A Multi-Variate Regressional Approach to Understanding the Factors Driving Unemployment Duration

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Understanding the macroeconomic factors driving unemployment duration ,particularly between racial subcategories presents an interesting dynamic that elicits econometric investigation. Unemployment duration data (annual data) since 1948 has shown some turbulence, in reactions to key economic events, as well as, passive economic events. Unemployment duration (in weeks) between 2011 and 2018 has seen a decline of -42%, matched by a declining unemployment rate (in percent) of -56% in the same period. Despite the declining unemployment rate, unemployment duration is still testing slightly higher values compared to say the 1960s. In this paper, I developed a multivariate regression model to measure the effect of specific variables (unemployment rate, unemployment population demographics, inflation, labor participation rate and GDP) on unemployment duration(UD). My model found a statistically significant relationship between the percent change(year over year) of Black or African-American unemployment rate, percent change in GDP, percent change in labor participation rate (LPR) and the percent change in unemployment duration (UD). The novelty of my approach was my focus on the percent change of both independent and dependent variables, as it eliminated the simpler (trivial) approach of simply comparing reported values.

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Unemployment duration, as well as, unemployment rate have seen a decline in the past eight years (2011-2019) (Fig 1). However, unemployment spells seem to be testing higher levels relative to previous periods in history. While we observe less volatility when looking at raw unemployment duration data, a high level of volatility emerges when looking at the year over year (yoy) percent change in unemployment duration. The amazing recovery in unemployment duration

depicted by observing raw unemployment duration data, seems less likely when dealing with percent changes in the same data. I focus on unemployment duration because it provides a somewhat better measure of long-term unemployment and possibly the state of the economy in regards to permanent jobs. Abraham and Shimer (2002) postulated that unemployment duration was concentrated among women because of their attachment to the labor force, which led to a decline in short-term unemployment associated with transitions in and out of the labor force. Valletta (1998) argued that declining job security and transient jobs were the key contributors to rising unemployment duration. While both assertions made above seemed appropriate at the time, my current dilemma seems to direct me towards investigating other factors affecting unemployment duration at a time when it seems to be declining. The consequence of my analysis is an opportunity to propose other theories explaining the current state of unemployment duration.

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