

## CONTRIBUTION OF PHARMACIES AND PHARMACISTS TO LOCAL ECONOMIC GROWTH AND CONTROL OF PUBLIC HEALTH COSTS

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### Abstract

Pharmacies and pharmacists play a strategic role in supporting health development while contributing to local economic growth. This study aims to analyse the contribution of pharmacies and pharmacists to the local economy and their efforts in controlling public health costs. Through literature review and descriptive approach, it was found that pharmacies not only provide access to medicines and health services but also create jobs, support micro and small businesses, and increase the income of the surrounding community. On the other hand, pharmacists play a role in educating the public about rational drug use, promoting the use of generic drugs, and conducting efficient patient therapy management. These roles have proven to reduce healthcare costs at both the individual and national levels. Thus, pharmacies and pharmacists not only function as elements of healthcare services but also as agents of economic development and pillars of efficiency in the public healthcare system.

**Keywords:** Pharmacy, Pharmacist, Local Economy, Health Costs, Generic Drugs, Pharmaceutical Services.

### Introduction

Pharmacies are one of the most important healthcare facilities in Indonesia's public health system. Their role is not limited to selling medicines, but also includes professional pharmaceutical activities carried out by pharmacists. Pharmacies are now easily accessible in various rural areas and urban centres, expanding public access to quality medications and reliable healthcare services (Dalton & Byrne, 2017).

The origins of pharmacies in the world can be traced back to the word "*apotheca*," which meant a storage room for goods in ancient Rome. It later developed rapidly in several major civilisations, including Baghdad, before eventually reaching Indonesia during the Dutch colonial period. During the colonial period, only Europeans operated pharmacies, but after independence, the Indonesian government began empowering local people to pursue this profession and issued special regulations to support the development of pharmacy. (Gastens et al., 2025).

The role of pharmacies has grown significantly since the government recognised the importance of professional supervision and services in pharmaceutical practice, particularly following the enactment of Law No. 51 of 2009, which defines pharmacies as pharmaceutical service facilities that must be managed by pharmacists. As a result, the fulfilment of the public's needs for medications, medical devices, and proper medication education is now under the supervision of competent professional staff ( , 2025) .

Pharmacists, as professionals in pharmacies, are not only responsible for dispensing and dispensing medicines but also providing counselling, education, and ensuring the safety and effectiveness of treatment for patients. They are required to practise in accordance with pharmaceutical service standards to achieve optimal health outcomes in the community. These practice standards also aim to protect the public from counterfeit drugs and drug abuse, as well as improve patients' overall quality of life (Trisnantoro et al., 2023) . Beyond health aspects, pharmacies and pharmacists also make significant contributions to local economic growth. The presence of pharmacies creates job opportunities for the local community, both in pharmaceutical and non-pharmaceutical roles, ranging from pharmacy assistants, administrative staff, to cleaning personnel. Moreover, professionally managed pharmacies often collaborate with local SMEs, such as suppliers of complementary health products (Destria et al., 2025) .

The characteristics of pharmacies as healthcare service providers and retail businesses enable them to survive and adapt to the dynamics of the local economy. Pharmacies can serve as successful examples of small and medium-sized enterprises (SMEs) that can grow through service innovation and expand their outlet networks, as demonstrated by franchise pharmacy chains and pharmacies supported by state-owned enterprises (SOEs) and universities. This has a positive impact on economic activity in the health services and product distribution sector (Tonin & et al., 2021) .

From a public health cost control perspective, the involvement of pharmacists in the service process is very influential. Pharmacists play an active role in educating patients to use medicines rationally, encouraging the use of more affordable generic medicines, and providing accurate information about dosages and side effects. This is important to prevent healthcare costs from escalating due to inappropriate medication use or the consumption of unnecessary health products (Bush & Sommers, 2022) .

Pharmacies also serve as the main point in regulating the distribution of medicines, especially preventing the distribution of illegal or counterfeit medicines that can harm public health and increase medical costs. With an administrative system and supervision by pharmacists, the process of providing and distributing medicines is more orderly and efficient. The existence of legal and supervised pharmacies also protects the public from fraudulent practices in the pharmaceutical field. In addition to being a community service centre, many pharmacies also fulfil an educational role by offering free consultation services, health seminars, and basic health check-ups for the local community. Such innovations enhance public health literacy while expanding the social role of pharmacies and pharmacists in the eyes of the public (Rero et al., 2024) .

Educational pharmacies such as Airlangga Pharmacy, for example, not only serve as training grounds for aspiring pharmacists but also as research centres in community pharmacy and health information services. Such models can enhance the quality of services and professional development of pharmacists, thereby strengthening the role of pharmacies in local economic development alongside improvements in human resource quality (Carneiro & de Oliveira, 2022) . Historically, the growth of pharmacies in Indonesia is closely tied to regulatory transformations and new understandings of the importance of community pharmacy. With deregulation, pharmacies now serve not only as businesses but also as strategic partners for the government and society in ensuring quality and affordable healthcare, including in reducing healthcare costs for the community (Alsetohy et al., 2025) .

The social function of pharmacies has become increasingly relevant in today's world, where the cost of healthcare services remains a challenge for many families. Through collaboration between pharmacies, pharmacists, the government, and the community, it is hoped that the role of pharmacies in improving the welfare of society can be optimised—both in terms of the local economy and national healthcare cost efficiency. With the expansion of modern pharmacy networks, business model innovations, and enhanced professionalism among pharmacists, contributions to the economy and public health will continue to grow. This study aims to conduct an in-depth examination of the contributions of pharmacies and pharmacists, both in terms of local economic impact and healthcare cost control, to strengthen the arguments and policy foundations for the development of the pharmaceutical sector in the future.

## **Research Method**

The method used in this study is literature review, which is a method conducted by collecting, examining, and analysing various relevant sources such as scientific journals, books, research reports, and other documents related to the research topic. The researcher identifies, evaluates, and synthesises the results of previous studies to gain a comprehensive understanding, identify patterns, and formulate theoretical and methodological contributions to the issue under examination. The data used is secondary and obtained through systematic searches of published literature, then analysed descriptively to answer the research questions (Elijah & Aslan, 2025) ; (Cronin et al., 2008).

## **Results and Discussion**

### **The Contribution of Pharmacies and Pharmacists to Local Economic Growth**

Pharmacies and pharmacists play a very strategic role in supporting local economic growth in various regions of Indonesia. Pharmacies are not only providers of health services, but also drivers of the microeconomy that directly impact the welfare of the surrounding community. Pharmacies contribute to job creation at the local level. Each pharmacy typically employs pharmacists, pharmacy assistants, administrative staff, and

cleaning personnel. As a result, pharmacies are one of the business units that absorb labour and reduce unemployment rates in the region. (Chisholm-Burns & et al., 2020).

In addition to creating job opportunities, pharmacies also promote the growth of micro, small, and medium enterprises (MSMEs). Many pharmacies provide space for local MSME products, such as healthy foods, medical devices, and herbal products, thereby expanding the market and increasing the income of MSME actors (Ahmed & et al., 2023).

Pharmacists, as professional staff in pharmacies, play a role in educating the public about the rational use of medications. This education not only improves public health quality but also reduces unnecessary healthcare costs, allowing public funds to be redirected toward other economic needs (Dixon & Johnston, 2023).

The Village Pharmacy Programme initiated by the government is a concrete example of how pharmacies contribute to local economic empowerment. Village pharmacies are managed by local staff and supported by village cooperatives, ensuring that business profits are reinvested in the community and sustainably strengthening the village economy. The presence of pharmacies in villages also expands access to legal and affordable healthcare services and medications. This helps prevent the sale of illegal drugs and improves the safety and quality of life for village residents. (Nasution & et al., 2025).

Living pharmacies, which involve the use of land to grow medicinal plants, are also an innovation that supports food security and family health. This programme not only improves health but also opens up new business opportunities based on local medicinal plants. Pharmacists play a role in preserving local culture through research and development of herbal medicines based on local wisdom. These activities promote innovation in health products and create economic value for the local community (Arunmanakul & et al., 2022).

From a business perspective, the growth in the number of pharmacies in Indonesia shows a positive trend. Data indicates that the national pharmaceutical market is dominated by drug distribution through pharmacies, which accounts for approximately 50% of total drug distribution in Indonesia. The value of this market continues to increase every year, reflecting the significant contribution of pharmacies to the national and local economy (Wei & et al., 2024).

Pharmacies are also strategic partners of the government in the National Health Insurance (JKN) programme. With pharmacies integrated into the JKN system, people have easier access to government-subsidised medicines, thereby increasing purchasing power and economic turnover in the pharmaceutical sector. Cooperatives involving pharmacists and pharmacies provide a professional platform for mutual growth. Through cooperatives, pharmacists can develop their businesses without relying on bank loans, strengthen local economic institutions, and enhance the capacity of micro-enterprises in the health sector.

Another innovation implemented by pharmacies is providing health consultation services, simple examinations, and public health education. These services improve health literacy and strengthen the position of pharmacies as centres of social and economic services in the community.

Community pharmacies also play a crucial role in emergency situations, such as pandemics. They serve as the frontline in providing medications, medical supplies, and disease prevention education, thereby helping to maintain economic stability and public health during crises. (Bacci et al., 2025) .

Collaboration between pharmacies, pharmacists, and local institutions such as cooperatives, village-owned enterprises (BUMDes), and small and medium enterprises (SMEs) creates an inclusive and sustainable economic ecosystem. This synergy strengthens local economic resilience and improves overall community well-being. The economic impact of pharmacies is also evident in increased local government revenue through taxes and business fees. Rapidly growing pharmacies in an area serve as an indicator of economic growth and improved purchasing power among the community. (Dalton & Byrne, 2017) .

Pharmacists, as micro-entrepreneurs in the health sector, are now receiving support from various government programmes, such as cooperative assistance and business training. This support strengthens the role of pharmacists in developing their businesses and contributing to post-pandemic economic recovery.

Overall, pharmacies and pharmacists make a tangible contribution to local economic growth through job creation, empowerment of SMEs, innovation in healthcare services, and strengthening of community-based economic ecosystems. This strategic role not only improves the well-being of communities but also strengthens economic and health resilience at both the local and national levels.

### **The Role of Pharmacies and Pharmacists in Controlling Public Health Costs**

Pharmacies and pharmacists play a central role in efforts to control public healthcare costs. This role is not limited to the provision of medicines, but also includes aspects of education, therapy management, and operational efficiency, all of which have a direct impact on broad healthcare cost savings. Pharmacies serve as the front line in ensuring the availability of safe, effective, and affordable medicines for the public. Through efficient inventory management, pharmacies can reduce waste caused by expired or obsolete stock, thereby minimising operational costs and keeping medication prices competitive (Gastens et al., 2025) .

Pharmacists, as professionals in pharmacies, play an active role in educating patients about the rational use of medicines. This education includes explaining the importance of adherence to dosage, duration of therapy, and the selection of generic medicines that are more economical but still of high quality. One of the main contributions of pharmacists in cost control is promoting the use of generic drugs. Pharmacists educate

the public that generic drugs have the same efficacy and safety as branded drugs but at a much more affordable price (Umeh & Okafor, 2025).

Pharmacist intervention in selecting cost-effective therapies has been proven to significantly reduce treatment costs. Studies show that pharmacist involvement in patient therapy management, such as medication therapy management (MTM), can reduce unnecessary medication use and prevent complications that lead to additional costs.

Pharmacies also play a role in optimising medication inventory management through methods such as Reorder Point (ROP). By understanding medication demand patterns, pharmacies can efficiently manage purchases, avoid excess stock, and reduce storage costs and losses due to expired medications (Trisnantoro et al., 2023).

Clinical pharmacy services provided by pharmacists, such as counselling, adverse effect screening, and therapy monitoring, help patients achieve optimal treatment outcomes. This not only improves patients' quality of life, but also prevents costly hospitalisation or further medical interventions (Destria et al., 2025).

Pharmacists also play a role in supporting the National Health Insurance (JKN) programme by ensuring that medicines are used in accordance with the national formulary and preventing overutilization of medicines. This efficiency is very important in reducing the burden of national health system financing. The education provided by pharmacists is not limited to patients in pharmacies, but also through community programmes, health campaigns, and outreach in various public places. These efforts enhance public health literacy and promote wise medication use. Proper inventory management at pharmacies ensures timely availability of medications according to patient needs. This prevents excessive medication purchases, which can burden both household finances and healthcare facilities. (Tonin & et al., 2021).

Pharmacists also play a role in preventing medication errors and drug-related problems (DRPs) that can lead to increased treatment costs due to side effects or complications. Pharmacist interventions have been proven to reduce the incidence of DRPs and improve treatment cost efficiency, particularly among elderly patients and those with chronic conditions. The counselling provided by pharmacists helps patients understand the importance of completing therapy as prescribed, reduce the risk of drug resistance, and prevent disease recurrence, which can increase future treatment costs. (Bush & Sommers, 2022).

Pharmacies are also strategic partners of the government in the procurement and distribution of generic drugs, thereby expanding public access to affordable and high-quality medicines. This is crucial in reducing healthcare costs at the national level. Innovations in pharmacy services, such as online consultations, health screenings, and loyalty programmes, also improve cost efficiency by preventing diseases early and reducing the need for visits to more expensive healthcare facilities (Rero et al., 2024). Effective financial management of pharmacies, including cash flow monitoring and control of overhead costs, ensures the sustainability of pharmacy operations while keeping medication prices affordable for the public. Collaboration between pharmacists, doctors,

and other healthcare professionals in multidisciplinary teams strengthens patient therapy management, prevents duplicate treatments, and reduces unnecessary costs (Carneiro & de Oliveira, 2022).

Overall, the role of pharmacies and pharmacists in controlling public health costs is vital. Through education, therapy management, inventory optimisation, and service innovation, pharmacies and pharmacists are able to reduce health costs without compromising service quality, thereby contributing to the achievement of an efficient and sustainable health system.

## Conclusion

Pharmacies and pharmacists make a significant contribution to local economic growth through job creation, empowerment of MSMEs, and increased economic activity in the health sector. The presence of pharmacies in various regions not only facilitates public access to medications but also opens new business opportunities, increases local revenue, and strengthens community-based economic ecosystems. Pharmacists, as professional healthcare providers, also drive innovation in services and collaboration with various stakeholders, thereby enhancing local economic resilience.

In controlling public health costs, pharmacies and pharmacists play an important role through education on rational drug use, promotion of generic drugs, and efficient therapy management. Pharmacists help patients choose effective and economical therapies, improve treatment adherence, and prevent unnecessary drug use. These efforts have a direct impact on health cost savings, both at the individual and overall health system levels.

Overall, the synergy between pharmacies and pharmacists not only improves the quality of healthcare services but also contributes to local economic growth and healthcare cost efficiency. This strategic role makes pharmacies and pharmacists important pillars in the development of sustainable health and economy at both community and national levels.

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