Economic agents adapt to expected and unexpected shocks in their decision-making. This thesis develops three theoretical chapters about the business cycle, and studies three different sets of economic activities through numerical analysis.

Chapter 1 studies the consumption and saving behavior that can lead to endogenous fluctuations in interest rates. This chapter is based on a joint paper with Eungsik Kim. We analyze the implications of quasi-hyperbolic discounting preference for two types of endogenous economic fluctuations, endogenous deterministic cycles and local sunspot equilibria, in a three-period overlapping generations (OLG) economy with pure exchange. We provide a sufficient condition for the existence of two-period endogenous cycles and a necessary and sufficient condition for the existence of a local sunspot equilibrium characterized by local indeterminacy. We show that introducing the present bias into preferences shrinks the set of two-period cycles but enlarges the set of locally indeterminate equilibria. Moreover, our model suggests that the locally indeterminate equilibria exist under a reasonable value of time discount factor.

Chapter 2 studies the employment decisions of firms in terms of wage offering and new job creation under an environment with volatile labor productivities. This chapter is based on a joint paper with Eungsik Kim and Stephen Spear. We introduce a novel model that incorporates both search friction and imperfect competition in the labor market through a two-stage game. We find that the level of competition increases wages, unemployment, and labor market volatility. Moreover, by varying how much labor assignment depends on wage bidding versus vacancy posting, we find that the labor market becomes more volatile as the weight of wages on labor assignment increases. The effect of competition level among firms is also more significant when labor assignment is decided by wages.

Chapter 3 studies the innovation and investment decisions of large technology firms and venture capitalists facing a newly emerged technology. This chapter is based on my job market paper. We develop a theory which connects corporate innovation with VC investment through corporate takeover activities of startups. We explore the mechanism where corporate decision makers use the level of VC investment to predict the acquisition opportunities in the near future, and make in-house R&D decisions accordingly. We show that increase in VC investment deters corporate internal R&D, and the deterrent effect is stronger for low-profit technologies. A strategic venture capitalist has more incentives to invest if corporate R&D can be more easily deterred, since it increases the demand to acquire their startups. The theory thus predicts high VC investment in technologies with lower profit than those firms invest in.