Research Statement

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My research interests lie in macroeconomics and span time series analysis, labor, monetary, and environmental economics. I am particularly interested in labor market reform in a dynamic and stochastic general equilibrium (DSGE) framework. I utilize data to employ both modern econometric techniques and structural estimation methods to answer research questions that are both academically interesting and policy-relevant. In this statement, I summarize my current papers on labor market reform, and discuss my ongoing research agenda for the future. More insights into my work are available on my website ogbeifunlawrence.com.

"Labor Market Reform and the Business Cycle" (Job Market Paper)
Most research on labor market reform uses a reduced-form approach. In my job market paper, I attempt to determine the best measure of labor market reforms and the channel(s) they affect economic activity in a real business cycle model with labor search. A comprehensive labor market freedom index (LMFI) is used to capture labor market regulation such that reform is like a shock to this index. The quantitative analysis proceeds in two stages. First, the model's parameters are calibrated to fit U.S. data. Second, the study uses the calibrated parameters to simulate the model for dynamic responses of interest variables.

The study demonstrates the importance of both channels through the impulse response graphs. Vacancy rate response could be either negative or positive, depending on the channel through which the shock works. Suppose the marginal cost of vacancy posting is the channel for the shock; the vacancy rate responds positively, whereas when the matching efficiency channels are considered, the vacancy rate responds negatively to the shock. In a model with both channels, the combined net-effect response of vacancy rate is positive as the vacancy posting cost channel dominates the other. However, the response of the unemployment rate to the shock is similar across models, with the difference being the hump shape and peak effect produced by the different models.

The study also analyses the implications of LMFI persistence for transmitting shocks in an estimated DSGE model. The main finding in this regard is as follows: First, the impulse response of vacancy rate is always positive irrespective of the values of

LMFI persistence. Second, for high values of LMFI persistence, shock through the matching efficiency channel reduces the vacancy rate, whereas, for lower values of LMFI persistence, the shock to LMFI increases the vacancy rate. Lastly, in a model with both channels, the dominant channel determines the positive or negative response of the vacancy rate to LMFI shock.

The paper also tests the external validity of the structural model using a VAR framework. Using the U.S. data, the VAR analysis shows that the impulse response for vacancy rate and unemployment rate supports the structural model's result with labor market reform working through two channels—vacancy posting cost and matching efficiency. Similarly, using panel VAR to analyze fifteen OECD countries, the impulse response for vacancy rate also accords well with the result from the structural model.

Overall, the study sheds new and important light on how labor market reforms can be embedded into a real business cycle model with search and matching and how well the augmented model can explain the volatility observed in the U.S. and OECD data. Thus, in conjunction with evidence from previous research, this paper provides information that can be useful to theorists engaged in respecifying some of the features in their model and policymakers who should decide which sector of the theoretical economy should be used to make policy decisions.

"Labor Market Reform and the Steady-state"
In this paper, I evaluate how labor market reform performs under different market conditions. Using a New Keynesian model with an environment characterized by frictions in the labor market, I investigate the effects of labor market reform, described by a permanent change in the labor market freedom index (LMFI), a proxy for reform. I show that a reform aimed at improving labor market flexibility has (un)intended consequences on macroeconomic variables. The main findings are threefold. First, the long-run implication of improving labor market flexibility depends on the policy's channel. Second, wage rigidity only matters in the short run as it either lengthens or quickens the transition path. Third, firms tend to respond differently in the short run when reform is pre-announced.

Future Research Agenda
My future research agenda is in the fields of Macro-labor and Monetary Economics. Next, I summarize two of my ongoing projects in the two fields.

"Two Illustrations of the Quantity Theory of Money: A Restatement "
This paper focuses on re-examining the conclusions from Lucas's (1980) study titled "Two Illustrations of the Quantity Theory of Money," with several changes in mind. First, since the time of his investigation, many measurement problems associated with the Federal Reserve's published data have become well-known (Barnett (1982), Barnett, Serleitis and Fisher (1992), Barnett (2011)), and superlative indexes of money—whether Divisia or Fisher-Ideal—have been suggested as alternatives that avoid them. Second, because the quantity theory is about long-run relationships between nominal magnitudes, it is not clear that a short-term interest rate, such as the 90-day T-bill rate, is the most

appropriate interest rate to capture the expected inflation effects of a change in the rate of money growth. For this reason, the 10-year Treasury note is chosen in this study to replace it.

Third, at the time of its writing, work on filters to smooth economic time series had not begun in earnest. One of the first filters to gain wide acceptance and usage is that of Hodrick and Prescott (1997). Recently, however, Hamilton (2018) has identified several problems with the Hodrick-Prescott filter and suggested an alternative to it. Therefore, the current study will investigate the influence, if any, of the choice of filter on the results. Finally, because several studies since the original Lucas study have identified sources of bias in the CPI, this study will use the GDP deflator for personal consumption expenditures, measured by year-over-year changes in the GDP deflator index. The use of this computation is motivated to eliminate any seasonal effect that may be present in quarterly data. Also, by the nature of the monetary reaction function, policy responses to inflation are based on the evaluation of "overall" agents' expected and actual behaviors. The CPI does not capture the aggregate behavior of all agents as it measures only changes in consumer prices. The preliminary results have highlighted that filtered data produce estimates that are larger than the unfiltered counterpart. Lucas's proposition can only be established in the early sub-period when using simple-sum M2 growth. When I used other money measurements in the early sub-period, the filtering technique determined if Lucas' relationships held.

"Entrepreneur and Financial Frictions: A Racial-Gender Perspective "
I also have active research on financial friction. I intend to investigate and quantify the effect of racial-gender imbalances in access to financial markets on both entrepreneurship and the misallocation of productive inputs. I have been granted a confidential, restricted-access version of the Kauffman Firm Survey (KFS), a panel of nearly 5,000 nascent entrepreneurs in the U.S., covering 2004 and 2011. The survey includes information on the age, gender, race, marital status, education, and working/other start-up experience of up to 10 owners, for each firm. It also reports which owners actively manage their businesses, the geographical location, industry, wage bill, assets, revenues, and profits, along with data on different financing sources (debt and equity). This setting will allow me to examine if there is evidence of racial-gender differences in firms' access to credit and the average product on inputs of production. Also, I hope that I can develop a model of entrepreneurial choice under financial frictions that features agents' heterogeneity in wealth, productivity, gender and race. The model will be calibrated to the U.S. economy to show whether racial-gender gaps in credit access account for the bulk of racial-gender differences in the average product of capital.

In the long run, I see myself using advanced estimation methodologies to study topics at the intersection of macro-labor, monetary and environmental economics. I hope that through a finer understanding of the underlying economic forces in my research, I can help inform sound policy decisions.