EVALUATING CENTRALISED VS. DECENTRALISED HEALTHCARE SUPPLY MODELS: A COMPARATIVE ANALYSIS OF OPERATIONAL EFFICIENCY, ACCESSIBILITY, AND SERVICE QUALITY

Detailed Project Report (Comparative Analysis Project) — Option 1

Student Name: Vaghani Paras Hareshbhai

Student ID: DE240399

Module Code: M05 - Organisational Supply Models

Submission Date: 19/10/2026

Institution: EIIET (European Institute of Innovation)

TABLE OF CONTENTS

Section TitlePage

1. Abstract 2

2. Introduction 3

3. Literature Review 4

4. Methodology 5

5. Findings 6

6. Discussion 7

7. Conclusion 8

8. References 9

9. Appendices 9

1. ABSTRACT

This comparative study critically examines the structural logic, operational mechanics, and overall functionality of centralised versus decentralised healthcare supply models. As health systems across public and private domains struggle with rising costs and changing population health demands, selecting the appropriate administrative and supply framework is a crucial management challenge. Centralised models offer cost savings through bulk purchasing and standardized quality control, but they often lack flexibility and slow down local response times. On the other hand, decentralised systems give regional managers operational freedom to quickly respond to local health needs, though they risk resource duplication and regional inequality.

Using a secondary qualitative analysis methodology, this project investigates how operational mechanisms coordinate levels of care (primary, secondary, tertiary) and manage patient referral paths. The study examines real-world health reform case studies to assess structural changes, and proposes a decision matrix for health administrators seeking an optimal balance between centralised governance and local autonomy.

2. INTRODUCTION

Healthcare service delivery requires complex supply chains and organizational structures to ensure medical equipment, essential medicines, and clinical services reach patients efficiently. Modern health systems face major challenges, such as aging populations, rising medical technology expenses, and unexpected public health emergencies. How a health system structures its supply and administrative model heavily influences clinical care quality, financial sustainability, and patient accessibility (World Health Organization, 2018).

Organizational supply models in health services generally range on a spectrum between full centralisation and deep decentralisation. In a centralised healthcare model, major decision-making authority, budgeting, and procurement functions are held by a central national authority or ministry of health. Conversely, decentralised delivery models delegate decision-making power and resource management to regional health boards, local municipalities, or individual clinical facilities (Saltman et al., 2007).

This report focuses on Option 1: Evaluating Centralised vs. Decentralised Healthcare Supply Models. The primary aim is to analyze how these administrative structures affect operational efficiency, resource allocation equity, and service quality across different care levels (primary, secondary, and tertiary). The paper explores referral network management, compares historical international health system reforms, and develops a practical decision framework to guide health service directors in choosing the right balance between procurement centralisation and local operational independence.

Understanding these supply dynamics is vital for healthcare management professionals. Finding the right balance between central purchasing efficiency and local operational responsiveness is key to maintaining high-quality patient care without exceeding public budgets.

3. LITERATURE REVIEW

The debate between centralisation and decentralisation in healthcare governance has been widely studied in health policy and organizational management literature. Scholarly works emphasize that both structural models present distinct operational advantages and systemic limitations.

3.1 Centralised Supply Models and Economies of Scale

According to Mossialos and Oliver (2005), centralisation in health supply chains provides strong financial benefits primarily through economies of scale. When a single central body handles medical procurement, the health system gains significant bargaining power over pharmaceutical manufacturers and medical device suppliers. This leads to reduced unit prices and standardized product quality across all public hospitals. Furthermore, centralised administration helps prevent regional corruption and ensures uniform clinical guidelines nationwide (Savigny & Adam, 2009).

3.2 Decentralisation and Local Responsiveness

Conversely, literature advocating for decentralisation highlights the benefit of local operational autonomy. Rondinelli (1983) categorized decentralisation into deconcentration, delegation, and devolution. In health management, decentralising decision-making power to regional authorities allows local directors to allocate medical supplies according to specific regional disease burdens (Bossert, 1998). However, research by Peckham et al. (2005) warns that uncoordinated decentralisation can lead to fragmented care networks, unequal resource distribution between rich and poor districts, and higher administrative costs due to duplicate management teams.

4. METHODOLOGY

This comparative analysis project uses a qualitative secondary research design to evaluate healthcare supply models. Secondary qualitative analysis is appropriate for health management research as it allows for the examination and synthesis of official policy papers, published case studies, and peer-reviewed journals across different health jurisdictions (Saunders et al., 2019).

4.1 Data Collection and Source Selection

Research evidence was gathered through systematic database searches on Google Scholar, PubMed, and ScienceDirect, as well as institutional reports from the World Health Organization (WHO) and the Organisation for Economic Co-operation and Development (OECD). Key search keywords included: *healthcare supply chain centralisation*, *decentralised health governance*, *referral network coordination*, and *health service delivery efficiency*.

4.2 Analytical Evaluation Framework

The collected evidence was analyzed using a thematic comparative framework across three primary evaluation dimensions:

1. **Operational Efficiency:** Evaluating procurement costs, inventory holding expenses, administrative overheads, and supply distribution speed.

2. **Health Equity & Access:** Assessing patient referral flows and geographical distribution of medical resources across primary, secondary, and tertiary care levels.

3. **Service Quality & Governance:** Reviewing clinical standardization, risk management responsiveness, and regional managerial accountability.

5. FINDINGS

The research findings demonstrate that neither pure centralisation nor complete decentralisation offers a flawless solution for healthcare delivery. Instead, systemic efficiency depends on how functions are divided between central oversight and local management.

Evaluation Dimension	Centralised Supply Model	Decentralised Supply Model
Procurement & Cost Control	High bulk discounts; lower unit costs for medicines and capital equipment.	Smaller purchase volumes; higher unit costs and potential budget duplication.
Supply Chain Flexibility	Rigid bureaucrat processes; slower response to sudden local shortages.	Agile procurement; rapid adaptation to local emergency needs.
Quality Standardization	Uniform clinical guidelines and standardized equipment across all regions.	Variable quality standards across regions; potential service inequality.
Local Managerial Autonomy	Low local authority; staff follow strict top-down national directives.	High local empowerment; managers tailor services to local community needs.

The findings also highlight the critical role of referral networks in connecting different levels of care:

Care Level	Primary Operational Role	Supply & Coordination Mechanism
Primary Care	Community clinics, general practice, and preventive wellness centers.	Gatekeeper function; basic essential medicine inventory; direct patient referral initiation.
Secondary Care	Regional hospitals, emergency services, and general specialist care.	Intermediate diagnostic supply; acute bed capacity management; escalation protocols.
Tertiary Care	Specialized university medical centers and advanced surgical hubs.	Centralised high-tech equipment; complex medical supply management; specialized intake.

6. DISCUSSION

The comparative findings illustrate that choosing an organizational supply model requires managing trade-offs between central cost efficiency and local operational adaptability. Analyzing real-world health reform case studies provides practical context for these structural decisions.

6.1 International Health System Reorganisation Case Studies

A notable example of healthcare decentralisation occurred in the Scandinavian health sector (e.g., Denmark and Sweden), where decision-making authority was successfully transferred to regional councils and municipalities. Decentralisation improved patient satisfaction because regional boards tailored healthcare facilities to local demographic needs. However, maintaining high equity required strong national budget equalization mechanisms to prevent wealthier municipalities from overfunding their local hospitals while poorer regions suffered shortages (Magnussen et al., 2009).

In contrast, health sector decentralisation initiatives in several developing economies led to severe supply chain fragmentation. In these instances, regional authorities lacked trained procurement staff and logistics infrastructure, resulting in frequent stockouts of essential vaccines, unequal clinical quality, and higher procurement prices due to lost bulk purchasing power (Bossert & Beauvais, 2002).

6.2 Managerial Decision Framework for Hybrid Supply Governance

To prevent both bureaucratic central paralysis and decentralised fragmentation, healthcare executives should adopt a **Hybrid Supply Model**. Under this balanced approach, high-value procurement (such as expensive imaging equipment, vaccines, and specialized pharmaceuticals) is managed centrally to maximize price discounts. Simultaneously, daily operational decisions (such as clinical shift scheduling, routine maintenance, and local community outreach) are delegated to regional clinical managers to preserve agility.

7. CONCLUSION

In conclusion, evaluating centralized versus decentralized healthcare supply models shows that neither extreme approach fully meets the needs of modern health systems. Centralisation provides essential financial savings through bulk purchasing power and maintains uniform national clinical quality. However, it often suffers from slow decision-making and limited local flexibility. Conversely, decentralisation encourages regional innovation and swift local adjustments, but risks operational fragmentation, unequal service distribution, and lost bargaining power.

To build an effective and resilient health delivery system, healthcare managers must move away from rigid binary choices and focus on designing integrated hybrid supply models that balance central efficiency with local independence.

7.1 Strategic Recommendations for Health Managers

Based on the findings of this comparative project report, the following actionable recommendations are offered to health service directors and policy makers:

1. **Implement Centralised Procurement for High-Value Goods:** Centralize the purchasing of expensive medical devices, pharmaceuticals, and technology to secure maximum volume discounts.

2. **Delegate Local Operational Budgets:** Grant regional hospital administrators authority over daily operational maintenance, staffing, and routine inventory management to improve service speed.

3. **Strengthen Digital Referral Networks:** Deploy unified electronic health record (EHR) systems across primary, secondary, and tertiary care facilities to ensure seamless patient transitions and reduce care duplication.

4. **Establish National Quality Oversight Audits:** Maintain central quality assurance inspection teams to ensure decentralized regional health centers maintain high standards of patient safety and care.

8. REFERENCES

Bossert, T. (1998). 'Analyzing the decentralization of health systems: developing a decision space approach', *Social Science & Medicine*, 47(10), pp. 1513–1527.

Bossert, T. J., & Beauvais, J. C. (2002). 'Decentralization of health systems in Ghana, Zambia, Uganda and the Philippines', *Health Policy and Planning*, 17(1), pp. 14–31.

Magnussen, J., Vrangbæk, K., & Saltman, R. B. (2009). *Nordic Health Care Systems: Recent Reforms and Current Challenges*. European Observatory on Health Systems and Policies, Open University Press.

Mossialos, E., & Oliver, A. (2005). 'An overview of pharmaceutical policy in four countries: France, Germany, Poland and the UK', *International Journal of Health Planning and Management*, 20(4), pp. 291–306.

Peckham, S., Exworthy, M., Powell, M., & Greener, I. (2005). *Decentralisation, Devolution and Health System Performance*. NHS Service Delivery and Organisation Programme.

Rondinelli, D. A. (1983). 'Development administration and American foreign assistance policy: An assessment of administrative decentralization in developing countries', *Canadian Journal of Development Studies*, 4(1), pp. 44–79.

Saltman, R. B., Bankauskaite, V., & Vrangbæk, K. (2007). *Decentralization in Health Care: Strategies and Outcomes*. European Observatory on Health Systems and Policies, Open University Press.

World Health Organization. (2018). *Delivering Quality Health Services: A Global Imperative for Universal Health Coverage*. World Health Organization, OECD, and World Bank Group.

9. APPENDICES

Appendix A: Strategic Governance Matrix for Healthcare Supply Chains

Supply Chain Activity	Recommended Governance Level	Strategic Rationale
Pharmaceutical Bulk Buying	Centralised Authority	Maximizes purchasing volume power and ensures drug safety compliance.
Medical Device Maintenance	Decentralised / Regional	Ensures quick technician response times for hospital equipment repairs.
Staffing & Shift Scheduling	Local Hospital Level	Allows flexibility to handle daily patient influxes and local staff needs.