

ORIGINAL

Economic Measures for Risk Control and Cost Containment in Healthcare in Morocco: An Exploratory Study

Medidas económicas para el control de riesgos y la contención de costos en la atención sanitaria en Marruecos: un estudio exploratorio

Aazelarab Boughaleb¹  , Mounir Jerry¹ 

¹Laboratory of Economic Sciences and Public Policy, Ibn Tofail University, Kenitra, Morocco.

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Corresponding author: Aazelarab Boughaleb 

ABSTRACT

Introduction: controlling healthcare expenditures is a major challenge for Morocco, particularly with the expansion of universal health coverage. This reform raises issues of financial sustainability, equity, and efficiency of financing mechanisms, requiring an evaluation of the implemented economic measures.

Objectives: to analyze and assess the effectiveness of economic measures adopted to control financial risks and healthcare expenditures. To identify key initiatives, challenges, and recommendations to strengthen the sector's financial governance.

Method: a qualitative approach combining documentary analysis and a semi-structured survey conducted with 18 healthcare sector experts via an online questionnaire. Thematic analysis of responses identified effective measures, limitations, and areas for improvement.

Results: Coordinated Care Pathways (CCPs), Health Technology Assessment (HTA), and the drug reimbursement strategy are perceived as effective. However, challenges remain, including lack of coordination, an inadequate regulatory framework, and fragmented information systems. Recommendations include strengthening financial governance, integrating digital tools, and optimizing regulatory and pricing mechanisms.

Conclusion: the study highlights the need for an integrated approach to improve healthcare expenditure management in Morocco. Adopting financial risk management technologies, modernizing regulatory tools, and strengthening primary care are essential to ensuring sustainable universal health coverage.

Keywords: Health Expenditure Management; Financial Risk Management in Health; Universal Health Coverage; Moroccan Health System.

RESUMEN

Antecedentes: el control del gasto sanitario es un desafío importante para Marruecos, especialmente con la expansión de la cobertura sanitaria universal. Esta reforma plantea cuestiones de sostenibilidad financiera, equidad y eficiencia de los mecanismos de financiación, lo que requiere una evaluación de las medidas económicas implementadas.

Objetivos: analizar y evaluar la efectividad de las medidas económicas adoptadas para controlar los riesgos financieros y los gastos en salud. Identificar las principales iniciativas, desafíos y recomendaciones para fortalecer la gobernanza financiera del sector.

Método: un enfoque cualitativo que combina el análisis documental y una encuesta semiestructurada realizada a 18 expertos del sector sanitario mediante un cuestionario en línea. El análisis temático de las respuestas permitió identificar medidas efectivas, limitaciones y áreas de mejora.

Resultados: los itinerarios de atención coordinada (CCPs), la evaluación de tecnologías sanitarias (ETS) y la

estrategia de reembolso de medicamentos se consideran eficaces. Sin embargo, persisten desafíos como la falta de coordinación, un marco regulador inadecuado y la fragmentación de los sistemas de información. Las recomendaciones incluyen el fortalecimiento de la gobernanza financiera, la integración de herramientas digitales y la optimización de los mecanismos regulatorios y de precios.

Conclusión: el estudio subraya la necesidad de un enfoque integrado para mejorar la gestión del gasto sanitario en Marruecos. La adopción de tecnologías para la gestión del riesgo financiero, la modernización de las herramientas regulatorias y el refuerzo de la atención primaria son esenciales para garantizar una cobertura sanitaria universal sostenible.

Palabras clave: Gestión del Gasto Sanitario; Gestión del Riesgo Financiero En Salud; Cobertura Sanitaria Universal; Sistema de Salud Marroquí.

INTRODUCTION

Managing healthcare expenditures is a major challenge for health systems worldwide, particularly in developing countries where resources are limited and healthcare needs are constantly increasing.^(1,2) In this context, the implementation of effective economic mechanisms becomes an essential lever to ensure the financial balance of health systems and guarantee equitable access to care.

In Morocco, structural reforms have been undertaken, notably the expansion of universal health coverage under Law 09.21 on social protection. This reform aims to ensure access to healthcare for the entire Moroccan population. However, it raises significant challenges, particularly regarding financial sustainability, the efficiency of financing mechanisms, and equity in resource distribution.^(3,4) One of the main concerns is the high level of Out-of-Pocket (OOP) health expenditures, which limits access to healthcare, especially for vulnerable populations.⁽⁵⁾

In this context, a key question arises: What economic measures are implemented to control risks and manage healthcare expenditures in Morocco, and how can they be evaluated in terms of efficiency, equity, and sustainability? Financial risk management in healthcare is thus a strategic lever to ensure effective and sustainable governance of the Moroccan health system. Given these challenges, this study seeks to identify and analyze the economic measures implemented in Morocco to control risks and manage healthcare expenditures. It also aims to assess these measures in terms of efficiency, equity, and sustainability. By comparing Moroccan initiatives with best international practices, the objective is to identify solutions adapted to the local context and formulate recommendations to strengthen the economic governance of the health sector.^(6,7)

This study is based on a methodology that combines documentary analysis and a semi-structured survey involving key stakeholders in the healthcare sector. The article follows the IMRD methodology (Introduction, Methods, Results, Discussion), in accordance with academic standards. The introduction presents the context and research problem. The methodological section describes the approaches adopted, the data sources, and the analytical tools used. The results section presents the analysis of identified economic measures and their impact on healthcare expenditure management. The discussion puts these results into perspective with international experiences and proposes strategic recommendations. Finally, the conclusion summarizes the study's key contributions and suggests directions for future research.

Conceptual Framework and Literature Review

This section examines the conceptual and theoretical foundations required to analyze economic measures for risk control and healthcare expenditure management. It defines key concepts such as risk management, efficiency, equity, and sustainability, which form the basis of economic governance in health systems. Additionally, it reviews international experiences to highlight practices and innovations that could inspire reforms in Morocco, taking into account the specificities of its health system. This dual approach provides an analytical perspective to evaluate current initiatives and identify areas for improvement.

Definitions of Key Concepts

To understand the mechanisms of risk control and expenditure management in health systems, it is essential to define the core concepts that structure these dynamics. These include risk management—a strategic process aimed at preventing systemic failures and protecting patients—and the management of healthcare expenditures, which seeks to balance efficiency, equity, and sustainability. These notions form the theoretical basis for analyzing current practices and guiding strategic decisions in health policy.

Risk Management in Health Systems

Risk management in health systems involves a systematic approach to identifying, analyzing, and mitigating

risks that could harm patients and medical staff. For example, the adoption of intelligent medical devices necessitates rigorous evaluation to reduce risks associated with their rapid implementation.⁽⁸⁾

Expenditure Management: Efficiency, Equity, and Sustainability

Managing healthcare expenditures is a significant challenge for modern health systems. This process seeks to reconcile limited resources with growing healthcare needs while maintaining a high standard of service quality and accessibility. Three fundamental concepts underpin this effort:

- **Efficiency:** Achieving maximum outcomes with limited resources, often through the integration of modern technologies and advanced analytical frameworks.⁽⁹⁾
- **Equity:** Guaranteeing fair access to healthcare, particularly in developing countries where income disparities significantly influence health outcomes.⁽¹⁰⁾
- **Sustainability:** Managing healthcare expenditures within a framework that ensures the long-term viability of the health system, integrating innovation while controlling costs.⁽¹¹⁾

Review of International Experiences

As health systems grow increasingly complex, countries have implemented various strategies to address challenges related to risk management and cost control. This review of international experiences examines approaches adopted in different contexts to identify models and innovations that could be adapted to Morocco. The goal is to explore how these experiences can inform necessary reforms, emphasizing the integration of technologies, proactive management, and multisectoral collaborations.

Approaches Used in Other Countries to Control Risks and Contain Costs

Managing risks and costs in health systems is a common challenge across countries, but the strategies employed vary depending on cultural, economic, and regulatory contexts. Many health systems worldwide have adopted innovative strategies to enhance patient safety, optimize resources, and reduce inefficiencies. These initiatives include integrating digital technologies, implementing proactive risk management practices, and fostering collaboration between public and private stakeholders. Analyzing these international experiences helps identify proven solutions that can be adapted to other contexts, particularly Morocco, to strengthen the efficiency and resilience of health systems.

- **Proactive Risk Management Using Digital Systems:** The United Kingdom incorporates digital technologies into risk management strategies, enabling enhanced monitoring and reduced clinical errors.⁽¹²⁾
- **Collaboration-Based Innovation Frameworks:** In Europe, projects like PiPPi encourage collective innovation through virtual communities of practice to address healthcare needs.⁽¹³⁾

Relevant Innovations Adaptable to the Moroccan Context

The Moroccan context provides fertile ground for adopting tailored innovations that address the specific challenges of its health system, such as healthcare access inequalities, limited resources, and the population's growing needs. Drawing from international experiences, these innovations may include service digitalization, telemedicine, and community-based approaches to strengthen primary care. Integrating these solutions while considering local socio-economic realities can enhance the efficiency, equity, and sustainability of Morocco's health system, ultimately improving the quality of care for the entire population.

- **Digitalization and Intelligent Data Management:** Innovations such as integrated digital systems help reduce inefficiencies while improving patient safety.⁽¹⁴⁾
- **Digital Transformation in Overloaded Environments:** Experiences in Germany demonstrate that digital transformation requires careful management to avoid overburdening already limited resources.⁽¹⁵⁾

METHOD

This section details the methodological approach adopted to explore the economic measures implemented in Morocco for risk control and healthcare expenditure management. The methodology was designed to ensure the reproducibility of the study by specifying the study universe, sampling criteria, participant selection, and data processing steps. The approach combines an in-depth documentary analysis and a semi-structured survey, administered through a semi-directive questionnaire distributed via Google Forms and sent by email and LinkedIn to targeted participants.

Methodological Approach

This study follows a qualitative methodology aimed at exploring and analyzing the economic measures implemented to control risks and manage healthcare expenditures in Morocco. The approach is based on two methodological axes:

- An in-depth documentary analysis of existing health economic policies.

- A semi-structured survey through an online questionnaire distributed to key stakeholders in the healthcare sector.

These two approaches enable cross-referencing of complementary data sources to obtain a comprehensive and contextualized view of the economic mechanisms for managing financial risks in healthcare.

Study Universe and Sampling

The study universe includes all actors involved in the regulation, governance, and management of healthcare expenditures in Morocco, including public institutions, regulators, healthcare facilities, and representatives from the pharmaceutical industry and health insurance sectors.

The sampling was conducted using a purposive and stratified approach to ensure diversity and representation of different stakeholders. The sample includes 18 experts and professionals from the Moroccan healthcare system, representing both public and private sectors.

Participants were selected based on their affiliation with key institutions such as the Ministry of Health and Social Protection (MSPS), the National Health Insurance Agency (ANAM), compulsory health insurance management bodies (CNSS, CNOPS), public and private hospitals, and the pharmaceutical industry.

Data Collection

Documentary Analysis

The documentary analysis is based on a systematic review of institutional reports, academic publications, and national and international case studies. The sources analyzed include:

- Moroccan institutional reports (ANAM, CNSS, CNOPS, MSPS) on health expenditure regulation and universal health coverage.
- International databases (WHO, World Bank, OECD) on economic policies and healthcare cost containment mechanisms.
- Legislative and regulatory texts governing the economic regulation of the Moroccan healthcare sector.

Semi-Structured Survey

The survey was conducted through a semi-directive questionnaire distributed via Google Forms. The questionnaire link was sent via email and LinkedIn to identified participants. This method allowed for a rapid and efficient data collection process while ensuring anonymity and confidentiality of responses.

The questionnaire included both closed and open-ended questions, enabling an in-depth exploration of stakeholder opinions and proposals.

The themes covered include:

- Identification of existing economic measures: What tools are currently used for risk management and healthcare cost control?
- Assessment of measure effectiveness: Which mechanisms are considered effective, insufficient, or in need of reform?
- Obstacles and challenges faced: What are the main barriers to the implementation of economic strategies?
- Recommendations and innovations: What solutions could improve financial governance and the efficiency of the Moroccan healthcare system?

Data Analysis Method

The qualitative data analysis followed a systematic approach to extract structured insights:

Analysis of Secondary Data

A thematic content analysis was applied to the documents reviewed to identify:

- The economic strategies currently implemented in Morocco.
- The main regulatory gaps and inconsistencies observed.
- International best practices that could inspire adapted reforms.

Analysis of Primary Data

Participants' responses were coded and organized into key themes such as:

- Effectiveness of existing economic measures.
- Equity and financial accessibility of healthcare services.
- Sustainability of cost-containment mechanisms.
- Strategic priorities and recommended innovations.

The analysis helped identify recurring trends, facilitating the formulation of policy recommendations based on evidence-based insights.

This methodological section outlines the study universe, sample selection, data collection, and analysis methods, ensuring the scientific rigor of the research. The use of a semi-directive questionnaire administered via Google Forms ensures standardized and reproducible data collection, contributing to the validity of the study's conclusions.

RESULTS

This section provides a synthesis of the economic measures identified through the analysis of strategic documents and institutional reports aimed at managing financial risks and healthcare expenditures in Morocco. By exploring the national initiatives implemented and the lessons learned from international best practices, the objective is to highlight ongoing efforts and opportunities for improvement to strengthen the efficiency and sustainability of Morocco's health system. These findings allow for the identification of priority action levers while integrating perspectives tailored to the country's growing needs and structural constraints.

Economic Measures Implemented in Morocco

The results of the documentary analysis highlight a series of strategic measures adopted to control financial risks and manage healthcare expenditures. These initiatives, derived from various reforms and national reports, are detailed as follows:

- **Financial Impact Assessment and Management Rationalization:** The National Health Insurance Agency (ANAM) has proposed evaluation tools to analyze the financial impact of convergence scenarios. The objective is to ensure the financial balance of the stakeholders involved while rationalizing management processes through unified procedures.
- **Strengthening Prevention and Coordinated Care Pathways:** Prevention of chronic diseases is a central pillar, incorporating awareness campaigns and training for healthcare personnel. Additionally, the implementation of coordinated care pathways aims to optimize medical follow-up, reduce misuse, and control costs.
- **Regulating Drug Prices and Therapeutic Protocols:** Strict regulation of drug prices, which are often higher than in other countries, is recommended to ease the financial burden. The development of therapeutic protocols also contributes to rationalizing care and limiting unnecessary expenditures.
- **Innovative Financing Strategies:** Financing mechanisms include risk pooling and reducing direct household payments, notably through the extension of mandatory health insurance and the use of alternative financing.
- **Optimizing the Attractiveness of the Public System:** Developing public hospital infrastructure and rationalizing strategic purchases, such as results-based payment systems, aim to improve efficiency and strengthen user confidence in public services.

Reference Models and International Best Practices

The analysis of international practices highlights relevant approaches that can inspire reforms in Morocco. Among these examples are:

- **Strengthening Primary Care and Financing Systems:** International experiences demonstrate that investment in primary healthcare and increased public contributions promote better efficiency. Prepayment mechanisms combined with risk pooling play a key role in protecting households from unforeseen expenditures.
- **Resource Mobilization and Efficiency Gains:** Introducing targeted taxes on harmful products, such as tobacco, and promoting generic medicines help mobilize additional resources while reducing costs.
- **Promoting Prevention and Cost-Effectiveness Analyses:** Disease prevention, combined with rigorous evaluation of health interventions, helps prioritize needs and optimize budget allocations.

Synthesis of Documentary Research

The documentary analysis highlights Morocco's efforts to manage financial risks and control healthcare expenditures as part of its basic medical coverage reforms. These initiatives include evaluating the financial impact of reforms to ensure the balance of health insurance schemes, regulating drug prices, and implementing coordinated care pathways to optimize patient follow-up and reduce unnecessary costs. Additionally, measures such as the extension of mandatory health insurance, rationalization of management processes, and strengthening public infrastructure contribute to risk pooling, improving efficiency, and limiting direct payments by households, particularly for the most vulnerable populations.

Moreover, international practices offer valuable lessons to reinforce Moroccan reforms. Investment in primary

care, the promotion of generic medicines, and the introduction of targeted taxes on high-risk products are among the most promising approaches to mobilize additional resources and reduce catastrophic expenditures. Disease prevention and the use of cost-effectiveness analyses to prioritize interventions also help optimize resource allocation while ensuring equitable access. By adapting these strategies to the local context, Morocco could enhance the resilience and financial sustainability of its health system while meeting the growing needs of its population.

Results of the Semi-Structured Survey

This section presents the results of the semi-structured survey conducted with stakeholders in Morocco’s health sector. It analyzes the respondents’ perceptions, priorities, and proposals regarding current economic measures, their effectiveness, as well as opportunities and solutions to strengthen risk management and healthcare expenditure control. These results provide valuable insights for guiding necessary policies and reforms.

Respondent Profile

The analysis of respondents is structured around four fundamental dimensions: distribution by professional experience, profession, type of institution or organization, and hierarchical level. This approach highlights the diversity and richness of profiles represented in the sample, ensuring a balanced and relevant analysis.

Descriptive charts reveal major trends for each dimension, offering a complete and detailed overview. These elements are essential to contextualize the study’s results and better understand the perceptions of key actors from various institutions, levels of experience, and professional responsibilities.

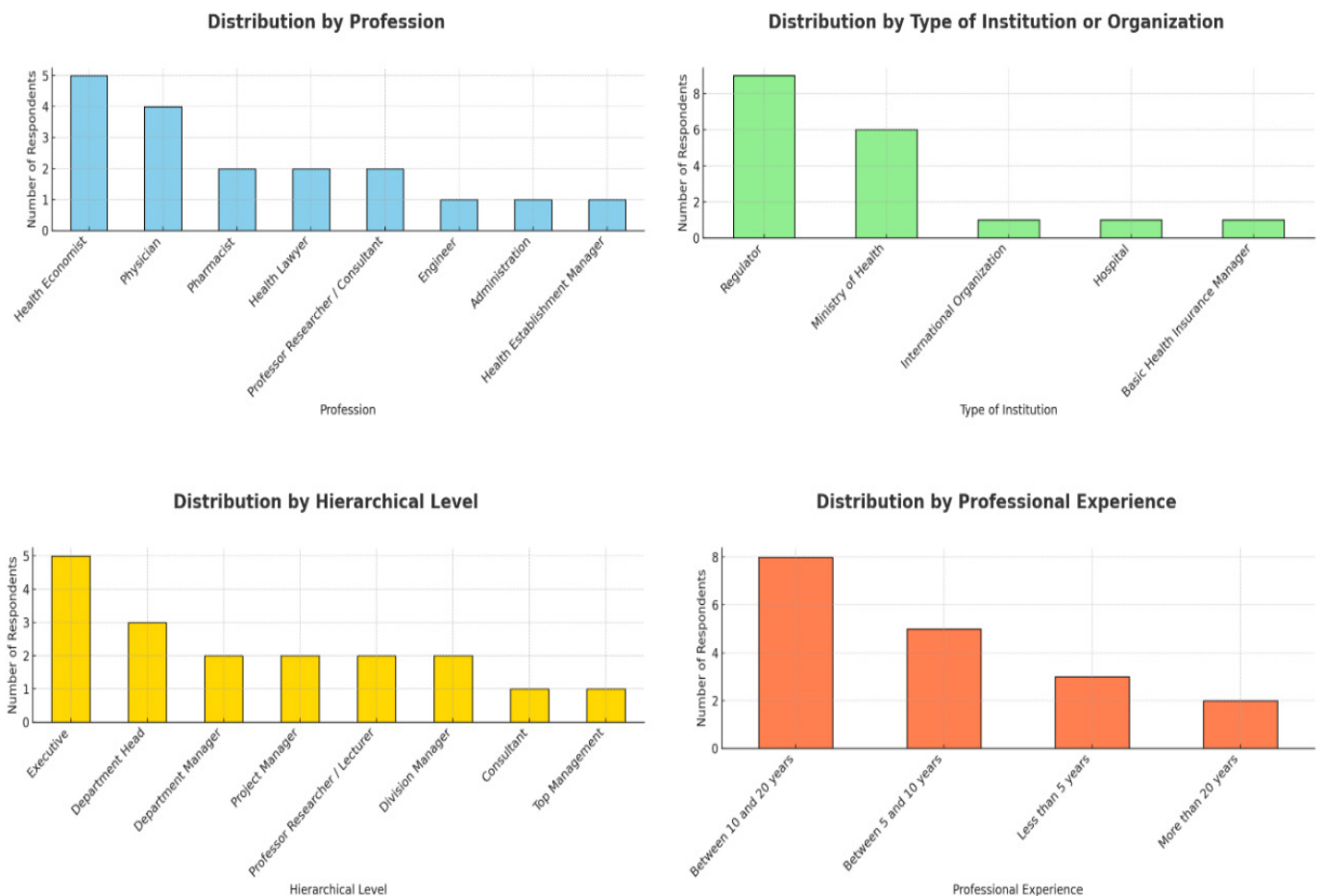


Figure 1. Respondent Profile
 Source: Created using Python with Matplotlib

Distribution by Professional Experience

Respondents’ experience in the health sector varies significantly, ranging from less than 5 years to more than 20 years. The majority (44,4 %) have between 10 and 20 years of experience, reflecting a strong professional grounding and significant expertise. Additionally, 27,8 % have intermediate experience of 5 to 10 years, while

the categories “less than 5 years” and “more than 20 years” represent 16,7 % and 11,1 % of respondents, respectively.

Distribution by Profession

The professions of respondents span a wide range, including health economists (27,8 %) and physicians (22,2 %), along with more specialized roles such as pharmacists, health lawyers, and professor-researchers/consultants. Health economists and physicians are the most represented professions, reflecting their central role in the regulation and management of health systems.

Distribution by Type of Institution or Organization

The institutional diversity of respondents reflects the richness of perspectives collected in this survey. Participants primarily come from regulators, the Ministry of Health and Social Protection (MSPS), international organizations, hospitals, and health insurance managers. These structures play essential roles in governance, financing, and service delivery within Morocco’s health system, demonstrating varied and strategic representation.

The data reveals that 50 % of respondents belong to regulators (e.g., ANAM), emphasizing their central role in the issues studied. The MSPS accounts for 27,8 % of participants, as a key actor in defining health policies. International organizations, hospitals, and health insurance managers (CNSS/CNOPS) represent 5,6 % each, highlighting their complementary contribution to national and international health efforts.

Distribution by Hierarchical Level

Respondents occupy various hierarchical levels, with a predominance of executives (27,8 %), followed by department heads (16,7 %) and project managers (11,1 %). These results show that the sample includes key actors with strategic and operational responsibilities within health organizations. Other categories, such as consultants or top management members, complete this distribution.

Synthesis of Respondent Profiles

The analysis of respondent profiles reveals significant diversity in terms of professional experience and specialization. Most respondents have between 10 and 20 years of experience, reflecting strong expertise in the health sector. Health economists and physicians are the most represented groups, with notable contributions from other specialties such as pharmacists, lawyers, and professor-researchers.

Respondents primarily come from regulators and the Ministry of Health and Social Protection, ensuring representation from key institutions. At the hierarchical level, executives, department heads, and project managers dominate, providing strategic and operational perspectives. This diversity enriches the collected data and enhances the relevance of the study’s conclusions.

Synthesis of Results

The synthesis of results provides an overview of the main lessons from this study, highlighting both the strengths and weaknesses of the analyzed economic measures. By identifying the most impactful initiatives and existing gaps, this section aims to lay the groundwork for concrete recommendations. It examines the effectiveness, equity, and sustainability of the implemented measures while addressing systemic challenges that limit their impact. This synthesis emphasizes critical areas requiring intervention and improvements to strengthen the financial resilience and operational efficiency of Morocco’s health system.

Identification of Current Economic Measures

The analysis of collected responses highlights the main economic measures used in Morocco to control healthcare expenditures and manage financial risks. These measures fall into three broad categories: structural mechanisms, operational strategies, and regulatory and evaluation tools.

Structural Mechanisms

Structural mechanisms form the foundation of healthcare expenditure control policies. Among these, the healthcare goods and services basket is cited as a central tool. It defines covered services and ensures better resource planning, although its scope remains limited by budget constraints. Coordinated care pathways (CCPs), aimed at organizing patient follow-up, were also identified as essential. They reduce redundant care and improve the quality of interventions.

These structural measures are represented in figure 2, which shows the measures most frequently mentioned by respondents. It highlights the importance of the healthcare goods and services basket and CCPs in Morocco’s health system.

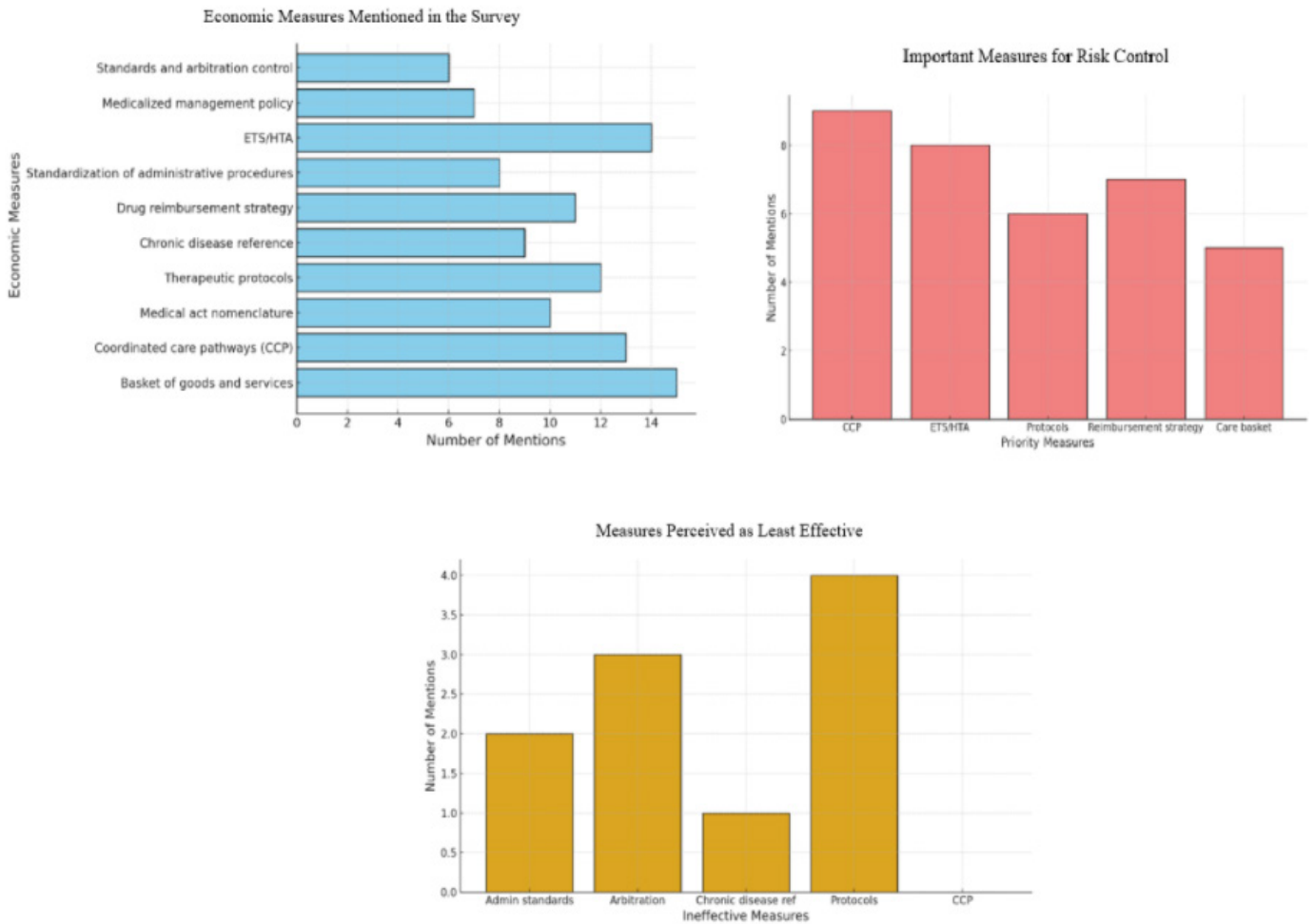


Figure 2. Responses related to the current economic measures
Source: Created using Python with Matplotlib

Operational Strategies

Operational strategies include tools designed to optimize expenditure management and ensure effective monitoring of public policies. Therapeutic protocols play a key role in standardizing care to reduce clinical variations and limit unnecessary expenses. Similarly, the drug reimbursement strategy is a priority measure to control pharmaceutical costs while ensuring access to quality treatments at affordable prices.

Figure 2 illustrates the measures perceived as most important for risk control. It shows that therapeutic protocols, CCPs, and the drug reimbursement strategy are considered key levers to strengthen the resilience of the health system.

Regulatory and Evaluation Tools

Regulatory and evaluation tools hold a strategic position in expenditure control. Health Technology Assessment (HTA) is crucial for prioritizing interventions based on cost-effectiveness, directing resources toward the most impactful initiatives. Strategic decision-support studies are also cited as means to analyze public policies and support evidence-based decision-making.

However, some measures, such as standardizing administrative procedures and controlling norms and arbitration, are deemed less effective. Respondents highlighted gaps in their implementation, such as a lack of coordination or excessive rigidity, limiting their impact. These weaknesses are highlighted in Figure 2, which details the measures perceived as least effective.

Synthesis of Respondent Perceptions

Survey results reveal mixed perceptions of current economic measures. While some, like CCPs and HTA, are widely praised for their effectiveness, others, such as administrative standards, require redesign to address current challenges. These findings underline the need to strengthen existing tools while integrating new practices tailored to Morocco’s context.

Evaluation of Current Economic Measures

The evaluation of Morocco’s current economic measures highlights their perceived effectiveness, the main obstacles encountered, and the opportunities and concrete solutions proposed for improvement. The responses of survey participants provide a balanced perspective on the strengths and weaknesses of existing mechanisms.

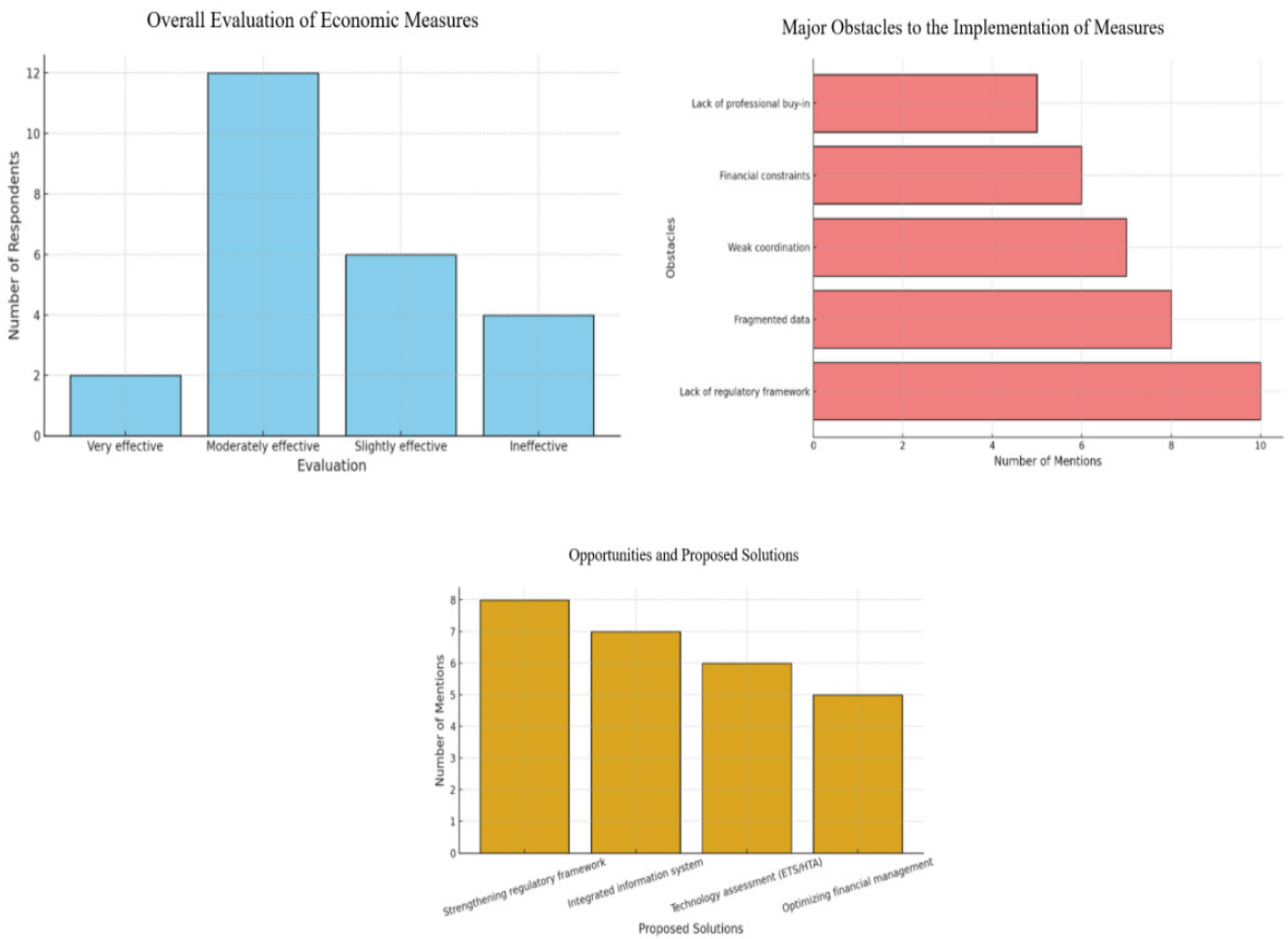


Figure 3. Evaluation of Current Economic Measures
Source: Created using Python with Matplotlib

Overall Effectiveness Evaluation

The majority of respondents consider the current economic measures to be moderately effective (figure 3). While progress has been made, these measures struggle to fully meet the needs of Morocco’s health system. A significant number of participants also rated these measures as ineffective or minimally effective, highlighting challenges in their implementation.

Major Obstacles Identified

Respondents identified several major obstacles hindering the effectiveness of economic measures, illustrated in Figure 3: Major Obstacles to the Implementation of Measures:

- Absence of a robust regulatory framework: Existing laws lack flexibility to adapt to the evolving needs of the health system and new economic realities.
- Fragmentation of data and absence of integrated information systems: The lack of a common platform limits coordination between stakeholders and evidence-based decision-making.
- Weak coordination among stakeholders.
- Financial and human resource constraints: Limited budgets and a shortage of qualified personnel complicate the implementation of necessary reforms.
- Lack of engagement from health professionals: Some actors, particularly in the pharmaceutical industry and hospital sector, do not actively participate in implemented initiatives.

Opportunities and Proposed Solutions

To address identified obstacles, respondents proposed concrete solutions, detailed in figure 3: Opportunities

and Proposed Solutions. These recommendations aim to strengthen the effectiveness of current economic measures and ensure their impact:

- Strengthening the regulatory framework:
 - Modernize laws to make them more adaptable to current needs.
 - Generalize mandatory therapeutic protocols for costly pathologies.
- Implementing an integrated information system:
 - Develop a centralized digital platform to connect stakeholders and improve coordination.
 - Implement shared medical records to facilitate patient follow-up.
- Health Technology Assessment (HTA):
 - Establish a dedicated entity for the economic analysis of health products.
 - Use evaluation results to guide reimbursement and financing policies.
- Optimizing financial management:
 - Revise contractual terms with adjustments reflecting real costs and technological developments.
 - Mobilize available funds in insurance schemes to support necessary investments.

Proposals to Improve Current Measures

The analysis of collected responses highlights several recommendations for improving economic measures in Morocco. These proposals are structured around four main axes: financial risk control, healthcare expenditure management, integration of modern technologies, and adaptation of international practices.

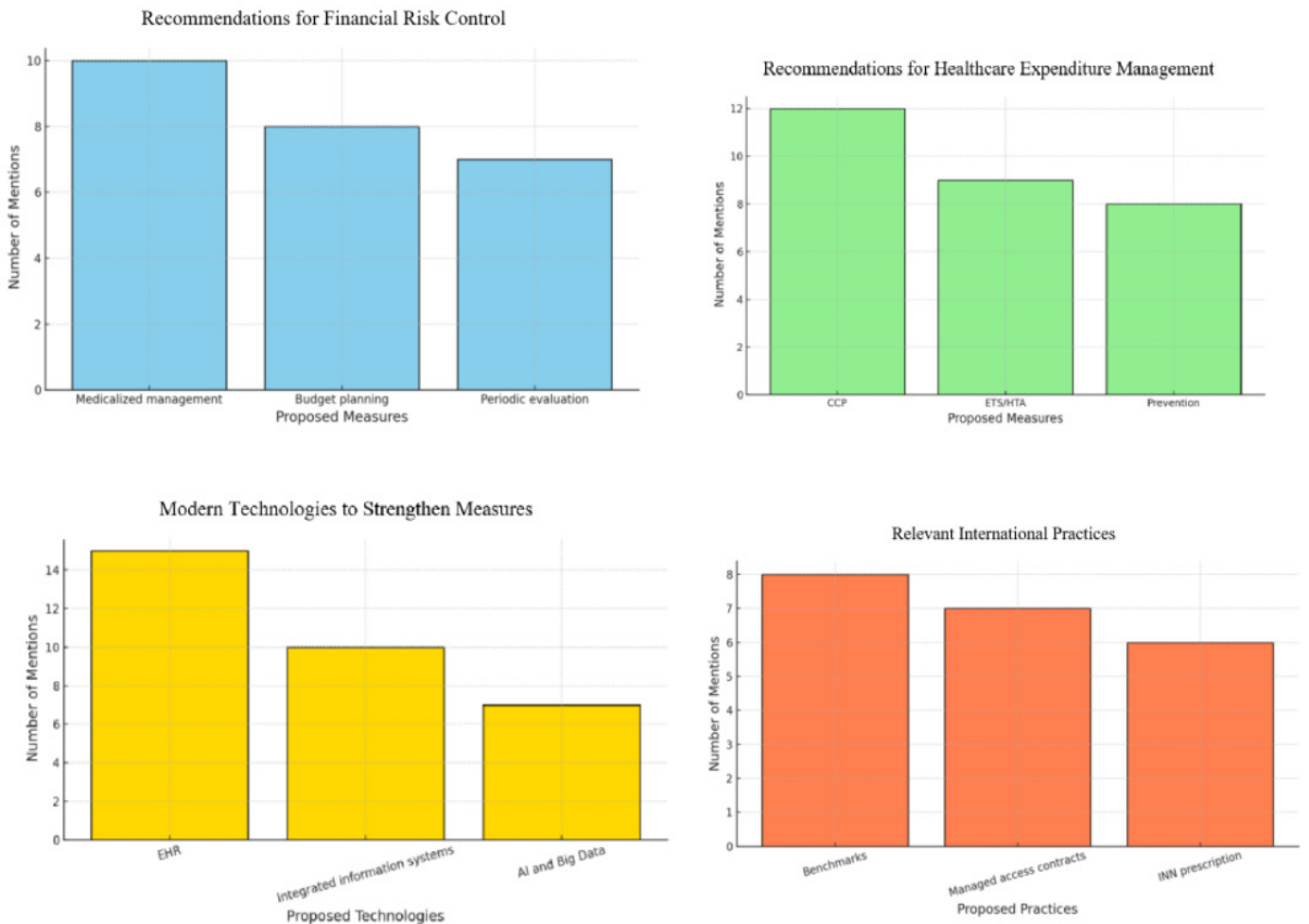


Figure 4. Proposals to Improve Current Measures
 Source: Created using Python with Matplotlib

Financial Risk Control

Participants identified specific measures to strengthen financial risk control, including:

- Implementing a strategy for medicalized expenditure control based on validated and enforceable therapeutic protocols.

- Rigorous budget planning to identify and anticipate high-risk areas.
- Periodic evaluation of financial systems to ensure the effectiveness of existing mechanisms.

Healthcare Expenditure Management

To better manage healthcare expenditures, several recommendations were made:

- Implementation of Coordinated Care Pathways (CCPs) to optimize patient management.
- Scientific and economic evaluation of health technologies (HTA) to guide reimbursement and investment decisions.
- Strengthening disease prevention and promoting outpatient care to reduce costs associated with avoidable hospitalizations.

Integration of Modern Technologies

The integration of innovative technologies is perceived as an essential lever to improve the performance of economic measures. Participants specifically recommended:

- Shared Medical Records (SMR): A central tool to improve care coordination.
- Integrated and interconnected information systems: To centralize data and facilitate its exploitation.
- Use of Artificial Intelligence (AI) and Big Data tools: To analyze trends and optimize decision-making processes.

Adoption of International Practices

Some practices successfully adopted in other countries could be adapted to the Moroccan context, including:

- International benchmarks to compare performance and identify best practices.
- Managed Entry Agreements to negotiate conditions for introducing high-cost drugs.
- Prescription by International Nonproprietary Names (INN) and substitution rights to reduce medication costs.

Strategic Perspectives and Priorities

The strategic perspectives proposed by respondents highlight three key priorities for improving risk and expenditure management in Morocco's healthcare system. These priorities revolve around governance, expenditure control, and the use of modern tools and technologies.

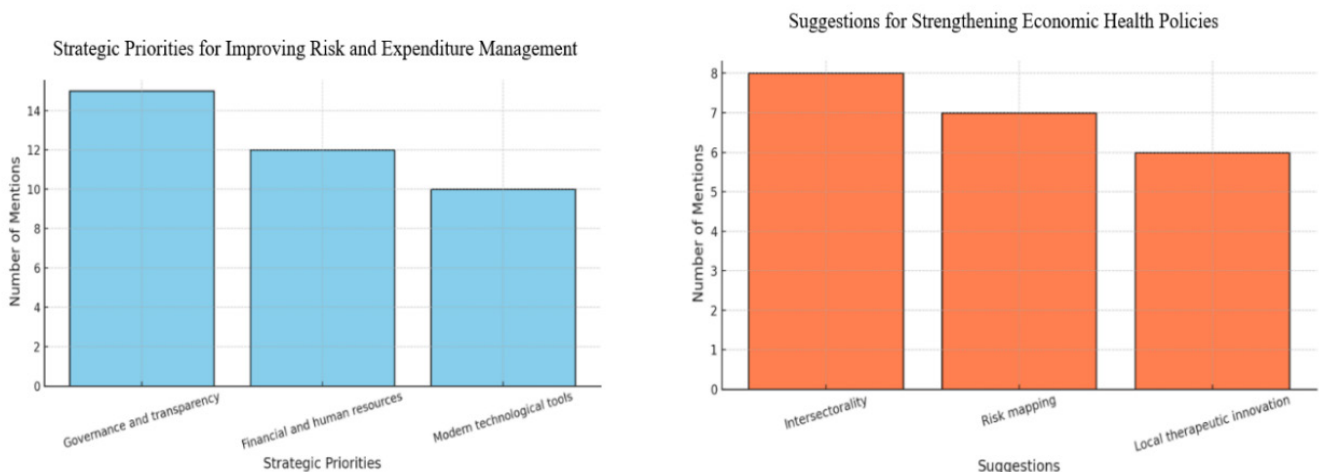


Figure 5. Participants' responses related to Strategic Perspectives and Priorities

Source: Created using Python with Matplotlib

Identified Strategic Priorities

The strategic priorities identified by respondents aim to strengthen risk and expenditure management in Morocco. They focus on three main areas: governance and transparency, resource optimization, and the integration of modern technological tools for the sustainable transformation of the healthcare system.

- **Governance and Transparency:** Strengthening governance frameworks is a major priority for improving risk and expenditure management in Morocco. This involves better coordination between the various stakeholders in the sector, including public institutions, healthcare professionals, and financing

bodies. A national strategy dedicated to medicalized expenditure control should also be developed to structure efforts in regulation and efficiency. Furthermore, promoting transparency in managing financial resources and healthcare expenditures is essential to ensure optimal use of funds and build trust among health system actors.

- **Financial and Human Resource Optimization:** Optimizing financial and human resources is another key priority identified. This involves reorganizing healthcare structures and human resource management practices to ensure efficient and needs-based allocation. Public awareness campaigns and strengthened preventive measures are also central to reducing avoidable long-term expenditures. Finally, it is crucial to train health sector managers to adopt modern and efficient management practices, thereby maximizing the impact of limited financial resources.
- **Use of Modern Technological Tools:** The integration of modern technological tools represents a strategic opportunity for the sustainable transformation of the healthcare system. Implementing an integrated and interconnected information system will centralize data and improve coordination among various actors. Moreover, generalizing shared medical records (SMR) and coordinated care pathways (CCPs) will facilitate continuity of care and optimize its effectiveness. Finally, leveraging emerging technologies such as Artificial Intelligence (AI) and Big Data will provide advanced tools to analyze trends, support decision-making, and enhance the overall performance of the healthcare system.

Additional Suggestions to Strengthen Economic Health Policies

In addition to strategic priorities, respondents proposed several measures to strengthen economic health policies. These suggestions aim to better structure financing mechanisms, promote intersectoral collaboration, and encourage innovation in healthcare.

- **Implementation of Intersectoral Policies:** It is crucial to strengthen collaboration between the health, finance, and education sectors to address the social determinants of health. This intersectoral approach will improve living conditions for populations and prevent certain diseases, thereby reducing pressure on the healthcare system.
- **Mapping Financial Risks:** Developing a financial risk map for healthcare coverage is necessary to better anticipate challenges. This strategic tool will identify areas of vulnerability and prioritize interventions based on actual needs, optimizing resource allocation.
- **Promotion of Local Therapeutic Innovation:** Promoting local therapeutic innovation is essential to reduce dependence on imported medicines and medical technologies. By accelerating the harmonization of insurance schemes and supporting research and development, Morocco could not only manage its expenditures but also improve patient access to tailored and innovative solutions.

DISCUSSION

This section aims to analyze the results of this study in depth, highlighting their practical and theoretical implications. It reflects on observed relationships, identified limitations, and key lessons for strengthening the economic governance of Morocco's health system. The discussion is supported by existing literature to ground the results in a robust theoretical and empirical framework. It is structured around four main themes: a synthesis of results, interpretation of significant relationships, implications for public policies, and perspectives for future research.

Summary of Key Results

The results highlight a variety of economic measures implemented to manage financial risks and healthcare expenditures in Morocco. Among the most effective initiatives, Coordinated Care Pathways (CCPs), Health Technology Assessment (HTA), and the drug reimbursement strategy emerge as key levers. These findings align with studies by the OECD (2020) and WHO (2021), which emphasize the importance of optimizing care pathways and conducting economic evaluations of medical technologies to improve health system performance and cost containment.^(2,16)

However, certain measures, such as standardizing administrative procedures and controlling norms and arbitration, are considered less effective due to limited implementation and coordination gaps among stakeholders. This implementation challenge has been documented in similar contexts, particularly in Latin America and Southeast Asia, where fragmented health systems hinder the effectiveness of economic reforms.⁽¹⁷⁾

The main obstacles identified in this study include the absence of an appropriate regulatory framework, data fragmentation, and a lack of financial and human resources. Numerous academic works have demonstrated that ineffective governance and the lack of a centralized data infrastructure constitute major barriers to the efficiency of health systems.^(18,19)

The identified opportunities include strengthening the regulatory framework, establishing an integrated information system, and developing modern technologies such as shared medical records and artificial

intelligence tools. The introduction of these innovations is widely supported in recent literature, notably by McKinsey (2021), which highlights that digitizing health systems could reduce healthcare expenditures by 10-20 % in emerging countries by optimizing administrative processes and improving care coordination.⁽²⁰⁾

Interpretation of Significant Relationships

The analysis reveals significant relationships between economic measures and the strategic objectives of the health system. For example:

- Coordinated Care Pathways (CCPs) and HTA directly contribute to economic efficiency by reducing redundancies in care and prioritizing interventions based on cost-effectiveness. This observation is supported by research from Hussey et al. (2013), which demonstrates that implementing coordinated care pathways reduces avoidable hospitalizations and improves chronic disease management.⁽²¹⁾
- The drug reimbursement strategy facilitates access to essential treatments at affordable costs, thereby reducing households' direct expenditures. According to the WHO (2019), an effective reimbursement policy can lower patients' out-of-pocket expenses by up to 30 %, particularly in mixed systems with partial universal coverage.⁽²²⁾
- The implementation of modern technological tools, although currently underdeveloped, is perceived as a key catalyst for improving stakeholder coordination and reducing system inefficiencies. Studies by Meyer et al. (2022) on the impact of hospital information systems in Europe show that shared digital platforms between institutions reduce medical errors by 15 % and optimize hospital resource management.⁽²³⁾

However, institutional weaknesses and governance challenges limit the impact of certain initiatives. For instance, the lack of engagement from health professionals and insufficient intersectoral collaboration hinder the full implementation of the identified measures. This issue has also been documented by Marchildon et al. (2017), who argue that the effectiveness of economic health reforms strongly depends on stakeholder involvement and governance model flexibility.⁽²⁴⁾

Implications for Public Policies

The findings of this study provide valuable insights for designing public health policies:

- **Strengthening Governance:** Improving coordination among various stakeholders (public and private) and promoting greater transparency in financial resource management are essential. According to Berchet et al. (2016), optimizing hospital governance and clarifying roles between public and private actors improve the efficiency of health systems.⁽²⁵⁾
- **Prioritizing Prevention:** Investing in the prevention of chronic diseases and the development of primary care could reduce long-term costs and improve equitable access. A World Bank (2022) study found that for every dollar invested in chronic disease prevention, there is a four-dollar return on investment in avoided healthcare costs.⁽²⁶⁾
- **Modernizing Management Tools:** Digitizing the health system and integrating technologies such as shared medical records and interconnected information systems are essential for increasing system efficiency. Successful experiences in Scandinavia have demonstrated that automating administrative workflows in healthcare reduces medical record processing times by 40 %.⁽²⁷⁾
- **Adopting a Balanced Financing Approach:** Developing innovative financing mechanisms, such as targeted taxes and risk pooling, could enhance the system's financial sustainability while reducing households' financial burden. Several studies on health financing reforms in Southeast Asia recommend mixed models combining progressive taxation and mandatory contributions.⁽²⁸⁾

Perspectives for Future Research

This study opens avenues for further research:

- **Longitudinal Analysis of Reforms:** Monitoring the evolution of implemented economic measures over time to assess their long-term impact.
- **International Comparisons:** Exploring health systems in other countries with similar economic and social contexts to identify adaptable practices for Morocco.
- **Impact of Modern Technologies:** Evaluating the effect of integrating digital technologies and artificial intelligence on risk management and healthcare cost control.

These perspectives will deepen the understanding of health economic dynamics in Morocco and guide future reforms toward more effective and sustainable governance.

CONCLUSIONS

This study highlights the central role of economic measures in managing financial risks and controlling

healthcare expenditures in Morocco. The findings indicate that initiatives such as Coordinated Care Pathways (CCPs) and Health Technology Assessment (HTA) contribute to better resource allocation and cost rationalization. However, persistent challenges, including a lack of coordination among stakeholders and insufficient resources, limit the effectiveness of existing mechanisms.

To enhance the financial governance of the healthcare system, it is essential to strengthen the integration of economic instruments, invest in appropriate technological tools, and adopt a proactive approach centered on prevention and primary care. These levers are crucial to ensuring financial sustainability and equitable access to healthcare, both of which are fundamental to achieving effective universal health coverage.

Future research should further evaluate the implemented policies and propose strategies tailored to the specificities of the Moroccan context while drawing on best international practices to foster sustainable economic governance in the healthcare sector.

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CONFLICT OF INTEREST

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AUTHORSHIP CONTRIBUTION

Conceptualization: Aazelarab Boughaleb, Mounir Jerry.

Data Curation: Aazelarab Boughaleb, Mounir Jerry.

Formal Analysis: Aazelarab Boughaleb, Mounir Jerry.

Research: Aazelarab Boughaleb, Mounir Jerry.

Methodology: Aazelarab Boughaleb, Mounir Jerry.

Project Management: Aazelarab Boughaleb, Mounir Jerry.

Resources: Aazelarab Boughaleb, Mounir Jerry.

Software: Aazelarab Boughaleb, Mounir Jerry.

Supervision: Aazelarab Boughaleb, Mounir Jerry.

Validation: Aazelarab Boughaleb, Mounir Jerry.

Display: Aazelarab Boughaleb, Mounir Jerry.

Drafting - Original Draft: Aazelarab Boughaleb, Mounir Jerry.

Writing - Proofreading, Editing: Aazelarab Boughaleb, Mounir Jerry.