Economic Perspectives: Assignment 2

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Essay Question

This assignment contains two questions, you are required to attempt both.

1. Use economic theory to explain how fluctuations in real GDP can occur according to either
   (a) **New Keynesian economic models**; or
   (b) Political business cycle models
2. Use economic theory to explain how fluctuations in real GDP can occur according to either
   (a) **post-Keynesian economic models**; or
   (b) Austrian economic models

Each question earns up to 50 marks. 1,250 words maximum

A word count must be included at the end of each es say and essays must be within the word limit. The word count includes text, appendices and footnotes but excludes text within any titles, graphs and bibliography. Your essay is not expected to include appendices.

1 Fluctuations in real GDP according to New Keynesian economic models

The New Keynesian School of economics developed in the 1980s (Mankiw 2008), in order to react to the critique of Keynesian Economics from the side of the New Classical school, in particular Lucas (1976). Therein, he criticizes the top-down epistemology of Keynesian economics, especially its extensive use of econometrics as a base for design of fiscal and monetary policy. Furthermore, Keynesian models received a wave of criticism claiming their assumption to be inconsistent with the microeconomic concepts deemed crucial for macroeconomic models of the time (Gordon 1990, Greenwald & Stiglitz 1993). Henceforth, the aim of the New Keynesians school was to explain the reasons for rigid prices in the medium-run concept using deductive microeconomic models, while stressing the importance of said policy interventions.

Despite the fact that this new stream did evolve in its literature into a set of diverse models, their assumptions were mostly consistent and focused on explanation of the mechanisms that cause changes in nominal variables result in real effects of significant magnitude on the real output (Greenwald & Stiglitz 1993). In contrast to the New Classical belief in that firms operate in perfect competition and under perfect information, New Keynesians exercise the idea of Monopolistic competition, putting the firms into the position of price setters. Additionally, they stress the importance of specific externalities in markets for goods, labor, as well as in the financial markets. On the other hand, consistently with the opposition, they observe an economy as a simple aggregation of individual firms and assume some fluctuations in the economic activity to occur naturally.

Greenwald & Stiglitz (1993) points out the general agreement on need for microeconomic basis in order to explain and predict macroeconomic fluctuations. According to the New Keynesians however, the current micro basis is failing on its own, which is why it needs to be amended to accurately explain aggregated behavior of agents. Although they do not explicitly reject Say's law, i.e. that markets will always clear, they argue against holding the axiom of the New Classical school, that is that prices adjust quickly. Moreover, they pursue that "increased flexibility of wages and prices might exacerbate the economy's downturn."(Greenwald & Stiglitz 1993)

"Deadweight losses and market failures are possible on a macroeconomic scale and can cause serious damage to the economy"(Tobin 1986).

The perspective on aggregation of agent-based models in order to capture a view over an economy remains rather simplistic. The main difference is that New Keynesian view does not accept aggregate demand to be equal to vertical sum of demand curves individual firms face, because of its consideration of monopolistic competition. Nevertheless, disregarding specific proportions, it is assumed that an increase in price of a specific differentiated good will ceteris paribus induce an increase in aggregate price level ($P_i \uparrow \implies P \uparrow$). Differently, change in the quantity of said good demanded at given price will cause an increase in the aggregate consumption and vice versa ($c_i \uparrow \iff C \uparrow$).

The earliest of New Keynesian models focus mostly on explaining why prices and wages are sticky, especially on the real rigidities of wages. One of the concepts identified to be likely cause of this effect is the implicit contracts theory. Its main assumption is that the agents in labor market act under uncertainty and that workers are more risk-averse than firms. In result of this, individuals perceive certain level of income to provide equivalent utility as a higher uncertain income, which enables the firms to hire labor at wage below the market-clearing equilibrium(Romer 1993). Secondly, efficiency wages, which are above the market-clearing equilibrium, enable firms to incentivize workers to an increased level of productivity. Finally,

the insider-outsider model illustrates the bargaining process between a firm and respective trade union, where a negative shocks is likely to cause lay-offs, rather than a decrease in the real wage, while a positive shock is likely to induce an increase in wage of currently employed individuals, resulting in an above-equilibrium wage. Such scenario results primarily from the firm's incentive to reduce the costs of labor turnover (Lindbeck & Snower 1989).

In later periods, the New Keynesians focus on rigidities of prices in the markets for goods. The most examined theory developed in this body of literature is the argument of menu costs, i.e. that change in price if a good does in itself entails costs, such as reprinting of catalogs and distribution of information on the price change. Consequently, a firm shall only adjust its prices when such change results in profit increase higher than that of resorting to adjustment of quantity increased by the menu costs. Such condition results in change in real output until the price is adjusted, however with a large number of firms in an economy, only some adjust their prices at each particular time. (Blinder et al. 1998, Chugh 2014) Another relevant theory explains the nominal price rigidities by pointing out the property of residual demand of a firm in oligopolistic competition, i.e. a change in its price elasticity at a profit maximizing price-quantity combination imposed by firms competing in the market. In such situation, assuming that cartels are illegal, a profit maximizing firm is forced to set a price such that it matches its competitors. Additionally, model employing constant marginal costs of firms cause monopolistic markets to clear at the same price, given linear demand curve (Chugh 2014). Further models based on marketing theories have also been demonstrated to act as an evidence for nominal price rigidities.

Later New Keynesian research has identified marginal frictions were claimed to be amplified by market failures in the financial sector. Greenwald & Stiglitz (1993) explains the roles of risk-averse firms and banks in the economy. Firstly, he points out that issuing equity act as a signal of increasing risk of a firm, which eventually leads to decrease in the firms value. For this reason, firms rely on debt financing more heavily. In result of this, firms have obligations and face more risk themselves, which leads to increasing debt in economic downturns, risk of bankruptcy and negative shift in aggregate supply, as firms seek higher profits due to marginal bankruptcy costs. Similar situation then occurs in the credit market, where risk-averse banks face increasing risk of default on their lending. This weakens the value of their assets, leading to decrease in total amount of lending, due to constraints imposed on the interest rate. This implies the New Keynesian view of money as non-neurtal and need for fiscal policy interventions, such as decrease of discount rate and reserve requirement to decrease the cost of lending. Unfortunately, with shocks high enough in magnitude, the policy may not be effective due to zero-bound constraints, as the 2008 Great Recession has proven.

In conclusion, the New Keynesian school of economics formalized theory based on thoughts of John Maynard Keynes in order to address critique from the side of New Classical economists. In two almost parallel streams of literature, they aimed to explain real wage rigidities and nominal price rigidities using microeconomic theory. Later, the theory of risk-averse firms and banks was presented and identified as an important amplification force of economic fluctuations, suggesting need for monetary policy and government intervention.

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2 Fluctuations in real GDP according to Post Keynesian economic models

In recent years, economists attempt to explain the 2008 great recession and form mechanisms to prevent similar occurrence from happening again. While the Austrian school of economics claims that the economy is able to self-regulate and function on its own, the major competing view in the foreground of heterodox economics, the Post Keynesian school, focuses on utilizing the most of past research, while designing and optimizing government and central bank policy recommendations, in order to maintain full employment and reduce the output fluctuations.

In contrast to the New Keynesian school however, the Post Keynesians reject use of agent based microeconomic foundations (King et al. 2013), as they are unable to capture the complexity of a macroeconomic system. Furthermore, The backbone of this economic school arises from Keynes (2016), especially the principle of effective demand, implying that "it is scarcity of demand rather than scarcity of resources that is to be confronted" (Arestis 1996). According to King et al. (2013), Tony Thirlwall has summarized the following 6 key propsitions of the Post keynesian economics:

- "Employment and unemployment are determined in the product market"
- "Involuntary unemployment is caused by deficient effective demand"
- "Investment causes savings"
- "Non-neutrality of money"
- "Quantity Theory of Money is misleading"
- "Capitalist economies are driven by the "animal spirits" of investors"

Similarily to the New Keynesian school, the Post Keynesian economics argue for existence of disequilibrium in the economy. They agree on the existence of downward rigidity of wages associated with layoffs in period of decrease in aggregate demand

An important aspect of the Post Keynesian view is that it attempts to explain the business cycle fluctuations as endogenous, i.e. as a result of behavior of agents. The main two models developed in the wake of the Post Keynesian school, which explain real output fluctuations are Kalecki's two-class model and Minsky's financial instability hypothesis.

The two-class model assumes a society divided into two groups of individuals: workers who provide labor in exchange for wage and capitalists, who provide investment in exchange for profits. Further agents in the system are government and foreign economies. Should income be equal expenditure and assuming that workers do not save, it must hold that total profit of capitalists $P = (C_p + I) + (G - T) + (X - M)$, where C_p is capitalist consumption, I investment, G government expenditure, T government tax revenue, X exports, and M imports. Consequently, the level of investment and the level of monopoly in the economy are the factors said to be responsible for the GDP fluctuations. (King et al. 2013)

Model developed later by Minsky (1977) also divides society into two groups, the banks and the capitalists, who depend on investment in order to generate profit and repay interest. The endogenous cycle described therein arises from progression of capitalist cycle, where 3 different stages of financing progress and investors face an intertemporal trade-off at a fixed interest rate. In the first and the safest stage, hedge financing, the capitalist borrows money, being able to pay interest and repay the principal amount borrowed at maturity. Second

stage is speculative financing, where interest is paid, but the firms may need to take another loan in order to repay the principal. The third stage, named Ponzi financing, after a major financial fraudster of 1900s, is a form of financing, where the capitalists need to take further loans in order to be able to repay interests on previous loans. This is what eventually leads to a juncture, referred to as the "Minsky" moment, at which the financial asset bubble caused by overwhelming share of subprime lending on the banks' assets collapses. Then, a crisis followed by eventual restoration of hedge financing phase occurs. Arestis (1996)

This model is used as a theoretical illustration of the importance of monetary policy in developed economies with a credit system. Furthermore, its major importance is the fact that although not directly, it did describe the dynamics, which eventually led to the 2008 financial crisis (Whalen 2008). Effectively, this concept, developed in the late 1970s, becomes one of the reasons, why the Post Keynesian school is coming to the foreground of the field, in academia as well as practice (Keen 2013). Whalen (2008) stresses that at this point of proof of the concept, it is important to continue the debate on the topic. As it has been already mentioned, "left to themselves, [the advanced capitalist economies] cannot achieve and maintain full-employment of resources" (Arestis 1996), for which reason institutionalism and regulation of an economy is encouraged by their view.

In direct response to the 2008 crisis, Godley et al. (2008) firstly analyze the issues and identify major failure of the government and Federal Reserve prior to the 2007 credit crunch and then construct a set of policy recommendations for ideal recovery from said event. They point out that even based on the previous time-series analyses published by the Levy institute, the financial crisis was predictable and that it was a major fault of the mainstream economics that appropriate regulation was not put in place. Their main concern for the future remains in the public debt to GDP ratio of the United States and focus on increase in net exports as a way to its reduction. Their further suggestions, however meet an issue of a long-established capitalist system. According to them,"it is inconceivable that such a large rebalancing could occur without a drastic change in the institutions responsible for running the world economy—a change that would involve placing far less than total reliance on market forces."

Tendencies of current Post Keynesian macroeconomics continue building on top of the financial instability hypothesis, using both the critical analysis typical for heterodox schools and modern instruments of econometric analysis, as well as computer-based system dynamics simulations, such that of Keen (2013). Although the orthodox school insists on solid micro foundation and the continually revisited model of aggregate supply and aggregate demand with varying forms of the AS curve, This approach has potential of bringing the orthodox and heterodox economics slightly closer together. Thus, a conclusion might be made that the Post Keynesian school attempts to use all possible research methods to improve and optimize their models and effectively reach a stable, yet regulated state of the global economy, which will be sustained. This is mainly due to the fact that the 2008 financial crisis has shown enough evidence that lack of policy response does not result in a long run equilibrium. (Whalen 2008)

In conclusion, the Post Keynesian school of economics diverges from the mainstream focusing on an economy as a functional system presenting with endogenously caused fluctuations. Their theory considers prices to be sticky and employment determined by the level of effective demand. Two models of business cycles were presented and further incentives building on top of them presented.

Question 2 Word Count: 1079

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Written in LyX

Appendix: Debate notes

Godley et al. (2008) - Written at the time of financial crisis outbreak; empirical case-study (top-down)

- Admitting crisis; skeptical about US and global future
- Predictability of the magnitude and invention of measures to mitigate it
- Time series analysis broadly used - "We told you, using a scientific method"
- Fiscal policy relaxation after the dotcom boom put govt budget into deficit
  - Increase in household debt due to subprime lending - excused by sustaining nominal growth
  - Decline in AD; No further place for fiscal policy; Public debt alone at 100% GDP; Net exports the only way to get out?
- Asian economies: surplus; savings and cheap dollar
  - US economy flodded with dollars feeding the lending boom
- Negative borrowing → Impossible to apply fiscal and monetary stimulus large enough
  - predicting U to rise over the next 2 years
  - Further govt deficits of around 10% cannot be tolerated
- Non-restoration of public borrowing - the public will increase consumption over time
  - resotring financial mkt confidence
- "What must come to pass, perhaps obviously, is a world-wide recovery of output, combined with sustainable balances in international trade."
- fiscal expansion and a rapid acceleration in net export demand
- "It is inconceivable that such a large rebalancing could occur without a drastic change in the institutions responsible for running the world economy—a change that would involve placing far less than total reliance on market forces."

Harvey (2011) - post crisis, critique of mainstream

- Mainstream considers fluctuations to be caused exogenously; Post keynesians view them as endogenous
- Let's reach full employment for ever. Distinguidh voluntary vs. involuntary unemployment
- Rigidities slow down tendencies to growth
  - fall in demand does not allow firms to reduce nominal wages
- "The shift back and forth between stop and go fiscal and monetary policy creates the business cycle"
- Monetarists: Dumb, Say's law; household money illusion, ignoring inflation?
- Post keynesians
  - Wages downwardly rigid
  - agents operate in uncertainty
  - Animal spirits: Action rather than inaction
  - Increase in GDP leads to decrease in credit creation
  - "Expansions cause recessions which cause expansions."
- "labor demand acts in the same manner as in mainstream models, the labor supply curve does not."
- "free-market economy with no price rigidities can remain at less-than-full-employment equilibrium indefinitely."

Keen (2013) - Minsky model

- Stock-Flow Consistent' framework