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DECISIONS OF THE POWERFUL CAPITALISTS AND UNCERTAINTY: A RATIONAL EXPECTATION APPROACH

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Abstract

This paper is about the relation between giant companies and uncertainty of the monetary rule. The uncertainty comes from the decisions of the giant capitalists which are holding huge amount of capital and their future expectation. Their expectations and decisions are important for the future because their revenues are almost a country's GDP (Gross Domestic Product). Therefore, their revenues are big enough to affect economies. The main difference of the paper is the adding the decisions of the giant companies in a basic rational expectation model. Also, subject of the paper depends on Marxian monopolistic competition and surplus value theories. As a result, monetary authority is affecting the output, but unknown result so monetary rule is not efficient for stabilizing economy. New Classical Economy proposes the similar result. However, this paper explains why monetary policy is ineffective for stabilizing economy considering decisions of the giant capitalist.

Keywords: Rational Expectation, Muth Method, Uncertainty

Jel Code: E32

GÜÇLÜ KAPİTALİSTLERİN KARARLARI VE BELİRSİZLİK: RASYONEL BEKLENTİLER YAKLAŞIMI

Özet

Büyük şirketlerin bugünün ekonomilerinde büyük etkileri vardır. Beklentileri ve kararları gelecek için önemlidir, çünkü neredeyse bir ülkenin GSYİH'sini (Gayri Safi Yurtiçi Hasıla) kazanırlar. Bu nedenle, karları ekonomileri etkileyecek kadar büyüktür. Bu şirketler ekonomiler için önemli birer belirleyiciler haline geliyorlar. Varsayımlarımıza göre, karlarını reel sektörlere yatırım yapma veya bankalara borç verme yoluyla kullanabilmektedirler. Ancak, bankacılık sisteminin iyi çalışmaması toplam tasarrufların toplam yatırımlara eşit olmamasına sebep oluyor. Bu nedenle, ekonomi eksik kapasiteyle çalışıyor olacaktır. Ayrıca, mevcut toplam talep yatırımları içermektedir Para otoritesinin para politikası ekonomiyi istikrara kavuşturmakta etkili değildir çünkü büyük şirketlerin beklentilerinin, kararlarının bilmemektedirler. Bu makale de bu varsayımlarımızı rasyonel beklenti modeli ile nasıl olduğunu gösteriyoruz.

Anahtar Kelimeler: Rasyonel Beklentiler, Muth Metodu, Belirsizlik

Jel Kodu: E32

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Introduction

Powerful companies are considerable economic agents. According to the assumptions, they spend their earnings as investing in real sectors or loan to the banks or financial markets. However, the banking and financial system are not work well (Crowding-Out) (Orhangazi, 2008: 87). This mentions that surplus value (excess assets) cannot turn to the real sector and stuck in the financial markets and banks. Total savings are not equal to total investments. Therefore, there should exists excess asset. These will cause idle capacity for the next period for economies (Başköy, 2002)[2]. Also, investments are included by the current aggregate demand, so current period investment is the next period supply. Therefore, according to the reasons above either they invest or not, there will always be excess asset that cannot used in the production process. Money authority's monetary policy does not effective to stabilize the economy because they do not know what the great company's expectations, decisions and ineffectiveness of the banking system (commercial banks). We show how it happens with a rational expectation model.

We should show the greatness of the companies with some instances:

If Wal-Mart were a country, its revenues would make it on par with the GDP of the 25th largest economy in the world by, surpassing 157 smaller countries. We've found 25 major American corporations whose 2010 revenues surpass the 2010 Gross Domestic Product of entire countries, often with a few billion to spare. Even some major countries like Norway, Thailand, and New Zealand can be bested by certain U.S. firms.

Three systems theorists at the Swiss Federal Institute of Technology in Zurich have taken a database listing 37 million companies and investors worldwide and analyzed all 43,060 transnational corporations and share ownerships linking them. They built a model of who owns what and what their revenues are and mapped the whole edifice of economic power.

They discovered that global corporate control has a distinct bow-tie shape, with a dominant core of 147 firms radiating out from the middle. Each of these 147 own interlocking stakes of one another and together they control 40% of the wealth in the network. A total of 737 control

[2] You can read Tuna Başköy article for more details of the monopolistic competition. "Karl Marx's Theory of Market Competition." *Problematique* 8 (Fall 2002): 4-23.

80% of it all. Above, a list of companies and countries which are very good examples for the theory.

Conoco Phillips is bigger than Pakistan

Pakistan's GDP: $174.87 billion

Conoco Phillip's Revenue: $184.97 billion

Conoco Phillips would rank as the world's 48th biggest country.

Source: Fortune/CNN Money, IMF

Chevron is bigger than the Czech Republic

Czech Republic's GDP: $192.15 billion

Chevron's Revenue: $196.34 billion

Chevron would rank as the world's 46th biggest country.

Source: Fortune/CNN Money, IMF

Exxon Mobil is bigger than Thailand

Thailand's GDP: $318.85 billion

Exxon Mobil's Revenue: $354.67 billion

Exxon Mobil would rank as the world's 30th biggest country.

Source: Fortune/CNN Money, IMF

Walmart is bigger than Norway

Norway's GDP: $414.46 billion

Walmart's Revenue: $421.89 billion

Norway would rank as the world's 25th biggest country.

Source: Fortune/CNN Money, IMF

1. Writing and Solving the Rational Expectation Model

The model based on the basic new classical economy. The only difference is the decisions of the giant capitalist are included as a considerable factor both in aggregate supply and demand side.

(AS) $y_t = y^* - \alpha(d_{t-1}) + \varepsilon_t$ (1)

(AD) $y_t = m_t - p^* - \beta d_t$ (2)

(M^S) $m_t = m^* + \phi E_{t-1} d_t$ (3)

The notation of (d) is the decision of holding excess asset which are belong to powerful capitalists who are owner of great international companies and shareholder of respectable percentage of national GDP. Excess assets come from Marxian surplus value of these companies and if the companies decide to do not spend this surplus value as real sector investment in current period and aggregate demand current period decreases. So, this decision will cause decreasing of next period aggregate supply. Also, the financial markets and banks do not work well that means the total amount of savings occurring in the economy is not equal to the amount being invested. Therefore, these excess assets are just accumulated and are not included any production process current time($S>I$). Therefore, economy runs with idle capacity in two ways. Because of idle capacity the notation of (d) enters the equation 1 and 2 negatively. Also, monetary policy tries to hold economic stability with supplying money in to economy if there are excess assets. Other variables are same with rational expectation models. y_t is the logarithmic form of current level output, y^* is the potential output level, m_t is money supply, ε_t is the error term $\varepsilon_t \sim N(0, \sigma^2)$ with zero mean and σ^2 variance. Also, the assumption that prices are not expected to change ($E_{t-1}\Delta p_t = 0$). Therefore, prices are constant ($p_t = p^*$). E is the expectation operator. This assumption is plausible for very low inflation countries.

Write equation 1 and 3 into 2.

$$y^* - \alpha(d_{t-1}) + \varepsilon_t = m^* + \phi E_{t-1} d_t - p^* - \beta d_t \quad (4)$$

Using the Muth method of Undetermined Coefficients:

$$d_t = \bar{d} + \sum_{i=0}^{+\infty} \pi_i \varepsilon_{t-i} \quad (5)$$

Ignoring the constants and expanding results in:

$$d_t = \pi_0\varepsilon_t + \pi_1\varepsilon_{t-1} + \pi_2\varepsilon_{t-2} + ...$$
$$d_{t-1} = \pi_0\varepsilon_{t-1} + \pi_1\varepsilon_{t-2} + \pi_2\varepsilon_{t-3} + ...$$
$$E_{t-1}d_t = \pi_1\varepsilon_{t-1} + \pi_2\varepsilon_{t-2} + ...$$

Plugging in these values in the reduced form equation yields:

$$y^* - \alpha(\pi_0\varepsilon_{t-1} + \pi_1\varepsilon_{t-2} + \pi_2\varepsilon_{t-3} + ...) + \varepsilon_t = m^* + \phi(\pi_1\varepsilon_{t-1} + \pi_2\varepsilon_{t-2} + ...)$$
$$-p^* - \beta(\pi_0\varepsilon_t + \pi_1\varepsilon_{t-1} + \pi_2\varepsilon_{t-2} + ...)$$

We need to evaluate π_i, the undetermined coefficients. For this we collect terms in ε_{t-i}

$$\varepsilon_t : -\beta\pi_0 = 1$$
$$\pi_0 = -\frac{1}{\beta}$$
$$\varepsilon_{t-1} : -\alpha\pi_0 = \phi\pi_1 - \beta\pi_1$$
$$\varepsilon_{t-2} : -\alpha\pi_1 = \phi\pi_2 - \beta\pi_2$$
$$\vdots$$
$$\vdots$$
$$\vdots$$

$$d_t = -\frac{1}{\beta}\varepsilon_t + \frac{1}{\beta}\sum_{i=1}^{+\infty}(-1)^{1+i}\left(\frac{\alpha}{\phi-\beta}\right)^i\varepsilon_{t-i} \qquad (6)$$

The solution for output: put equation 6 (the formation of one period delayed) into equation 1;

$$y_t = y^* + \varepsilon_t + \frac{\alpha}{\beta}\varepsilon_{t-1} - \frac{\alpha}{\beta}\sum_{i=1}^{+\infty}(-1)^{1+i}\left(\frac{\alpha}{\phi-\beta}\right)^i\varepsilon_{t-1-i} \qquad (7)$$

Conclusion

The parameter of monetary rule (ϕ) enters the solution for output. Therefore, desire of holding excess asset creates suspense in this rational expectation model. We can't know the result of the monetary policy because of the last term. This will cause uncertainty of the monetary parameter either affect negatively or positively to economy. Consequently, even if money authority plans their monetary policy, the effect of the policy on the economy is unpredictable. Great companies make economic foresight very difficult because they become almost another country and their decisions influence whole economy. New Classic Economy propose the same result which is called ineffectiveness of the monetary policy. However, in this paper we demonstrate that the source of the ineffectiveness which is based on the giant monopolistic companies. Also, monetary parameter is not included in the result of the New Classical Economy models. Although, monetary parameter enters the solution for output in this paper, there is uncertainty how it will affect to output. Next paper will be about how giant capitalist decisions are shaped with error term that is the variable of the model of this paper.

Appendix

Yahoo is bigger than Mongolia

Mongolia's GDP: $6.13 billion

Yahoo's Revenue: $6.32 billion

Yahoo would rank as the world's 138th biggest country.

Source: Fortune/CNN Money, IMF

Visa is bigger than Zimbabwe

Zimbabwe's GDP: $7.47 billion

Visa's Revenue: $8.07 billion

Zimbabwe would rank as the world's 133rd biggest country.

Source: Fortune/CNN Money, IMF

eBay is bigger than Madagascar

Madagascar's GDP: $8.35 billion

eBay's Revenue: $9.16 billion

eBay would rank as the world's 129th biggest country.

Source: Fortune/CNN Money, IMF

Nike is bigger than Paraguay

Paraguay's GDP: $18.48 billion

Nike's Revenue: $19.16 billion

Nike would rank as the world's 102nd biggest country.

Source: Fortune/CNN Money, IMF

Consolidated Edison is bigger than the Democratic Republic of the Congo

Democratic Republic of the Congo's GDP: $13.13 billion

ConEdison's Revenue: $13.33 billion

ConEdison would rank as the world's 112th biggest country.

Source: Fortune/CNN Money, IMF

McDonald's is bigger than Latvia

Latvia's GDP: $24.05 billion

McDonald's Revenue: $24.07 billion

McDonald's would rank as the world's 92nd biggest country.

Source: Fortune/CNN Money, IMF

Amazon.com is bigger than Kenya

Kenya's GDP: $32.16 billion

Amazon.com's Revenue: $34.2 billion

Amazon would rank as the world's 86th biggest country.

Source: Fortune/CNN Money, IMF

Morgan Stanley is bigger than Uzbekistan

Uzbekistan's GDP: $38.99 billion

Morgan Stanley's Revenue: $39.32 billion

Morgan Stanley would rank as the world's 82nd biggest country.

Source: Fortune/CNN Money, IMF

Cisco is bigger than Lebanon

Lebanon's GDP: $39.25 billion

Cisco's Revenue: $40.04 billion

Cisco would rank as the world's 81st biggest country.

Source: Fortune/CNN Money, IMF

Pepsi is bigger than Oman

Oman's GDP: $55.62

Pepsi's Revenue: $57.83 billion

Pepsi would rank as the world's 69th biggest country.

Source: Fortune/CNN Money, IMF

Apple is bigger than Ecuador

Ecuador's GDP: $58.91 billion

Apple's Revenue: $65.23 billion

Apple would rank as the world's 68th biggest country.

Source: Fortune/CNN Money, IMF

Microsoft is bigger than Croatia

Croatia's GDP: $60.59 billion

Microsoft's Revenue: $62.48 billion

Microsoft would rank as the world's 66th biggest economy.

Source: Fortune/CNN Money, IMF

Costco is bigger than Sudan

Sudan's GDP: $68.44 billion

Costco's Revenue: $77.94 billion

Costco would rank as the world's 65th biggest country.

Source: Fortune/CNN Money, IMF

Proctor and Gamble is bigger than Libya

Libya's GDP: $74.23 billion

Proctor and Gamble's Revenue: $79.69 billion

Proctor and Gamble would rank as the world's 64th biggest country.

Source: Fortune/CNN Money, IMF

Wells Fargo is bigger than Angola

Angola's GDP: $86.26 billion

Wells Fargo's Revenue: $93.249 billion

Wells Fargo would rank as the world's 62nd biggest economy.

Source: Fortune/CNN Money, IMF

Ford is bigger than Morocco

Morocco's GDP: $103.48 billion

Ford's Revenue: $128.95 billion

Ford would rank as the world's 60th biggest country.

Source: Fortune/CNN Money, IMF

Bank of America is bigger than Vietnam

Vietnam's GDP: $103.57 billion

Bank of America's Revenue: $134.19 billion

Bank of America would rank as the world's 59th biggest country.

Source: Fortune/CNN Money, IMF

General Motors is bigger than Bangladesh

Bangladesh's GDP: $104.92 billion

GM's Revenue: $135.59 billion

GM would rank as the world's 58th biggest country.

Source: Fortune/CNN Money, IMF

Berkshire Hathaway is bigger than Hungary

Hungary's GDP: $128.96 billion

Berkshire Hathaway's Revenue: $136.19 billion

Berkshire Hathaway would rank as the world's 57th biggest economy.

Source: Fortune/CNN Money, IMF

General Electric is bigger than New Zealand

New Zealand's GDP: $140.43 billion

GE's Revenue: $151.63 billion

GE would rank as the world's 52nd biggest country.

Source: Fortune/CNN Money, IMF

Fannie Mae is bigger than Peru

Peru's GDP: $152.83 billion

Fannie mae's Revenue: $153.83 billion

Fannie Mae would rank as the world's 51st biggest country.

Source: Fortune/CNN Money, IMF

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