

The Impact of Monetary Policy on Healthcare Affordability: A Case Study of China's Urban and Rural Basic Medical Insurance

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Abstract: Longer life expectancy and improved health are key indicators of economic growth. As such, strategies to bolster the medical security system are priorities in government budgeting. The government is dedicating all available resources to better healthcare in rural and underdeveloped areas, narrowing the urban-rural healthcare gap, and achieving equitable healthcare resource distribution. This study examines the effect of monetary policy on healthcare affordability, focusing on China's Urban and Rural Basic Medical Insurance (URRBMI). It investigates how macroeconomic policies, such as interest rates and inflation control, affect healthcare costs and shape URRBMI's financial protection. Using an integrated methodology, including a literature review, theoretical framework, and econometric analysis, the research uncovers how monetary policy impacts healthcare costs and URRBMI's effectiveness. The findings highlight the importance of monetary policy in healthcare affordability. The study recommends collaboration between monetary authorities and healthcare policymakers to improve China's healthcare system's sustainability and effectiveness. Furthermore, these insights are crucial for refining URRBMI and provide new understandings of optimizing macroeconomic policy interactions with social welfare programs.

Keywords: URRBMI, Inflation, Monetary policy, Healthcare Affordability.

1. Introduction

The relationship between monetary policy and healthcare affordability is intricate and multifaceted. Monetary policy, which includes the regulation of interest rates, money supply, and exchange rates, substantially impacts the macroeconomic environment, thereby affecting healthcare costs and accessibility. The primary objectives of monetary policy include managing inflation, fostering economic expansion, and ensuring financial integrity. Changes in monetary policy can directly impact healthcare costs [1, 2]. For instance, increased interest rates can intensify the financial burden on healthcare institutions, leading to higher service fees. Inflation, a major concern of monetary policy, can increase the costs of medical equipment, pharmaceuticals, and services, thus affecting healthcare affordability. Studies show that during periods of high inflation, healthcare expenditure as a proportion of GDP tends to rise significantly [3]. Monetary policy also exerts an indirect influence on social welfare by altering household income and spending power, which in turn affects healthcare

affordability [4]. In China, the URRBMI is designed to provide basic medical insurance for urban and rural residents. This initiative aims to address the problem of people falling into poverty due to illness, ensure their health, and promote rural economic and social development.

This study is significant in its theoretical contributions to the comprehension of the interplay between macroeconomic and social welfare policies. It provides a novel framework for understanding the multifaceted effects of macroeconomic policies, thereby broadening the scope of traditional research. This novel framework also serves as a model for interdisciplinary study and facilitates the development of a comprehensive policy impact assessment system. Practically, the research provides empirical backing for refining monetary policies. Investigating the impact of monetary policy on healthcare accessibility assists policymakers in assessing and reconciling social impacts during policy formulation, thereby promoting harmonious economic and social regulation. Furthermore, the study sheds light on healthcare policy innovation, guiding respondents in proactively addressing economic shifts and enhancing policy resilience and efficacy.

2. China's Urban and Rural Basic Medical Insurance (URRBMI)

2.1. Background and Operation Mechanism

China is committed to building a more all-encompassing and effective health insurance system that, via integration and coordination, meets the varied requirements of its people, including those of different social segments. This aim is to enhance the overall efficacy of the medical insurance infrastructure. In 2018, the Chinese government undertook a landmark reform of the medical insurance system, amalgamating the original New Rural Cooperative Medical Scheme (NRCMS) with the Urban Resident Basic Medical Insurance Program (URBBI), thereby instituting the Urban and Rural Resident Basic Medical Insurance System (URRBMI). This initiative ensures the continuity and equity of medical insurance coverage, thereby extending health benefits to a broader demographic through national policy implementation [5,6].

2.2. The Role of China's Urban and Rural Basic Medical Insurance (URRBMI)

Vulnerable groups, defined by low-income and chronic conditions, face barriers to accessing quality healthcare. Health insurance ensures they have essential medical care. Policies have merged urban and rural systems, expanded the capital pool, and increased resources. Insurance is funded by government subsidies and individual contributions, adjusted for medical costs and benefits. By 2022, individuals will receive an average of 960 yuan, with at least 610 yuan in subsidies and 350 yuan paid personally. This covers 70% of hospital costs and includes outpatient chronic disease and maternity care. Critical illness coverage eases financial burden without additional payments. This comprehensive coverage reduces out-of-pocket expenses and meets essential healthcare needs. With educational enrollment growth, over 95% of the population, including those in economically challenged circumstances, is insured[5][7]. The policy aims to establish a unified health insurance system, improve service quality and governance, and promote healthcare equity.

3. The Transmission Mechanisms of Monetary Policy and Healthcare Affordability

3.1. Transmission Mechanisms of Monetary Policy

China's monetary policy framework has shifted from direct credit controls to more indirect, price-based tools, distinguishing it from advanced economies [8, 9]. The main instruments include the seven-day repo rate and the medium-term lending facility rate (MLF). Although access to credit remains critical, the monetary transmission mechanism has become less efficient in recent years [10].

To enhance transmission, China needs to allow markets to play a fuller role, advance capital market reforms, coordinate monetary and fiscal policies, and expand financing support for the private sector.

3.2. Healthcare Affordability

The program has played a key role in increasing the affordability of healthcare for all, especially in standardizing coverage and benefits. It covers urban and rural areas and helps close the gap in access and affordability of healthcare. The implementation of standardization ensures that residents everywhere can enjoy similar benefits, thus promoting equity in health care. In addition, the program has increased reimbursement rates for various medical services, reduced out-of-pocket costs for patients, reduced their financial burden, and made health care more accessible and affordable. The combination of policies has narrowed the gap between urban and rural medical care and improved the access and quality of medical care for rural residents. At the same time, the system provides financial protection against catastrophic health expenditures and prevents the return to poverty due to illness, especially for low-income households. These improvements have made substantial progress in improving the affordability of healthcare in our country. However, regional disparities, out-of-pocket costs, and sustainability challenges still require ongoing improvements to ensure equitable access to healthcare and financial sustainability[11].

4. Potential Impacts of Monetary Policy Changes

4.1. The cost of Insurance and the Level of Reimbursement

In China, the People's Bank of China uses monetary policy tools such as interest rates to influence inflation and the overall economic situation, thereby affecting the cost and reimbursement level of basic medical insurance for urban and rural residents. First, when interest rates fall, expansionary policy stimulates the economy, which increases aggregate demand, and the inflation resulting from rising prices too quickly can raise healthcare costs. When interest rates rise, the government implements a contractionary monetary policy, which results in reducing aggregate demand and slowing economic growth, which helps control inflation. When inflation rises, the cost of drug services tends to increase across the economy, impacting fees for hospitals, clinics, pharmaceutical companies and other health care providers. Thus, when inflation is high, the individual contribution to health insurance increases rapidly, and vice versa.

Government subsidies play a vital role in the system. However, inflation affects the government's fiscal capacity, which may affect its ability to maintain or increase health insurance subsidies. Because higher medical costs due to inflation put pressure on the reimbursement system, the government may need to adjust reimbursement levels to keep pace with rising costs. But if reimbursement does not keep up with inflation, it may lead to out-of-pocket costs for patients, and the result may be that poor people are not willing to go to the doctor, resulting in lower productivity and slow economic growth[12].

4.2. The Burden of Residents' Medical Expenditure

Rising health care costs due to interest rate adjustments and increased inflation have put tremendous pressure on residents, making health care even more unaffordable. Therefore, inflation affects not only the overall economic environment, but also the government's ability to subsidize health insurance, and the ability of residents to afford health care. As health care costs rise due to inflation, residents may delay or avoid seeking necessary medical care, which can exacerbate the long-term medical costs of health care. Changes in monetary policy indirectly affect residents' medical costs by altering the rate of inflation, which in turn affects the affordability and accessibility of health care. In

some cases, patients may be adjusting the way they manage chronic diseases because of rising medical costs, opting for cheaper medications and less frequent tests. There may even be fewer elective or non-essential medical procedures due to increased medical costs, and patients may delay or forgo treatments that are not immediately necessary[13]. However, a long delay greatly increases the risk of physical deterioration, which in general is not benefit for the health of the population.

For such reasons, the public is more likely to focus on preventive care to prevent the onset of disease and avoid future high treatment costs. As technology evolves and traditional medical costs rise, patients may prefer telemedicine. Telemedicine has accessible technology, integrated costs, benefits, and high-quality care. It provides remote consultation services, allowing patients to consult with doctors without visiting in person. This is especially helpful for people in rural or underserved areas, where 24/7 services make care readily available to patients. Patients can consult in real time via video calls to monitor their health. In addition, telemedicine eliminates the need for patients to go to the hospital, saving time and money. Healthcare providers can also reduce the indirect costs of maintaining physical office space. During COVID-19, many hospitals and clinics have integrated telemedicine services for a wide range of services, including mental health, support for chronic disease management and general counselling, as a more cost-effective way to get health advice[14, 15].

4.3. The Cost of Providing Services by Medical Institutions

Since China needs to import medical devices and drugs, fluctuations in the exchange rate have a significant impact on imports of medical devices and drugs. According to the negative correlation between exchange rate fluctuations and pharmaceutical imports mentioned in the study[16], although not statistically significant, it found that for every 1% increase in exchange rate fluctuations, imports and exports fell by 0.17% in the short term. This suggests that exchange rate fluctuations affect the cost and availability of imported medical supplies. When the local currency depreciates, it will increase the cost of imported medical equipment and drugs, which directly affects the operating costs of medical institutions. When monetary policy works by controlling the money supply, it can lead to inflation in the healthcare sector. As the study notes[17], economy-wide inflation grew 12.4 percent between 2021 and 2023, twice as fast as Medicare, and increased supply could lead to higher prices overall, including the cost of medical devices, equipment, and labor. Of course, rising interest rates will also affect the ability of pharmaceutical companies to fund research and development, and thus the availability of new drug treatments[18]; It is more difficult for healthcare providers to obtain funding for expensive medical equipment or facility expansions, which may indirectly increase the cost of certain medical services[19], which also has a high probability of influencing patients' treatment choices and behaviors.

5. Challenges and Policy Recommendations for Improving Healthcare Affordability

Currently, China's high-quality medical resources are mainly concentrated in first-tier and second-tier cities, which results in a huge difference in the level of medical service between urban and rural areas, and directly reflects the regional imbalance in the allocation of medical resources. For example, hospitals in cities are densely equipped with medical equipment, while rural areas need more basic medical facilities, resulting in limited-service opportunities, and technical and nursing expertise predominates in cities[20]. There is a shortage of medical personnel in rural areas because of poor pay conditions and doctors are more inclined to work in cities, resulting in a wide disparity in the ratio of doctors to patients. Urban doctors receive more comprehensive training and have more professional development opportunities, which further widens the gap in service quality[21]. In addition, urban residents have better health indicators, with low infant mortality and high life

expectancy, while rural health care is limited in accessibility and quality. Urban residents have greater access to preventive care and health education, more conducive to chronic disease management and health maintenance. The resulting chain reaction is that different provinces and cities have developed a variety of medical insurance reimbursement policies, which not only dazzling patients, but also widening the gap between regional medical resources equity[22]. Although our government has devoted much effort to the integration of the medical insurance system, there is still an insurmountable gap between urban and rural residents in enjoying medical resources, and the middle-aged and elderly groups are facing unprecedented challenges[23].

In view of the multiple challenges currently encountered, a comprehensive cost control strategy is recommended. The strategy should include the use of price supervision mechanisms, as well as the establishment of professional diagnostic teams, in order to achieve effective control over the continuous rise of medical costs and ensure that China's medical resources are fully utilized. At the same time, in the process of policy formulation, we should focus on how to alleviate the uneven distribution of medical resources by enhancing the accessibility of medical services in developed areas and increasing the investment in medical security infrastructure in rural areas. Such measures would incentivize patients to seek medical treatment in terms of nearby medical institutions, thereby reducing the excessive out-of-pocket medical burden they bear for cross-provincial medical treatment.

6. Conclusion

The impact of monetary policy on the affordability of urban and rural medical care, especially under China's basic medical insurance system, shows a multi-dimensional and significant impact. The interaction between macroeconomic policy and access to health care reveals a complex interrelationship. This linkage has broad implications for the healthcare system and its beneficiaries. With the implementation of the urban and rural basic medical insurance system, China's urban and rural residents have made remarkable progress in the coverage and accessibility of medical care. By integrating separate insurance schemes in the past, the system has effectively narrowed the gap between urban and rural areas in terms of access to health care and promoted the utilization rate of inpatient services, especially in rural areas, which fully validates the effectiveness of the scheme in improving access to health care. Nonetheless, the impact of monetary policy on the affordability of health care remains a crucial question. Interest rates, inflation, and exchange rate fluctuations can all have a significant impact on healthcare costs, insurance premiums, and overall affordability of medical services, which can overburden the system and affect out-of-pocket costs for patients. In essence, while China has made remarkable progress in expanding coverage of basic health care in urban and rural areas, the ongoing challenge lies in balancing economic stability and affordability. The government needs to address these challenges through innovative policy instruments and ongoing research to further strengthen our healthcare system and ensure that all citizens have access to sustainable and affordable healthcare services.

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