held previously. In most cases, the job loss is temporary. In fact, when the unemployment rate is low, say $4 \%$, it may well be the case that the number job openings exceeds the number of people who are frictionally unemployed. .

Unfortunately, the unemployment rate does not include two important groups: (1) people who are not counted as unemployed, but who would accept jobs if suitable jobs were offered; and (2) people who are counted as employed but consider themselves underemployed.

Who are persons not working or counted as unemployed but who say they want a job: During 2016 there were a little less than 6 million persons who were not working or counted as unemployed but who said that they wanted a job. Of this large number, only about $10 \%$ said they were not immediately available for work. Of the remainder, despite reporting that they would like a job, only about $45 \%$ had searched for work during the previous year (but not in the month prior to interview), and about $55 \%$ had not searched for work during the previous year. If we assume, as the Department of labor does (in an alternative measure of unemployment) that those who looked for work during the previous year (but are not counted as unemployed), would accept a job, this would add a little over $1 \%$ to the unemployment rate. If we add those who had not looked for work during the previous year, this would add another $1 \%$ or more.

Unfortunately, there is no way of knowing how many of these individuals who claim to want work, none of whom are counted as being employed or unemployed, would actually accept jobs. This is true whether or not they sought jobs during the previous year. Clearly many, perhaps most of these individuals, do not have as strong a need for employment as members of the labor force, (i.e., people who are either working or searching for work) and it can be presumed (conjectured) they many would insist on work that met certain requirements, such as particular hours (e.g., to allow for child care), or at certain locations (e.g., within reasonable driving distance of a job, or accessible by public transportation).

In addition to those individuals who say that they would like to locate work but are not counted as unemployed, there is a large number of potential workers among people who have retired due to age and have given up on seeking paid work because of discrimination, physical limitations, etc. There are about 40 million retired workers receiving social security benefits alone It should be noted that a significant number of these retired individuals continue to work. Approximately 19 percent of workers over 65 are counted as employed by DOL, of whom a little over 50 percent are full time workers. We can expect that the percentage of aged/retired workers to continue to rise, partly because the age at which retirement annuities are paid is certain to rise in the future, and partly because social security benefits alone are often insufficient to provide people with the quality of life they desire. If suitable jobs were available, we could anticipate that many more (a very crude method of estimation) aged/retired workers would accept work

Further, many Americans receive disability benefits, about 9 millions persons receive social security disability benefits alone. I (along with many others) believe that many (perhaps most) of this individuals could and would work if suitable employment opportunities were available.

Who are people who are counted as employed but consider themselves underemployed: Even when people are counted as employed, many feel that they are underemployed. There are two categories.

First, there were about 25 million people in the U.S. who work part-time, i.e., 1-34 hours per week during August, 2017. But a little over $20 \%$ of these individuals, about 5.2 million persons, reported that they worked part-time only because of slack work or business conditions.

Second, there is an unknown, but possibly large, number of persons who cannot, or believe that they cannot, find work consistent with their skills (e.g., a college graduate who works as a bartender, a Ph.D. in history working as a clerk in a retail store). Hard realistic data on the number of persons who are working at jobs that fail to utilize their potential ability are, unfortunately, almost impossible to collect.

In sum, the usual statistic reported for unemployment falls far short of identifying the number of people who would accept gainful employment if suitable employment could be located.

Preliminary thoughts on solutions - existing data: Clearly we are not going to abandon the use of the most common unemployment rate reported by DOL. This statistic shows, with great precision, the percentage of people not working, but who are able and willing to work, and who are actively seeking work. It will be recalled, however, that for some of people identified as unemployed, (the frictionally unemployed) job loss will be temporary and short term.

Fortunately, there is data, routinely collected and published by the U.S. Department of Labor, (DOL) that, in conjunction with the unemployment rate, would give a more accurate picture of the number of potential workers. Among these statistics are:

Length of time unemployed: DOL publishes monthly data on how long people identified as unemployed are out of work. These numbers obviously vary over the business cycle. However, during August 2017, about 30\% of unemployed persons had been without work for less than 5 weeks, and about two-thirds for 14 weeks or less. It is well known that the longer a person is without work, the lower the probability that he or she will ever return to work. When people are unable to locate a job within a reasonable time, say 5 or 6 weeks, this should begin to raise grave concerns. Some will seek alternative sources of support, say earlier retirement benefits, or disability benefits, or increased reliance on family members, and withdraw from the labor force.

Employment rate: .In addition to reporting the percent of the population unemployed, DOL publishes extensive data on the percentage of the population employed, all data available for demographic groups defined by age, gender, ethnic group, education, etc. It has long been proposed that we measure labor force slack by comparing the difference between the percent of people employed, during periods of a robust economy, when jobs are plentiful, and the percentage employed during the current year. The difference between these two figures, which includes people counted as unemployed, provides another estimate of how many people would accept employment if jobs were available.

Part-time employed be cause of slack business conditions: It would make sense to include these individuals as part of the unemployed. In fact, the DOL has an alternative measure of unemployment which includes all persons unemployed because of poor business conditions. This alternative measure added, in 2017, a little over $3 \%$ to the number of persons counted as unemployed. In effect, this alternative measure counts these part-time workers as fully unemployed, which seems excessive. To me, it would seem preferable to treat these individuals as only partially unemployed, but this is an issue that requires considerable study.

Conclusion: The current most popular unemployment data has many shortcoming, most of which cause an understatement of the number of people who would work if suitable jobs were available. The DOL recognizes the problems and has developed at least three other alternative measures of unemployment. Unfortunately, these alternative measures have serious conceptual problems and are not easily understood by many people. There is no simple, or fully adequate solution. But I believe people would have a much clearer picture of the need to improve job markets if we focused on the following four statistics instead of only the usual unemployment rate.

First, we should continue to publish the usual, but not always well understood measure of unemployment, currently around $4.0 \%$.

Second, the unemployment rate should be supplemented by measures of long people have been without work. Clearly, the longer a person has been without work, the lower the likelihood that he or she will return to work and the greater the urgency of intervention. .

Third, the difference between the employment rate (adjusted for differences in age and gender) between a robust representative year and the current year should be given equal
prominence to the above two statistics. This would show not just people counted in the ususal measure of unemployment, but also the number who would probably accept jobs if available.

Finally, these statistic should be supplemented by a measure of the number of part time workers who claim they would work full time if a suitable job was available. Perhaps this statistic should be converted to a percentage that shows the potential increase in full-time equivalent workers if these part-time workers found full time work, e.g., two half time workers would represent one full time worker. This percent could then be added to both the unemployment rate and the potential increase in employment if the population had the same employment rates in the current year as it had in more prosperous years.

The above would provide a more accurate, and easily understood, picture of the potential for increasing the number of people in gainful employment although admittedly it is imperfect. It understates the number of potential workers among persons who are retired and/or disabled. It also fails to estimate the number of persons who are working below their skill level.

