Regulation of Economy through Monetary Policy: Empirical Analysis of Impact Channels in Case of Uzbekistan

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Abstract

Ensuring economic stability through monetary policy is a hard-to-accomplish but commonly accepted way of regulating the economy in times of economic recovery or transition reforms. New landscape of global economic environment clearly demonstrated that new age of monetary policy come with new ties of monetary policy and economy. Turning the development target from fiscal to monetary policy required further research and policymaking for economy-monetary policy linkages. This article studies the role of monetary policy in regulating the economy in Uzbekistan in a rapid economic development phase.

Keywords: monetary policy, economic regulation, Uzbekistan.

1. Introduction

Monetary policy is the process by which the government, central bank, or monetary authority of a country controls the supply of money, availability of money, and cost of money or rate of interest to attain a set of objectives oriented towards the growth and stability of the economy (Iordachioaia, 2016). Cluster effect of monetary policy on regulating the economy has increased after global financial crisis. Nowadays main regulatory tool of many developed and developing economies is to monetary instruments which can easily show direct and collateral impact on major socio-economic indicators. In the recent decade global economic community witnessed the power of monetary policy in mitigating the external effects of economic downturn. Money supply, inflation, exchange rate and income level of population were normalized by monetary policy tools during sovereign debt crisis period and its inherited reflections in Greece. While theories for interconnectedness between monetary policy and economic regulation differs among thought schools, there is a growing trend of common acceptance of the importance of monetary in economy in the exemplary of abovementioned countries. Evolution of new generation of monetary policy and economic growth theories structured around three major approaches. Keynesian approach prioritized monetary policy and domestic economy linkages through inflation, production, employment, income and investment channels. This theory reflected the large scale effect of monetary policy in economic stability. In Friedman's approach monetary policy has a short-term impact on economic stability. Any long term effect is not beyond price volatility. Neoclassical approach to monetary policy and economy connections is the most contrasting. In their view, monetary policy can influence on economy when any external or sudden shocks occur in monetary system. Otherwise, economy is not influenced by monetary policy tools and impact channels.

Uzbekistan is a developing economy with a high annual economic growth rate. Output diversification, economic liberalization, series of reforms opened a new path of development after independence. Nowadays Uzbekistan has a new face of economic development with full aggregates of both fiscal and monetary policies. Fiscal policy has been executed with budget surplus despite regular increase in government spending. Monetary policy was built from the very basis of new banking system, currency system, payment system and reserve management. Monetary policy proceeds in contributing to economic growth and stability by adding key values through export promotion, FDI attraction and business environment development privileges. Moreover, financial system of Uzbekistan is bank-based in terms of capital accumulation, as it is a rapidly developing transition economy. Therefore, there is a systemic factor for strong position of monetary policy in economic regulation. This paper empirically analyses the effect of monetary policy in economy of Uzbekistan by examining the response of monetary policy indicators to economic growth.

2. Literature Review

Regulating economy by monetary policy is a hotly debated topic among policymakers and academic rounds. Monetary policy impact channels were not the topic of research for only academia, but also for government

authorities and international organizations for rescuing or at least normalizing the economy in economic turbulence and recessions. Roots of early research on monetary policy and economy trace from new era of economic thoughts we discussed above. Monetary policy has become a key tool for regulating economy in the new millennium. Series of financial imbalances in the world economy has been normalized through monetary policy tools. From the standpoint of policymaking and academic research it sparked the interest of leading scientists and experts of international financial institutions. Now we can divide the modern literature into two broad categories: (i) research papers of academia and (ii) guidelines and analytical reports of international organizations and governments. Academic rounds hotly and widely discussed and investigated the impact, relevance and applicability of monetary policy in economic regulation. Key focus of scientists concentrated on the effect of monetary policy in economic performance, growth and stability. The early pure research paper dedicated to the role of monetary policy in economic stability belongs to Milton Friedman published in 1968. In his paper, Friedman linked the properly established monetary policy with three channels: employment, price stability and growth. He suggested that monetary authority could make the biggest contribution to economic stability and growth by providing a moderate growth of quantity of money in the economy and keeping the golden equilibrium between inflation and deflation of prices. In 2010, Ridhwan et al studies the impact of monetary policy on economic development running a meta-analysis of causes of variations. They found that capital intensity, financial structure, inflation and economic size are highly interconnected to monetary policy changes. Pétursson (2001) examined transmission mechanism of monetary policy in economy and estimated the effect of interest rate change in financial system and the whole economy. In his specifications, he exploited VAR to analyze the influence of one percentage change of interest rate on exchange rate, employment rate and price levels. He found that changes in monetary policy may affect domestic demand after a half year and reaches the highest level of in the send half. He empirically proved that monetary policy changes have a long run effect in real economy. Nico (2011) conducted a strategic research on the optimal choice for the government in times of economic downturn top rescue the economy. In his research, he proved the best option theory in choosing monetary or fiscal policy in crisis conditions in the sample of 9 European countries. He found that four countries should implement monetary policy to reach the pre-crisis targets, while other five economies were advised to control fiscal policy. In 2012 World Bank Group experts Čihák, Demirgüç-Kunt, Feyen, and Levine offered a model of financial system development assessment based on 4x2 matrix of financial institutions and financial market indicators. Their model assessed the financial system as a whole through ratios of key financial indicator Deriving from the core elements of their model, we developed a monetary policy impact monitoring method by adjusting the indicator groups and new criteria. We added regulatory criteria to the part of financial institutions and generalized our modified method for the entire monetary policy.

3. Monetary Policy and Economic Development Goals of Uzbekistan

Like in all post-Soviet economies, monetary policy of Uzbekistan is in the last phase of structural reform and modernization. Uzbekistan successfully created its own financial system, established monetary authority, issued its own national currency, fully established its own banking system and launched monetary policy development strategy from the early days of independence. However, global financial linkages pose new challenges for running a smooth monetary policy. Transition process from planned to market economy was implemented with series of development-aimed reforms in monetary system, as all developing and transition economies create a bank-based financial system and gradually develop financial market to turn to financial market-based financial system. All capital and funds of individuals, firms and the government are circulated and allocated by banks. Therefore, as a representative of rapidly growing economy, monetary policy is one of the key components of economic transition, stability and sustainable growth in Uzbekistan.

Figure 1. Monetary policy tools for economic regulation
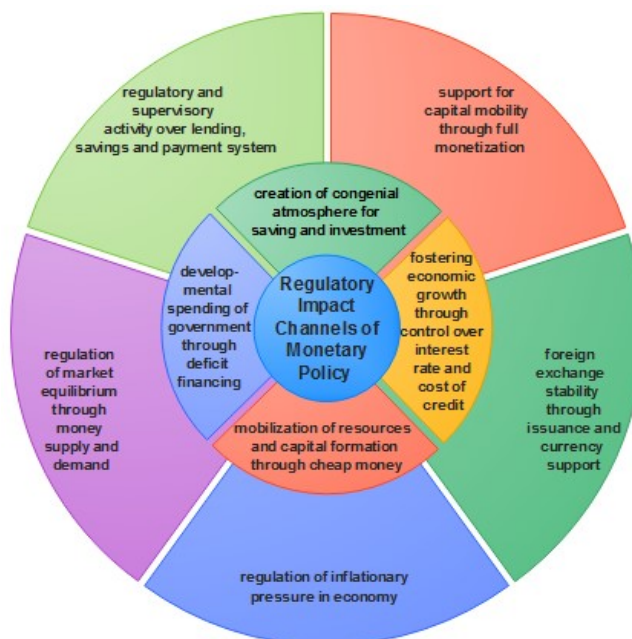
Source: Duskobilov, 2017.

Prudently set monetary policy aims to meet the demand for money in the context of rapidly growing economy. Consumption needs more money supply to cover the increasing cost of cumulative consumption. In condition of Uzbekistan, ensuring the golden equilibrium between money supply and demand is main task of monetary policy in order to fuel the growing economy with expanding business sector and high level of population growth. It facilitates to keep the optimal ratio of real income and consumption saturated with money. Another role of monetary policy in Uzbek economy is securing price stability. Price levels and exchange rate can be regulated by monetary policy through monetary support of national currency. Furthermore, price stability function of monetary policy can lower the inflation rate and natural depreciation of value. Consequently, price stability function may bridge the gap in balance of payments derived from value losses from depreciated currency in net foreign trade. Transition to market economy opened a way for accessible banking services market by creating a competitive environment. Credit market expansion is the major area of banking industry expansion which can be directly regulated by monetary policy. Lending practices of banks stimulate the investment and production, while excessive loan offers lead to solvency and liquidity loss. In Uzbekistan's practice monetary policy regulates the lending portfolios of banks and other financial institutions through refinancing rate, compulsory reserve requirements, credit rankings and loan loss provision floors. From the organizational and institutional standpoints, monetary policy controls and supervises performance of financial institutions who are the key players in mobilization of savings and investments, finance businesses and industries. It fuels the industrial development, business expansion and employment. Another important role of monetary policy in regulating domestic economy can be seen in interest rate setting and accessibility of financial services. Interest rate regulation and control gives an impetus to the domestic economy through creation of cheaper capital for industries and businesses. Here monetary policy directly enables private and public sector to reach investment funding in lower interest rate, collaterally eases mobilization of investible assets in the economy.

4. Analysis of Monetary Policy Behaviour and Economic Stability in Uzbekistan

In this part, monetary policy behaviour, its orientation and stance are examined whether within the criteria of economic stability. As stated above, monetary system of Uzbekistan is recognized with relentless annual development and the expansion of financial service coverage. Currently it embraces national currency (Uzbek soum) issuance, payment and clearing systems, foreign exchange market, 27 commercial banks, 70 non-bank financial institutions, 99 leasing agencies etc. Monetary policy is oriented to support economy not only with direct impact channels but also collateral channels. Exchange rate is set to support export and investment

attraction, which is a widespread measure of business environment enhancement in rapidly growing economies. Banking system is oriented to cover all income groups of population and organizational types of firms with full spectrum of financial services. Moreover, targeted lending policy – special loan packages for particular client groups is the most sensitive tool for income level, business environment and target sectors.

Analytically, monetary policy may perform as expected or may meet the functional requirements. But the monetary policy behaviour may change and may show countercyclical effect in the economy. Despite a large number of econometric models proposed to estimate the impact of monetary policy in economic condition, a simple arithmetical empirical model is found more efficient in the analysis of monetary policy performance in three criteria. This model was proposed by the World Bank Group experts Čihák, Demirgüç-Kunt, Feyen, and Levine in 2012 as a matrix of financial system measurement framework. Deriving from the methodology they proposed, we modified the matrix and added some monetary policy-related parameters to evaluate the depth, accessibility and stability. Our modified model monitors the monetary policy behavioural changes and condition of domestic economy (Table 1).

Table 1. Monetary policy behavior and economic condition in 2011-2015

Criteria	Indicator	2011	2012	2013	2014	2015	Behavior
DEPTH	Total lending to GDP	0.202	0.211	0.223	0.240	0.249	positive
	Financial institutions' assets to GDP	0.353	0.370	0.369	0.388	0.381	positive
	Deposits to GDP	0.231	0.211	0.219	0.197	0.208	changeable
ACCESS	Accounts per thousand adults	1.025	1.027	1.028	1.028	1.031	positive
	Branches per 100000 adults	49.5	49,7	49.7	49.7	49.8	positive
	Branches to bank ratio	27.4	28.59	28.86	32.54	32.85	positive
STABILITY	Capital adequacy ratio	0.242	0.243	0.243	0.238	0.236	changeable
	Liquidity ratio	0.651	0.650	0.651	0.646	0.645	changeable
	Exchange rate change	-0.095	-0.105	-0.110	-0.100	-0.160	negative
REGULATORY	Refinancing rate	0.12	0.12	0.12	0.10	0.09	positive
	Mandatory reserve rate	0.15	0.15	0.15	0.15	0.15	neutral
	Sterilization to GDP	0.055	0.061	0.057	0.052	0.054	changeable

Legends

positive   changeable   neutral   negative

This evaluation method of monetary policy behavior relies on periodic change in ratios of banking system performance indicators. It has four broad criteria of monetary policy's descriptive assessment: depth, access, stability and regulatory aspects. Depth of monetary policy reflects the expansionary impact of monetary policy in the domestic economy. Access shows the level of coverage and availability of financial services to all income groups, social classes and geographical area of a country. Monetary authority controls the activity areas, performance, competition policy and compliance of financial institutions. Stability of monetary policy is assessed by capital adequacy, liquidity and exchange rate fluctuations. Refinancing rate, mandatory reserve requirements and sterilization operations are the key regulatory tools of monetary policy of Uzbekistan. Therefore, we selected these three regulatory indicators in our matrix model.

The model-based assessment of monetary policy-economy linkages revealed that depth of monetary policy strengthened its position by increased lending volume by 0.047 unit, asset volume growth by 0.028, since deposit volume remained volatile. Access facilitation grew in all three sub categories 0.005 unit growth in bank accounts

per capita ratio, 0.3 unit growth in branches and 5.45 unit increase in average branch distribution per bank. Despite a fluctuating capital adequacy, monetary systems capital sufficiency shortened to 0.006 unit. However, financial system stayed absolutely sound due to its tripled soundness indicator than Basel Accord-required 8 per cent. Liquidity ratio underwent the same scenario with doubled sufficiency of the Basel Accord-required level of 30 per cent. As a main component of monetary policy and a factor of economy stability, exchange rate policy depreciated by 0.065 units in the selected time frame. It should be stressed that, exchange rate policy is regulated by the monetary authority in order support trade and investment. It countercyclical effect gives positive impetus to the economy. We, in large part, focused on the regulatory criteria of monetary policy which affects the economy through supply channels. Refinancing rate was reduced from 12 percent to 9 per cent to provide the access and cheaper lending. In international practice, refinancing rate is reduced if the economy performs best and meets the stability requirements at the expected level. In the exemplary of monetary policy of Uzbekistan, monetary policy influenced on the economy positively and ensured the demanded money volume, which finally led to regular decrease of key interest rate.

5. Conclusion

Monetary policy in Uzbekistan has proved its relevance and appropriateness for decades, which our empirical analysis brought similar interpretation from quantitative results. As our estimations shown, monetary system stability indicators and their regulatory instruments have been exploited in the selected period. Hence, volatile global economic environment and external shocks from financial downturns affects monetary system and economic stability at least collaterally. Exchange rate regulation, key interest rate settings, capital adequacy and liquidity management need timely improvement and frequent revision in consistent with global financial climate. Strength and weaknesses of monetary policy tools for economic regulation shown by our analysis can be enhanced further if the following recommendations will be taken into financial policymaking:

1. Creating a risk monitor for monetary system to analyze the hazards towards domestic economy;
2. Assessing the monetary policy tools and channels of economic regulation in terms of relevance and efficiency;
3. Launching an analysis framework to origin and dynamics of monetary hazards to evaluate the possibility of mitigating with monetary policy response;
4. Grouping the regulatory tools and their impact levels into zones by scale in order to monitor the systemic impact.

References

1. Pattipeilophy, C. et al. (2013). Unconventional Monetary Policy of the ECB During the Financial crisis: An Assessment and New Evidence. *DNB Working Papers*. No. 381. De Nederlandsche Bank. The Netherlands.
2. Ireland, P. (2006). The Monetary Transmission Mechanism. *Working Papers No*. 06-1. Federal Reserve Bank of Boston. USA.
3. Petursson, T. (2001). The Transmission Mechanism of Monetary Policy. *Monetary Bulletin. No.2001/4.* Central Bank of Iceland. Iceland.
4. Amarasekara, C. (2008). The Impact of Monetary Policy on Economic Growth and Inflation in Sri Lanka. *Central Bank of Sri Lanka Publications.* Sri Lanka.
5. Iordachioaia, A. (2013). Monetary Policy and Economic Policy. *Journal of Knowledge Management, Economics and Information Technology.* No.11/2013. Romania.
6. Precious, C. and Palesa, M. (2014). Impact of Monetary Policy on Economic Growth: A Case Study of South Africa. *Mediterranean Journal of Social Sciences*. Vol.5. No.15. Italy.
7. Vinayagathasan, T. (2013). Monetary Policy and the Real Economy: A Structural VAR Approach for Sri Lanka. *GRIPS Discussion Papers*. No. 13-13. Japan.
8. Friedman, M. (1968). The Role of Monetary Policy. *The American Economic Review*. Vol. LVIII, No. 1. USA.
9. Bollard, A. and Hunt, C. (2005). Monetary Policy and Economic Performance: the Experience of New Zealand. *Reserve Bank of New Zealand Bulletin*, Vol. 68, No. 4. New Zealand.
10. World Bank. (2012). *Global Financial Development Report 2013: Rethinking the Role of the State in Finance*. Washington, DC: World Bank.