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The Impact of Monetary Policy on the GDP of Iran through Innovation Channel

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EXTENDED ABSTRACT

INTRODUCTION

Nowadays, countries should consider the expansion of the knowledge-based economy to witness endogenous and extroverted growth. So, the government and central bank's policies should be designed to support the new factors of production, like human capital, R&D, and Innovation. To do so, this study tries to illustrate if monetary policies implemented by the central bank of I.R. Iran between 1978 and 2016 were aligned with the expansion of the innovation market, as one of the prominent factors of a knowledge-based economy.

METHODOLOGY

In this study, we used a simultaneous equation system to investigate the monetary policy effect on GDP through innovation channel in the period of 1978 to 2016.

The data was extracted from the central bank of I.R. Iran, and since this study tries to investigate the monetary policy effect on GDP through innovation channel, its spatial scope is national.

Specifying research model

To investigate the study's hypotheses following equations were used:

$$(1) \quad LGDP_t = \beta_0 + \beta_1 LIN_t + \beta_2 LL_t + \beta_3 LK_t + \varepsilon_t$$

$$(2) \quad Linn_t = \gamma_0 + \gamma_1 L \left(\frac{K}{L} \right)_t + \gamma_2 LGDP_t + \gamma_3 LM_t + v_t$$

In these equation IN, L, K, $\left(\frac{K}{L} \right)$, and M refer respectively to Innovation, Labor force, Physical capital stock, Physical capital Intensity, and Monetary policy index. It should be noted that since four different monetary indexes were used, four systems of the simultaneous equation were estimated too.

FINDINGS

The results show that monetary policies with money stock as a proxy had a negative and significant effect on Innovation in Iran. However, the influence of Innovation on GDP was positive and significant. Therefore, the monetary policy harmed GDP through the Innovation channel.

CONCLUSION

By implementing a change to relative prices of production factors, it is expected to see rational producers substitute less expensive combination of factors of production. In that case, the implemented policies will determine which factors will be used more in the production process. Interestingly, in our study period, the effect of monetary policy on GDP and GDP without Oil through innovation was negative. Therefore, these policy recommendations can be suggested:

- I.R.Iran Central bank should be careful about its policies on the innovation market and should implement policies to change the current situation.
- Also, Central bank's consultants should recommend policies that aim at knowledge-based economy expansion without any political consideration.

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