



British Journal of Management & Economics
1(1): 21-32, 2011

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Privatization of the Central Medical Supplies (CMS) Public Corporation: A Study

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Review Article

Received 21st June 2011
Accepted 29th July 2011
Online Ready 3rd August 2011

ABSTRACT

To improve the effectiveness of the public pharmacy, resources should be switched towards areas of need for reducing inequalities and promoting better health conditions. Medicines are financed either through cost sharing or full private. The role of the private services is significant. A review of reform of financing medicines in Sudan is given in this article. Also, it highlights the current drug supply system in the public sector, which is currently responsibility of the Central Medical Supplies Public Corporation (CMS). In Sudan, the researchers did not identify any rigorous evaluations or quantitative studies about the impact of drug regulations on the quality of medicines and how to protect public health against counterfeit or low quality medicines, although it is practically possible. However, the regulations must be continually evaluated to ensure the public health is protected by marketing high quality medicines rather than commercial interests, and the drug companies are held accountable for their conducts.

Keywords: Sudan; quality of medicines; drug importers; regulatory authorities; counterfeits medicines;

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1. INTRODUCTION

The present policy of the national health-care system in Sudan is based on ensuring the welfare of the Sudanese inhabitants through increasing national production and upgrading the productivity of individuals. A health development strategy has been formulated in a way that realises the relevancy of health objectives to the main goals of the national development plans. The strategy of Sudan at the national level aims at developing the Primary Health Care (PHC) services in the rural areas as well as urban areas. In Sudan 2567 physicians provide the public health services (554 specialists, 107 medical registrars, 1544 medical officers, 156 dentists, and 206 pharmacists) (GOS, 2009). Methods of preventing and controlling health problems are the following:

- Promotion of food supply and proper nutrition.
- An adequate supply of safe water and basic sanitation.
- Maternal and child health-care.
- Immunisation against major infectious diseases.
- Preventing and control of locally endemic diseases, and
- Provision of essential drugs.

This will be achieved through a health system consisting of three levels (state, provincial and localities), including the referral system, secondary and tertiary levels.

Pharmacy management should be coordinated and integrated with other various aspects of health. The following are recommended:

- Community must be the focus of benefits accruing from restructures, legislature to protect community interest on the basis of equity and distribution, handover the assets to the community should be examined; and communities shall encourage the transfer the management of health schemes to a professional entity.
- The private sector should be used to mobilise, and strengthen the technical and financial resources, from within and without the country to implement the services, with particular emphasis on utilisation of local resources.
- The government should provide the necessary financial resources to guide the process of community management of pharmacy supplies. The government to divert from provision of services and be a facilitator through setting up standards, specifications and rules to help harmonise the private sector and establish a legal independent body by an act of parliament to monitor and control the providers. Government to assist the poor communities who cannot afford service cost, and alleviates social-economic negative aspects of privatisation.
- The sector actors should create awareness to the community of the roles of the private sector and government in the provision of health and pharmacy services.
- Support agencies assist with the financial and technical support, the training facilities, coordination, development and dissemination of health projects, and then evaluation of projects.

The health system in Sudan is characterised by heavily reliance on charging users at the point of access (private expenditure on health is 79.1 percent (WHO, 2004)), with less use of prepayment system such as health insurance. The way the health system is funded, organised, managed and regulated affects health workers' supply, retention, and the performance. Primary Health Care was adopted as a main strategy for health-care provision in Sudan and new strategies were introduced during the last decade, include:

- Health area system.
- Polio eradication in 1988.
- Integrated management of children illness (IMCI) initiative.
- Rollback malaria strategy.
- Basic developmental need approach in 1997.
- Safe motherhood, making pregnancy safer initiative, eradication of harmful traditional practices and emergency obstetrics' care programmes.

The strategy of price liberalisation and privatisation had been implemented in Sudan over the last decade, and has had a positive result on government deficit. The investment law approved recently has good statements and rules on the above strategy in particular to health and pharmacy areas. The privatisation and price liberalisation in healthy fields has to re-structure (but not fully). Availability and adequate pharmacy supplies to the major sectors. The result is that, the present situation of pharmacy services is far better than ten years ago.

The government of Sudan has a great experience in privatisation of the public institutions, i.e., Sudanese free zones and markets, Sudan telecommunications (Sudatel) and Sudan airlines. These experiences provide good lessons about the efficiency and effectiveness of the privatisation policy. Through privatisation, government is not evading its responsibility of providing health-care to the inhabitants, but merely shifting its role from being a provider to a regulator and standard setter. The drug financing was privatised early in 1992. Currently, the Federal Ministry of Health (FMOH) has privatised certain non-medical services in hospitals such as catering services, security and cleanings.

The overall goal of the CMS ownership privatisation is to improve access to essential medicines and other medical supplies in order to improve health status of the inhabitants particularly in far states (e.g., Western and Southern States).

Establishment of alternative ownership for the CMS can be achieved by selling the majority of shares to the private sector. This will achieve the following objectives:

- High access to essential medicines of good quality and affordable prices to the states' population and governments.
- Efficiency and effectiveness in drug distribution system to avoid the serious pitfalls and incidences that reported during the last ten years in the CMS.
- Equity by reaching all remote areas currently deprived from the formal drug distribution channels.
- Improvement of the quality and quantity of delivery of medicines to the public health facilities.

2. PRIVATISATION OF PUBLIC PHARMACEUTICAL SUPPLIES AND METHODS

The term privatisation has generally been defined as any process aims to shift functions and responsibilities (totally or partially) from the government to the private. In broader meaning, it refers to restrict government's role and to put forward some methods or policies in order to strengthen free market economy (Aktan, 1995). Privatisation can be an ideology (for those who oppose government and seek to reduce its size, role, and costs, or for those who wish to encourage diversity, decentralisation, and choice) or a tool of government (for those who see the private sector as more efficient, flexible, and innovative than the public sector) (Kameran, et al., 1989; Gormley, 1991). Scarpaci, (1991) contended that "the invisible

hand of the market is more efficient and responsive to the consumer needs and the public administrative budgets consume large portion of tax monies that could otherwise be used for service delivery". The emphasis is on improving the efficiency of all public enterprises, whether retained or divested.

Privatisation may take many forms including:

- The elimination of a public function and its assignment to the private sector for financial support as well as delivery (police, and fire departments, schools, etc.). Opponents characterise this as "load-shedding" (Bendick, 1989).
- Deregulation is the elimination of government responsibility for setting standards and rules concerning goods or services (Gormley, 1996 and 1997).
- Assets sales are the selling of a public asset (city buildings, sports stadiums) to private firms.
- Vouchers are the government provided or financed cards or slips of paper that permit private individuals to purchase goods or services from a private provider (food stamps) or circumscribed list of providers (Kettl, 1995).
- Franchising is the establishment of models by the public sector that is funded by government agencies, but implemented by approved private providers.
- Contracting is the government financing of services, choice of service provider, and specification of various aspects of the services laid out in contracts with the private-sector organisation that produces or delivers the services.
- User fees are the public facilities such as hospitals maximise their income or finance some goods from private sources, either through drug sales or other services. This kind of privatisation is applied in Sudan since early 1990s, as the health financing mechanism (especially for medicines).

In Sudan, the government has decided to distance itself from direct involvement in business, and thus to divest most of its interests whether in loss or profit making public enterprises. The public reform programme was set firmly in the context of the broader reforms, which were introduced in 1992. It had become clear the previous policies had delivered very disappointed results. This reform based on the transfer of activities vested with the government institutions to the private sector. It signalled the government intention to reduce its presence in the economy, to reduce the level and scope of public spending and to allow market forces to govern economic activities. Privatisation also forms part of the government strategy of strengthening the role of the private in the development to achieve the vision of the 25 years strategy in which the private sector will be the engine for economic growth. The reforms started with the liberalisation of local currency, foreign exchange transactions, internal and external trade, prices and health services (e.g., user fee as a mechanism of drug financing and other services). This reform had led to greater reliance on individual initiative and corporate accountability rather than on government as a decision-maker in business matters.

The privatisation policy goal is to improve the performance of the public sector companies. So, they can contribute to the growth and the development of the economy by broadens ownerships, participation in management, and stimulation domestic and foreign private investment.

The following are the primary objectives, which have been defined in the government's policy statement on public sector reform:

- Improve the operational efficiency of enterprises that are currently in the public sector by exposing business and services to the greatest competition for the benefit of the consumer and the national economy.
- Reduce the burden of public enterprises on the government's budget by spreading the shares' ownership as widely as possible among the population.
- Expand the role of the private sector in the economy (permitting the government to concentrate on the public resources) on its role as provider of basic public services, including health, education, social infrastructure, and to compact the side effects of the privatisation.
- Encourage wider participation of the people in the ownership and management of business.

In pursuing the primary objectives the privatisation policy aims to transform the performance of most significant enterprises in the public sector and ensure liquidation of all viable and non-viable public enterprises as soon as possible through commercialisation, restructuring and divestiture.

Public sector reform efforts are thus aimed at reducing government dominance and promoting a larger role for the private sector, while improving government's use of resources. Movements towards those goals in some countries is supported by components of a structural adjustment loan, which helped initiate the programme and establish the legislative and institutional base.

Opponents argue, the original objectives of state ownership were to ensure the corporate sector of the economy was in national hands rather than being controlled by either foreign investors or the minorities that enjoyed business dominance upon independence. A further objective was to use investment in state firms to accelerate development in a situation, in which private sector was reluctant to take risks.

2.1 Public Sector Medicines Supply System

In Sub-Saharan Africa countries (Sudan is not an exceptional) discussions about medicine distribution system reform have concentrated on ways to improve sustainability and quality of access to essential medicines. These discussions also include debate on the impact of privatisation of public drug supply organisations on effectiveness, efficiency, quality and cost of medicines in the public health facilities, as well as on the respective role of the public and private sectors (Leighton, 1996).

Until the mid 1980s, governments in Africa assumed responsibility for providing drugs to the inhabitants in some countries such as Mali and Guinea. The private distribution of all drugs including aspirin was illegal (Vogel et al., 1989). In many countries e.g., in Sudan there were two parallel government distribution systems. The public health network of hospitals and health centres were gratuitously distributed drugs. In the public sector pharmacies, the drugs were sold to the public at subsidised prices.

During the 1990s, Sudan initiated a number of initiatives to establish drug-financing mechanisms as part of the health reform process and decentralised decision-making at a state level. In 1992 when a law was passed, medicines were not anymore free-of-charge (i.e., privatised) in public health system. The aim of the government is to increase equitable access to essential medicines, especially at states' level. As a result the Central Medical Stores, which was responsible for medicines supply system of the public health facilities,

became an autonomous drug supply agency, and renamed as the Central Medical Supplies Public Corporation (CMS) and operated on cash-and-carry basis. It was capitalised and an executive board was installed. Since that time, it implied the states and federal hospitals have to buy their own medicines, other medical supplies. They organised their own transport means and distribution to their primary health-care facilities and hospitals. In addition, all hospitals became financially autonomous entities and had to organise their own medicines procurement system.

The public drug supply system has not been working throughout Sub-Saharan Africa including Sudan. There are serious shortages or no medicines at all, particularly in rural areas. A study in Cameroon found the rural health centres received only 65% of the stock designated for them, and 30% of the medicines arrived at the centres did not reach the clients. The loss rate after arrival in hospitals was estimated at 40% (Stephens, 1982). In Sudan, Graff and Evarard (2003) who visited the country on a WHO mission reported, "Although the cash-and-carry system took off well, but lack of sufficient foreign exchange hampered the CMS procurement activities and resulted in low stock levels of all medicines and even stock out of life-saving products. Hospitals had to purchase the medicines from elsewhere and often had to buy from private sector. Overall hospitals' budgets were tied to allocate drug budget and sales income was not sufficient to cover the purchase of needed medicines supplies. This resulted the medicines were not available most of the times. The in- or outpatients with their prescriptions were directed to the private pharmacies. In 2003, Khartoum Teaching Hospital-the biggest hospital in Sudan (not far than 5 km away from the CMS) had medicine stock of only LS 83,000 (US\$ 31). This would not fill one prescription for an anemic patient as a result of renal failure. This is a common practice that patients or their relatives are given prescriptions to buy any pharmaceutical supplies that are needed including drugs and other disposables from private sector pharmacies.

Many ministries of health, services' providers and researchers have identified many characteristics that lead to poor performance in Africa public drug supply systems. These characteristics include:

(1) Absence of competition:

Competition is the best way to ensure the goods and services desired by the consumer are provided at the lowest economic cost. Given the customers (i.e., public health facilities) freedom of choice enables market forces to provide sustained pressures on companies to increase efficiency. Privatised companies generally operate in a competitive market environment.

(2) Insufficient funding:

For example in Sudan with exception of Khartoum, Gezira and Gedaref states, all the states have no enough funds to establish efficient drug supply system. In spite of being profit-making organisation, the CMS failed to avail such funds during the past 14 years.

(3) Inefficient use of available resources:

The CMS since it was established in early 1990s working as a profit-making organisation. Due to the absence of privatisation the CMS engaged in an installment of repackaging joint venture pharmaceutical factory in 1999 and recently announced its commitment to build a pharmaceutical city with not less than US\$ 20 million, despite the lack of life-saving

medicines in the public health facilities. Such amount could be sufficient to establish a reliable supply system for all states of Sudan. The lack of prioritisation is a typical symptom and sign of most public organisations.

(4) Poor management:

There are a number of constraints inherent in operating government drug supply service. These constraints comprise:

(a) Civil servants are hired, rather than persons with business experience and skills. Managers confront different challenges in public setting. They are not easily hired or fired. The lack of accountability results from the lack of shareholders, who would be free to remove incompetent administrators.

(b) Even if the services can recruit outside of civil service, the wages are often too low to attract experienced managers. In addition, the managers do not share in dividends or other monetary activities as do private managers and incentives for doing well are often attenuated in a bureaucracy.

(c) There are cultural and structural conditions that promote corruptions including enormous pressure of wages earners to support an extended family and a strong incentive to more than their fixed government wage, traditional gift giving practice and a proprietary view of public offices (Van der Geest, 1982).

2.2 Privatisation of the CMS's Ownership

The public sector drug supply institutions have not succeeded (CMS is not exceptional) so far in organising a reliable and regular essential drug supply for the public health facilities (Huss, 1996). One of the most criticisms of the public drug supply system generally in Africa and particularly in Sudan, is how badly they are internally managed. There are those who agree the greater amount of real pharmaceutical resources could be made available to the public health- care system and the access to essential medicines could be significantly increased, if managerial efficiency of the system improved (Akin, 1987). Constraints inherent in operating a government drug supply organisation even after autonomous experience, which is the main limitation of public sector, the stabilised role of the private sector organisations such as private pharmaceutical organisations (rapid increase in importing companies, manufacturers and pharmacies) is very crucial. Telecommunications, e.g., Sudatel is one of the obvious solutions of choice for the government pharmaceutical policy would be to privatise the ownership of the CMS to the extent possible.

3. DISCUSSION

3.1 Advantages of Private Agencies

There are many arguments in favour of privatisation of public institutions. Advocates of this method claim privatisation have the following advantages (Savas, 1987; Hartley, 1986; De Hoog, 1984; Moore, 1987; and Ascher, 1987).

- Privatisation is efficient and effective because it fosters and initiates competition. The competition among firms drives the cost down. Empirical studies clearly prove the cost of the services provided by the government is much higher than when the

services are provided by private contractors. For example CMS's declared mark-up on cost (35%) amounted to 2.3 times the private mark-up (15%). In addition, private sector pays taxes, customs and other governmental fees (CMS exempted).

- Privatisation also provides better management than the public management. Because decision making under privatisation is directly related to the costs and benefits. In other words, the privatisation fosters good management because the cost of the service is usually obscured.
- Privatisation would help to limit the size of government at least in terms of the number of employees. On the other hand, it is a fact that overstaffing is common in publicly owned enterprises.
- Privatisation can help to reduce dependence on a government monopoly, which causes inefficiencies and ineffectiveness in services.
- Private sector is more flexible in terms of responding to the needs of citizens. Greater flexibility in the use of personnel and equipment would be achieved for short-term projects, part-time work, etc. Bureaucratic formalities are very common when government delivers the service. Less tolerance and strict hierarchy in bureaucracy are the reasons of the inflexibility in publicly provided services.

3.2 Rational of the CMS Privatisation

Even in the absence of broader adjustment context, however, it has long been clear the CMS reform is needed and indeed is not to avoidable. Patients, administrators (at both hospitals and ministries of health), doctors and other health-care professionals, the regulatory authority and others are being fully aware the performance of the CMS is so poor and ill people are really suffered even after the privatisation of medicines financing in 1992. Although it is profit-making organisation, neither the Ministry of Finance nor FMOH is getting proper or even any returns from the CMS. The Ministry of Finance after more than 14 years still have to inject annual money to cover the cost of certain budget lines such as free medicines projects. In addition, the following are main three justifications, which summarise the inefficiency of the CMS as a public organisation:

- There is a widespread dissatisfaction with the situation of pharmaceuticals in public facilities. For instance, 79% of the populations pay for their medicines out of pockets (WHO, 2004). The access to essential medicines in Sudan is still less than 50% (Quick, 1997).
- Yet, the cost has been immense and it is continuing. There is no satisfactory estimate of the total capital invested in the CMS. Rather than receiving a sustained flow of dividends from its investments, the Ministry of Finance still financing the free medicines and certain diseases drugs. For example, in Khartoum State RDF, with small capital (US\$ 2 million) - compared to the CMS big employed capital (more than US\$ 20 Million) approximately 10 times that of the Revolving Drug Funds (RDF)- support Ministry of Health activities with two billion every year. In contrast, the CMS pays nothing to health services since it was established in 1992. Instead, the strong stream of dividends and tax revenues, which should support public spending on other health activities, is lost. Hence, it is the poor who suffer as a result.

- Violation of pharmaceutical regulation at the expenses of the public health by creating a big loophole in the pharmaceutical legal framework, which will inevitably leads to marketing of counterfeit medicines. This practice also suppresses the private sector (the government encourages it heavily to grow) by making inappropriate barriers to the private sector provision of drugs.

This is not to say the CMS has no future: there are substantial investment opportunities. Many can be turned around under new ownership and will succeed. It has been the experience of state enterprises worldwide that, in both socialist economies and in mixed economies, it is exceedingly difficult to remain competitive:

- If run by a board of public servants with multiple objectives and without real accountability to shareholders.
- The constraints from government on investment and other business decisions.
- If cut off by virtue of ownership from the latest technologies, marketing and management trends.

The basic points are:

- Public sector boards and civil servants are not in touch with markets and commercial trends.
- Government-run companies have conflicting objectives that do not stress commercial accountability and thus jeopardise survival and commercial success.

Reform is a matter of practical necessity rather than ideology. For example, the government of Cuba has still committed to socialist policies, and has recently chosen for pragmatic reasons, to privatise its telephone company. The final pragmatic reason impelling the government towards swift public sector reform is the resources are being misused.

It is not surprising some obstacles and resistance from the CMS member of staff will confront this reform. The following strategies will help to overcome such resistance and obstacles:

- Consensus should be built by negotiation with relevant ministries, public and private sectors, and interest groups so that all “buy into” the process and negotiated the goals.
- Promotion research and development, demonstration and dissemination of information for the current situation. WHO mission 2003 Report will be of great value and expected outcomes with more focus on the patients after adoption of user fee policy.

3.3 The Role of the FMOH

Private enterprise functions most efficiently if market forces are allowed to operate independently and completely unfettered. Nonetheless, some FMOH involvement is necessary to ensure the availability of proper use of good quality and affordable pharmaceuticals. So FMOH will continue its current responsibility for importing, licensing, inspecting and regulating the distribution system without any discrimination between different organisations including the new established business, facilitating the development of adherence to the national drug list in the public health facilities, encourage purchasing of

registered medicines from the least cost reliable sources, quality control of medicines and maintenance of quality through out the system, and enforcement of price control system. The FMOH could also be involved in informing private distributors and the public about the appropriate use of medicines.

At the public health facilities, however, freedom-of-choice arguments that would justify a laissez-fair approach to private sector importing do not apply. There is the overriding merit-good aspects of medicines need, the related requisites of availability, cost-efficiency, and quality control. Some pharmaceuticals are more cost-effective than others. Therefore, the enforcement of a government-mandated essential drug list lowers the real resource cost of a given quantity of pharmaceuticals necessary for alleviation of common diseases. Standard treatment guidelines alleviate unsuitable medicating practices particularly over-medication, and reduce costs to consumers.

The government may retain a special (or "golden") share ranging from 30% to 50% to protect a newly privatised business from unwelcome take-over on national security grounds, or as temporary measure, to provide an opportunity for management to adjust to the private sector. The special share requires certain provisions in the articles of incorporation of a company may not be changed without the specific consent of special shareholder. The presence of a special share is useful tool but is not intended to be a government straitjacket on the management. The management and not the government are generally responsible for ensuring the special share's provisions are observed (Omer, 2004; Gibbon, 1996; Gamal and Omer, 2007). In order to develop a free market in shares, special shares should be time limited as far as possible. The purpose of privatisation is to remove the government from ownership of the CMS. In some cases, especially where there are major uncertainties about the probable market of the business, for example, United Kingdom and other governments have sold their ownership interest gradually over a period of years (Gibbon, 1996; Bryman, 2004; MOH, 2003; WHO, 2007; and Andalo, 2004).

4. CONCLUSION

The CMS reform is stronger today than it was in the early 1990s when the reforms were started. There are many highly committed and able individuals throughout the public sector in the absence of the single-minded pursuit of commercial success. Also, in the long-term interest of employment growth and the public at large, narrower concerns have prevailed. Managements and boards are less able and less willing to impose accountability for results on themselves and their employees. Stock-out of life saving items is common, and sanctions for non-performance are often absent altogether. To overcome those common symptoms of all public owned enterprise, and achieve the strategic objectives of the FMOH by increasing the access of population to the essential medicines. The privatisation of the CMS's ownership is the best solution of choice. By resurrecting competition, which could be achieved mainly through privatisation of the CMS ownership, many of the mentioned pitfalls can be to avoided. The new business should be responsible (of course without any kind of monopoly) for drug supply and distribution to the public health facilities on competition basis. The initial capital of the drug stocks for the different health facilities should be given by this new business by signing a clear agreement with interested states' ministries of health.

ACKNOWLEDGEMENTS

A special thanks to our spouses Kawthar and Asia for their support and their unwavering faith in us. Their intelligence, humour, spontaneity, curiosity and wisdom added to this article.

REFERENCES

- Akin, J.S., Birdsall N., De Ferranti, D.H. (1987). Financing health services in developing countries: an agenda for reform. World Bank, Washington, D.C: USA. Aktan, C.C. (1995). An introduction to the theory of privatisation. *J. Social, Political Economic Studies*, 20(2), 187-217.
- Andalo, D. (2004). Counterfeit drugs set alarm bells ringing. *Pharmaceutical Journal* 273-341.
- Ascher, K., (1987). The politics of privatisation contracting out public services. New York: St Martin's Press.
- Bendick, M.J. (2009). Privatising the Delivery of Social Welfare Services. *Privatisation and Welfare State*, Eds. Princeton, N.J: Princeton University Press.
- Bryman, A. (2004). *Social Research Method*. (2nd Edition). Oxford University Press.
- De Hoog, R.H. (1984). Contracting out for human services-economic, political and organisational perspectives. New York: State University of Albania.
- Gamal K.M. Ali, Abdeen M.O. (2007). The Impact of the Pharmaceutical Regulations on the Quality of Medicines on the Sudanese Market: Importers' Perspective.
- Gibbon, H. (1996). A guide for divesting government-owned enterprises. *How to Guide*. July 15.
- Gormley, W.T. (1996). Regulatory privatisation: a case study. *J. Public Adminis. Res. Theory*, 6(2), 243-260.
- Gormley, W.T. (1997). Regulatory Enforcement: Accommodation and conflict in four states. *Public Administration Review* 37 (4): 285-293.
- Gormley, W.T. (2001). *Privatisation and its Alternative*. Madison, WI: University of Wisconsin Press.
- Government of Sudan (GOS). (2009). National 25 years Strategic Plan (2002-2027). Khartoum: Sudan.
- Graff, P.J., Evarard, M.M. (2003). WHO mission to Sudan: travel report. WHO/HO: EXD/HTP. World Health Organisation: Geneva.
- Hartley, K. (1986). Contracting-out: A step towards competition. *Economic Affairs*, 6(5).
- Huss, R. (1996). Pharmaceutical consumer co-operative - the third path? *CRAME: a case study of from Central African Republic*. *World Hospitals* 31(3): 13-15.
- Kamerman, S.B., Khan, A.J. (2009). *Privatisation and Welfare State*. Princeton, N.J: Princeton University Press.
- Kettl, D.F. (1995). Privatisation as a tool of reform. *The Lafollette Policy Report*. Vol. 7.
- Leighton, C. (1996). Strategies for achieving health-financing reform in Africa. *World Development* 24 (9): 1511-1525.
- Ministry of Health (MOH). (2003). 25 years Pharmacy Strategy (2002-2027). Khartoum: Sudan. Unpublished Report.
- Moore, S. (1987). Contracting-out: A painless alternative to the budget cutter's knife. Steve H. Hankie (Ed.). *Prospect for privatisation*. New York: The Academy of political science.
- Omer, A.M. (2004). Socio-cultural aspects of water supply and sanitation in Sudan. *NETWAS*, Vol.2, No.4, Nairobi: Kenya.

- Quick, J.D. (1997). *Managing Drug Supply: The Selection, Procurement, Distribution and Use of Pharmaceuticals*. 2nd ed. West Hartford, CT: Kumarian Press.
- Savas, E.S. (1987). *Privatisation: The key to better government*. Chatham House Publishers Inc., New Jersey.
- Scarpaci, J.L. (1991). *Health Services Privatisation in Industrial Societies*. London: Jessica Kingsley Publishers.
- Stephens, B. (1982). *Cameroon health centre study*. Prepared for Population, Health Nutrition Department: World Bank. International Science & Technology Institute, Inc., Washington, D.C.
- Van der Geest, S. (1982). The efficiency of inefficiency: medicine distribution in South Cameroon. *Social Sci. Medicine*, 16, 2145-2153.
- Vogel, R.J., Stephen, B. (1989). Availability of pharmaceutical in Sub-Saharan Africa: roles of the public, private and church mission sectors. *Social Sci. Medicine*, 29(4), 479-86.
- WHO. (2004). *The World Medicines Situation*. WHO/EDM/PAR/2004.5. World Health Organisation (WHO): Geneva, Switzerland.
- WHO. (2007). *The World Medicines Situation*. WHO/EDM/PAR/2004.5. World Health Organisation (WHO): Geneva, Switzerland.

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