## The Evolution of Endogenous Business Cycles

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## **Summary**

This paper explains the connection between two kinds of theories of the business cycle that I call EBC1 and EBC2 models. Both kinds use the idea that general equilibrium models with indeterminacy can be used to explain the real world but they do it in different ways. The main idea of the paper is that EBC2 models represent a return to the key idea in Keynes; that high involuntary unemployment can persist as the equilibrium of a market economy.

In the last hundred years, there have been two major changes in the way that macroeconomists think about their subject. Both of them were triggered by real world events that were hard to understand in terms of contemporaneous economic theory. In the 1930's, the Great Depression led to a shift from classical to Keynesian economics. The economy was no longer seen as a self-stabilizing system and instead, under the Keynesian system, persistent involuntary unemployment was recognized as a possibility.

In the 1970's, with the occurrence of high inflation and high unemployment, macroeconomists reverted to classical ideas of the 1920's; but those ideas were formulated in the language of dynamic stochastic general equilibrium theory. For twenty five years, from 1982 through 2007, we have been refining DSGE models until, in 2007, macroeconomics arrived at a point where we were able to recreate the classical economics of the 1920s using the mathematics of functional analysis. First generation EBC1 models were an important part of this research agenda.

The Great Recession of 2008 is another game changing event. Although the Recession was declared to be over by the NBER in June of 2009, the U.S. has since experienced more than thirty six consecutive months of unemployment above 8%. As of July 2012, there are no signs that the economy will recover soon.

One of the most important ideas to come from Keynes' General Theory was that high unemployment can persist as an equilibrium phenomenon. Second generation EBC2 models provide a microfoundation to this idea, and just as EBC1 models were part of the DSGE agenda that provided a microfoundation for the economics of classical ideas, EBC2 models provide a microfoundation for the economics of Keynes. The idea that involuntary unemployment can persist as an equilibrium phenomenon is one that will gain more credence, the longer the current recession persists.