Open Access Research Article

Donor-funded procurement effectiveness in the public health medical laboratory services:
Examining the moderation role for government policy in donor-support

Crossman Mayavo

College of Economics and Business, School of Economics, University of Johannesburg, South Africa.

***Corresponding author's e-mail: mayavoc@gmail.com**
DOI: 10.35898/ghmj-72984

ABSTRACT

Background: The paper seeks to provide evidence on the government policy's moderating role in donor-funded procurement in the laboratory services of Zimbabwe. Procurement is a key component for any organizations to function optimally and the medical laboratory service is no exception considering that the donors are the major funders of the department hence the need for this study to examine the government policy as the moderating variable for this research. Medical laboratory services plays a very important role in the functioning of any health sector as every disease have to be tested to ascertain the actual disease a person suffering from before any treatment can be commenced.

Aims: The aim of the paper was to examine the moderating role of government policy on donor-funded procurement in Zimbabwe's laboratory services.

Methods: The paper made use of a quantitative method research method. Data was collected from 260 respondents sampled from a total population of 795 using RaoSoftware but only 214 respondents successfully returned the questionnaire from the Ministry of Health and Child Care, Zimbabwe and the analysis was done using STATA to run the structural equation modeling.

Results: The study found out that government policy (GP) moderates the pre-donation preparation process (PDPP) (β=0.15, p-value = 0.038) donation requirement process (DRP) (β=0.24, p-value =0.000), donation recipient planning process (DRPP) (β=0.22, p-value = 0.001) and donation implementation process (DIP) (β=0.18, p-value = 0.004) and the effectiveness of donor-funded procurement.

Conclusion: Based on the results, the study concluded that government policy has a role to play to support donor-funded procurement in the laboratory services in Zimbabwe and the world over and the study recommended that policy maker should take into consideration the important role as government policy plays as it support key health outcomes considering the crucial role the medical laboratory also plays.

Keywords: *Donor-funded procurement; Donation implementation process; Medical laboratory; Moderating role; Disease; Pre-donation; Government policy*.

Received: 16 April 2024, **Reviewed:** 22 April 2024, **Revised:** 6 May 2024, **Accepted:** 11 June 2024.

1. Introduction

Globally, laboratories are a fundamental component of the health system in the face of emerging and re-emerging diseases and contribute directly to improving health services. These include both private and public laboratories. Despite the nature of the laboratory, quality, reliable and timely results from laboratory investigations remain critical elements in decision-making in all aspects of health services. Laboratory testing identifies the cause of disease and provides data for the surveillance of diseases and early detection of emerging problems to guide an effective response to health threats. Maintaining functional and effective national public health laboratory services requires guidance, support, and regulations through well-laid-down policies and strategies. The laboratories operate with minimum standard requirements for equipment, reagents and supplies, staffing levels, and the correct required qualifications. The study is based on Transaction Cost Economic Theory, Person-Situation Interaction Theory and Agent Theory. The next is section covers the objective of the study. The primary objective of this paper is to determine the moderating effects of government policy (GP) in support of the effective donor-funded procurement in the Zimbabwean public health medical laboratory.

2. LITERATURE REVIEW

Global support's perspective

Despite ODA disbursing such funding to health in developing countries, Global Fund, on the other hand, has been playing a critical role in the health sector by mobilizing and funding low and middle-income countries to fight AIDS/HIV, Malaria, and TB (Global Fund, 2021) and in 2017 and 2018 alone a total of 4.3 billion and 3.1 billion United States Dollars respectively (WHO, 2020; Global Fund, 2021; OECD, 2021) was used to fund the health sector worldwide. As shown by the statistics above, donor funds contribute to and support the African continent. However, the effects of donor funding are not seen as most of these SSA countries destroy economies for the health sector at a large scale. The countries are creating a culture of dependency syndrome and laziness within their territories, affecting the general populace (Moyo, 2009; Madlongwa, 2014; Bachtiger et.al, 2021). The other downsize of the donor funds in the African continent is that the governments neglect to provide services to the people they lead and concentrate on themselves, as witnessed by poor service delivery in various African countries (Odaro, 2014; Hangulu & Ankitola, 2017; National Health Laboratory Strategic Plan (NHLSP), 2017; Oswalia & Vasdev, 2021). Moyo (2009) concedes that Africa is failing to take note of the aid given due to corruption within the high ranks and files of the leaders of these countries and bureaucracy which makes approval so difficult for programmes to take place. One has to move from pole to window without success. With the high figures of monies making their way to Africa from Europe and other continents, nothing seems to change in deliverables (Alexander, 2010; Baporikar & Randa, 2020).

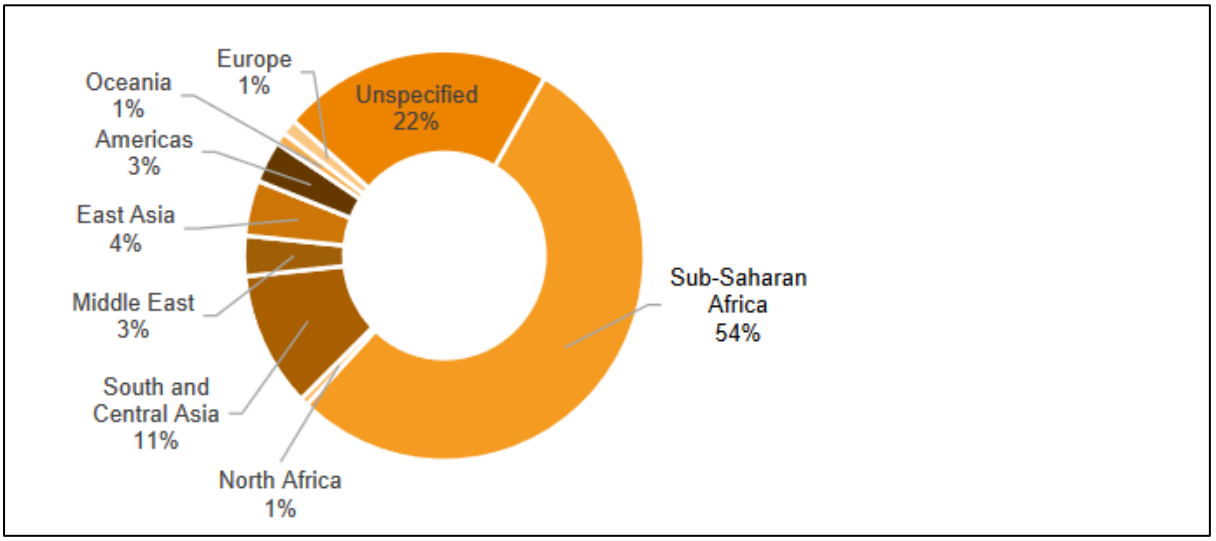

Figure 1: ODA to Health by region

Source: Development Initiative based on OECD (2018)

Sub-saharan africa perspective

However, with such donor funding being distributed to various lower to middle-income countries to fight diseases, sub-Saharan Africa (SSA) remains behind in terms of meeting targets such as Sustainable Development Goals (3) (SDGs) and still is battling to meet Sustainable development goals (SDGs) target for the year 2030 (Jailobaeva, Falconer, Loffreda, Arakelyan, Witter & Ager, 2021). The governments of SSA will need to put policies in place to support donor-funded programs within their countries. For the donor funds to make progress, the world leaders, in 2005, met in Paris, France, in what is known today as Paris Declaration on aid effectiveness. This declaration on aid effectiveness was said to help improve health donor coordination and harmonization between donors and governments of various countries, mainly those with poor health systems, especially the SSA. In 2018, SSA got half of the Health ODA funding, as shown in Figure 1.

Figure 1 shows the Health ODA distribution for 2018, which has remained in place until 2021 and is expected to remain the same going into 2022. The SSA continues to get 54% of the total ODA health funding, which has been the norm ever since. Some of the SSA's top beneficiaries of the above donor funding are illustrated in Figure 2.

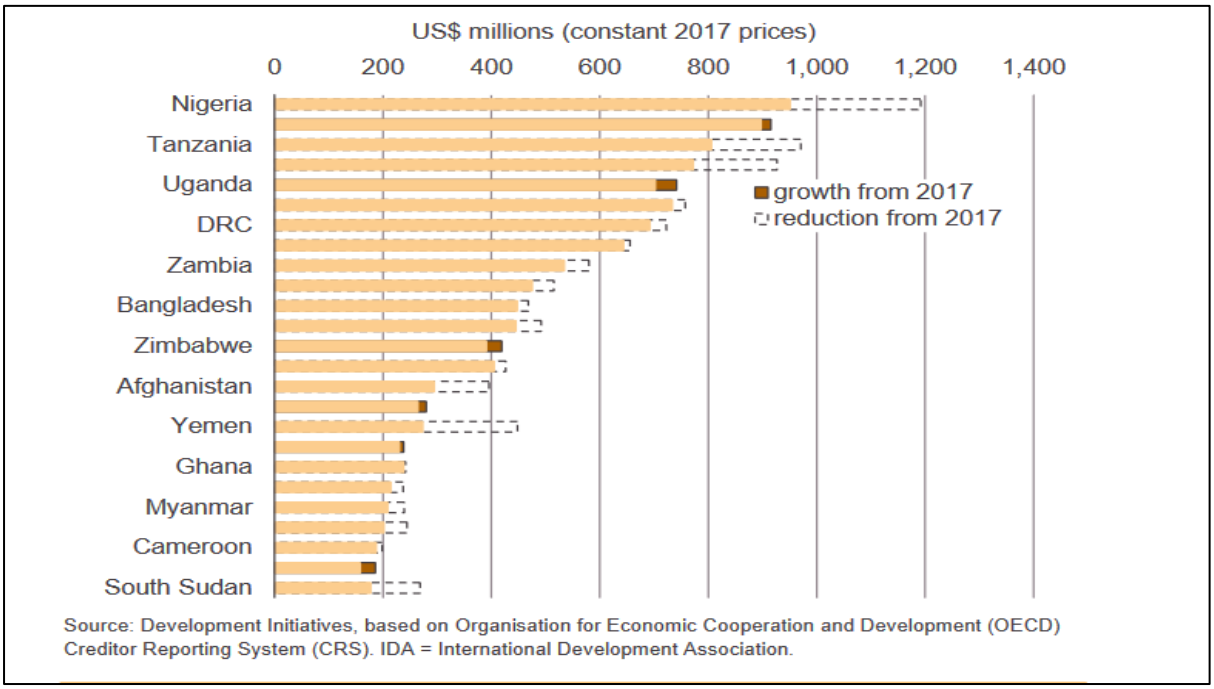

Figure 1: Top African beneficiaries of Health ODA

Source: Organisation for Economic Cooperation and Development (2021)

Figure 2 indicates the top SSA beneficiaries of the ODA health funding despite some other countries not from SSA being included within the same category as the SSA. Nigeria tops the SSA countries with USD951 million, followed by Tanzania and Ethiopia in the 3rd place (OECD, 2021). The country (Zimbabwe) under study is the 7th ranked in terms of receiving global health funding. The above only represents the top nine SSA countries. SSA received 31 billion in 2019 and 39 billion in funding in 2020 in their health sectors to procure health goods and services and fight COVID-19. Bilateral, Multilateral, and private Foundations contributed to the SSA health sector in 2020, and they are tabled in Table 1.

Table 1 Bilateral, Multilateral, and Private Foundations

Donors	Amount contributed (USD)
United States of America	6.5 billion
Global Fund	3.6 billion
Bill and Melinda Gates	2.8 billion
Global Alliance for Vaccines and Immunisation	1.9 billion
UK	1.8 billion

Source: UNICEF (2021)

In 2001, African states met in Abuja, Nigeria, known today as the Abuja Declaration, to deliberate on health funding. The African Union states members agreed to 15% of the national budget for health sector funding (Abuja Declaration Report, 2001). Unfortunately, most of these African states have failed to meet the agreed targets, and still, they are failing to meet and have no further discussions concerning this matter. For me, this was just a talk show of African leaders and only benefitted from the allowances given, but no implementation was given priority, although the idea was for the good of Africa as one. According to WHO (2019), only four countries managed to meet the target, and others only managed to increase their national budget funding towards the health sector. Today, no African country managed to surpass the 15% threshold. However, those other countries that had managed to meet the 15% have decreased their health sector budget for reasons known to them.

Government policy

Government policy is key to the improvement of the performance of public health laboratories because all the procurements, including those of donors, are guided and led by consistent policies (Mackenbach & McKee, 2013; Schaffer et al., 2022; Weerasekara et al., 2023). Government policy acts as a guide on all the donor procurement activities supported by the donor country policies, which both help to align with the constitutions of the countries involved. Policies help to curb illicit deals and corruption and influence efficiencies rather than providing bottlenecks. According to OECD (2021), government policies should influence procurement of services and goods outcomes as it is used to measure the fairness, equitability of the systems in place, transparency, and cost-effectiveness. Moreover, the same policies may drive remuneration of attractive salaries to procurement officers and public health laboratory employees with the skills and qualifications required (Chigora & Chisi, 2009; Alisan & Gunawan, 2010; Witter et al., 2019; Gautier & Riddle, 2017).

There is a need to have trust with those international support donors and partners (PEPFAR, CHAI, World Bank, and Global Fund, to mention a few). There should be a favourable policy regarding donor funding in Zimbabwe. Based on WHO (2001; 2011; 2015) on donation equipment and procurement, the selected variables to support this study are pre-donation planning process (PDPP), donation requirement process (DRP), donation recipient preparation process (DRPP) and donation implementation process (DIP) as these are the expected procurement process as indicated on the hypotheses as follows;

H1a: Government policy positively moderates the relationship between the pre-donation planning process and the effectiveness of donor-funded procurement.

H2b: The relationship between the donation requirement process and effective donor-funded procurement is moderated by government policy.

H3c: The donation recipient preparation process and effective donor-funded procurement relationship is moderated by government policy

H4d: The government policy moderates the relationship between donation implementation and effective donor-funded procurement.

Theoretical: Integration of the three theories

In this study, three key theories, that is the economic transaction cost (TCE) and person-situation interaction (PSI) theories, and agency theory, are considered in this study to integrate and seek to understand the relationship that exists in the donor-funded procurements and the Ministry of Health and Child Care participation in such processes. It is not an easy task, though, since there are more other theories left out of this study, and no one theory can apply to answer the challenges faced in this complex relationship in procuring public medical laboratory commodities. The TCE talks of the structure that exists for the proper organizational management and operations as well as outlining the causes of transaction costs (Coase, 1937; Williamson, 1979; Adoms, Hussein, & Agyem, 2018) putting forward key assumptions, which are bounded rationality (BR) and opportunism as major challenges, with key constructs asset specificity and uncertainty (Grover & Malhotra, 2003) that may affect the procurement of public medical laboratory commodities. BR is said to be limited to individuals.

Person-situation interaction theory is based on individual behaviours which affect the performance of donor-funded procurements and activities. For donor procurements to succeed, individuals must be goal-orientated and task-oriented. People's behaviour is affected more by the situations around the procurement than by the people around, as mentioned by Mischel (1968) and supported by Kihlstrom (2013). The Agency theory discusses the relationship between the donor and the MoHCC's laboratory services. MoHCC's laboratory services are the "principal", and the donors are the "Agency" since they are procuring on behalf of the MoHCC

(Parker, Dressel, & Chevers, 2018; Petrose et al., 2016; Rechel & McKee, 2012; Passey, 2020). This study proposes integrating the three theories as a theoretical contribution to the study. These theoretical factors will assist in improving laboratory performance since the organisational structures are manned by people who are self-aware of their obligations to improve the health welfare of the general populace of Zimbabwe through well-supported/functioning medical laboratories.

Conceptual framework

Figure 3 shows a proposed conceptual framework based on the hypotheses discussed above and that all the constructs have existing relationships, as shown by the direction of the arrow.

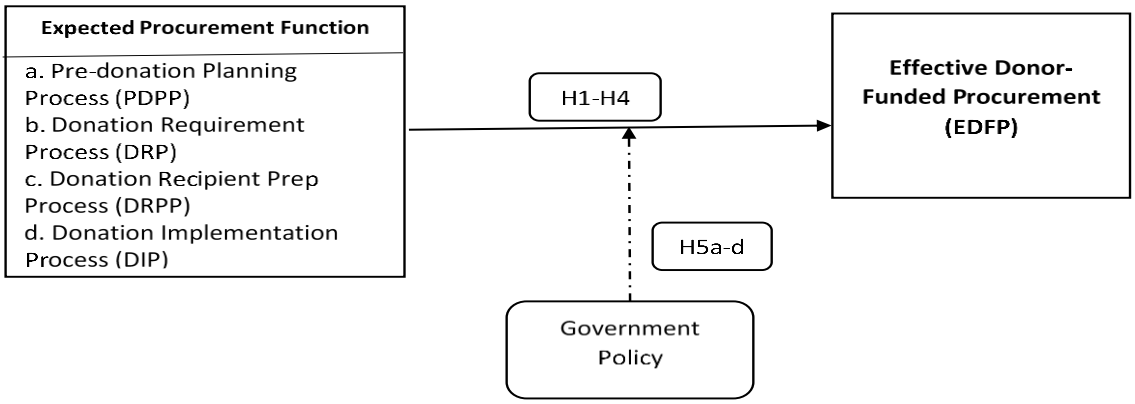

Figure 3: Conceptual Framework

The conceptual framework (Figure 3) envisages that the pre-donation planning process, donation requirement process, donation recipient preparation process, and donation implementation process directly affect the effectiveness of donor-funded procurement denoted by hypotheses H1-H4. Additionally, H5 indicates that government policy moderates the expected procurement outcome of donor-funded procurement and effective donor-funded procurement, as shown by hypotheses in the conceptual framework.

3. Methods

The study adopted a pragmatism philosophy associated with mixed methods research (Park, Artino & Konge, 2020; Biesta & Burbules, 2003; Tashakkori & Teddlie, 2003). Pragmatism allows the use of both quantitative and qualitative methods in a single research to build on the strengths and weaknesses of both methods (Morgan, 2007; Shannon-Baker, 2015; Cresswell & Plano Clark, 2011). This researcher adopted descriptive-exploratory research because they are complementary in this mixed-method research since descriptive research design helped this researcher to deal with quantitative methods and exploratory helped this researcher to collect data on the qualitative part of this research (Streubert & Carpenter, 1999; Larson-Hall, 2010; McNabb, 2010; Bernard, 2000), and this was explored through the experiences of the medical laboratory scientists and the procurement officers and SCMLTs. The research's sample size was 214 questionnaires returned which were sampled using Raosoft sample size calculator from the population of 795 health employees which are Scientists, Procurement Officers and State Certified Medical Laboratory Technologists from the Ministry of Health and Child Care.

4. Results

Table 2 shows the frequency, percentages, median, factor loading, and alpha results for a government policy's effects on donor-funded public health medical laboratories procurement. Table 2 show that 43.9% (n=94) of the respondents agree that we need government policy to motivate donor support, and 41.6% (n=89) of the respondents agree that we believe government policy promotes donor-funded procurement in the public health medical laboratory services. 39.3% (n=84) of the respondents agree that we trust the government policy helps to curb corruption in the procurement process for all supported public health medical laboratory services, 51.9% (n=111) of the respondents agree that we know government policy is a tool that influences support of recruitment of qualified employees, 50.5% (n=108) of the participants agree that we are aware that government policy can be used to set salaries that are attractive to avoid brain-drain, 47.2% (n=101) of the respondents agree that we accept that donor-funded procurement can be frustrated by unfavourable government policy, 49.1% (n=105) of the

respondents agree that we believe that procurement policy direction comes from consistent government policy, 53.3% (n=114) of the participants agree that we know that government policy may foil/support collaborations between the public health laboratory and donors, 50.9% (n=109) of the respondents agree that we believe that government policy influences harmonisation of equipment used in the public health laboratory and 54.2% (n=116) of the respondents agree that we know that donor-funded procurements may flourish due supportive government policy.

Table 2: Frequency, descriptive, median, factor loading, and the alpha on the effects of government policy on donor-funded procurement.

Statement	Strongly Disagree n (%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Strongly Agree n(%)	Median (IQR)	Factor loading	Alpha
GP01: We need government policy to motivate donor support	5(2.3)	6(2.8)	39(18.2)	94(43.9)	69(32.2)	4(4-5)	0.03270	0.8133
GP02: We believe government policy promotes donor-funded procurement in the public health medical laboratory services	2(0.9)	13(6.1)	47(22.0)	89(41.6)	63(29.4)	4(3-5)	0.13338	0.7725
GP03: We trust the government policy helps to curb corruption in the procurement process for all supported public health medical laboratory services.	6(2.8)	13(6.1)	53(24.8)	84(39.3)	58(27.1)	4(3-5)	0.17982	0.7721
GP04: We know government policy is a tool that influences support of recruitment of qualified employees	2(0.9)	11(5.1)	32(15.0)	111(51.9)	58(27.1)	4(4-5)	0.23747	0.7619
GP05: We know that government policy can be used to set attractive salaries to avoid brain drain.	6(2.8)	9(4.2)	37(17.3)	108(50.5)	54(25.2)	4(4-5)	0.16498	0.7657
GP06: We accept that donor-funded procurement can be frustrated by unfavourable government policy	3(1.4)	2(0.9)	34(15.9)	101(47.2)	74(34.6)	4(4-5)	0.12421	0.7790
GP07: We believe that procurement policy direction comes from consistent government policy	1(0.5)	11(5.1)	45(21.0)	105(49.1)	51(23.8)	4(3-4)	0.17880	0.7642
GP08: We know that government policy may foil/support collaborations between the public health laboratory and donors	1(0.5)	2(0.9)	37(19.3)	114(53.3)	60(28.0)	4(4-5)	0.16206	0.7694
GP09: We believe that government policy influences the harmonisation of equipment used in the public health laboratory	2(0.9)	4(1.9)	50(23.4)	109(50.9)	49(22.9)	4(3-4)	0.11042	0.7838
GP10: We know donor-funded procurements may flourish due to supportive government policy.	0(0)	3(1.4)	37(17.3)	116(54.2)	58(27.1)	4(4-5)	0.10222	0.7853

The same results were confirmed by median (IQR) results. The factor loadings were estimated for each item and ranged from 0.0270-0.23742 and are not showing a good item contribution to the construct. The item reliability coefficients (alpha (α)) ranged from 0.7619 to the highest of 0.8133. The researcher went on to run the structural equation modelling using the collected data. The structural equation model provides and defines the causal

relationships and association between observed endogenous variables and the exogenous observed variables. The diagram is shown on Figure 4 below;

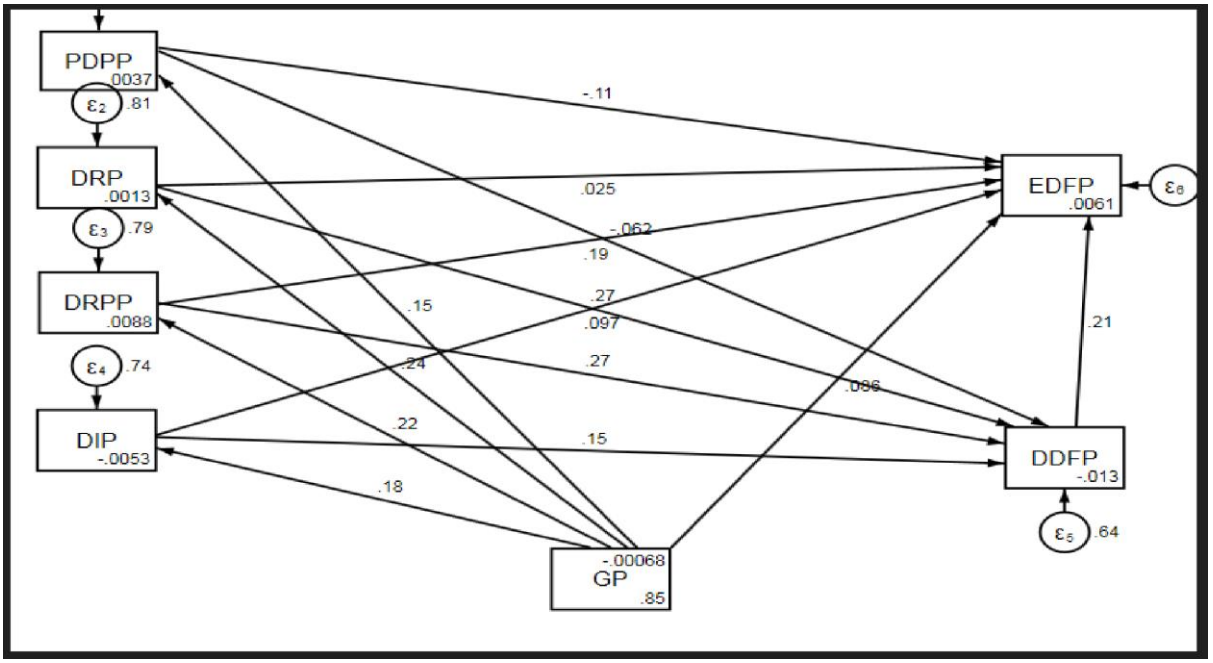

Figure 4: Structural Equation Modelling

The correlation coefficient measures the association of observed and measured variables. However, the correlation coefficient values should be between 0 and 1 to significantly influence the relationship between variables (Edwards, 2009; Sardeshmukh & Vandenberg, 2017).

5. Discussion

The objective was to examine the moderating effect of government policy on donor-funded procurement for public health medical laboratories in Zimbabwe. The researcher came up with the hypotheses, and all the hypotheses were supported, which talks about government policy (GP) moderates the pre-donation preparation process (PDPP) (β=0.15, p-value = 0.038) donation requirement process (DRP) (β=0.24, p-value =0.000), donation recipient planning process (DRPP) (β=0.22, p-value = 0.001) and donation implementation process (DIP) (β=0.18, p-value = 0.004) and the effectiveness of donor-funded procurement. The table below shows the hypotheses;

Table 3: Tested hypotheses supported

H1a: Government policy positively moderates the relationship between the pre-donation planning process and the effectiveness of donor-funded procurement->>>>	0.038	Supported
H2b: The relationship between the donation requirement process and effective donor-funded procurement is moderated by government policy->>>>	0.000	Supported
H3c: The donation recipient preparation process and effective donor-funded procurement relationship is moderated by government policy->>>>	0.001	Supported
H4d: The government policy moderates the relationship between donation implementation and effective donor-funded procurement->>>>	0.004	Supported

The research results show that government policy moderates these variables and shows positive relationships. The study's positive results accept that government policy has a role in supporting the effectiveness of donor-funded procurement. This assertion is supported by the views held by the OECD (2019) that government policies should influence procurement of services and goods outcomes as it is used to measure the fairness, equitability of the systems in place, transparency, and cost-effectiveness. Moreover, Odaro (2014) and Gautier and Riddle (2017) postulate that the same policies may make remuneration attractive to procurement officers and public health laboratory employees with the required skills and qualifications.

When the government policy is inconsistent, there is no control, and as seen by the positive results of this study, donors and procurement agents behave in a way that suits their agenda (Witter et al., 2019; Weerasekara et al., 2023). As stated by OECD (2021), government policy acts as a guide on all the donor procurement activities supported by the donor country policies, which both help to align with the constitutions of the countries involved. Policies help to curb illicit deals and corruption and influence efficiencies rather than providing bottlenecks. The results further speak to the decision-making that takes a long time. Every document passes through different offices before the final decision or approval can be obtained. This slows the implementation of the procurement processes and can be manipulated by corrupt decision makers in their favour, and such policies are anti-progress (Mackenbach & McKee, 2013; Schaffer et al., 2022).

The study immensely contribute to the body of knowledge considering that the study area has not been studied much if ever it was studied focusing specifically on the medical laboratory services. The study will contribute so much in the field of medical laboratory services and health at large. In addition to the above, the theoretical and practical implications are that the success of the donor-funded procurement is hinged upon improved policies that are in support of the medical laboratory services and stakeholders who benefits from these procurements should hold the government to account such that the testing services are given and cascaded down to the ordinary populace of the country. Laboratory service is a known neglected health sector department and this study will further influence the stakeholders to pressurise the government of Zimbabwe and the governments in Africa. When the GP is put in place and practised has the potential to influence the procurement of goods and services that improves the health outcomes. Additionally, since the government of Zimbabwe struggles with funding the medical laboratory services, policy-makers may need to put in place policies that support the procurement of goods and services and further stop working against the donors who have become the key procurement cornerstone in support of the laboratory services. The stakeholders have the duty to advise the government to put policies that make medical requirements procurement efficient.

6. Conclusion

The study revealed that government policy is a blueprint that guides donor-funded procurement and assists in driving better remunerations to attract the right skills and qualified employees in procurement and laboratory testing, such as scientists, SCMLT, and others who push the agenda forward. However, the government of Zimbabwe's policies is anti-Western donors due to the “regime change agenda” and political terms that have generally affected the laboratory and health sector's development. Furthermore, the study found that the government policy does not provide the lost trust between the donors and the government. Additionally, the study found that corruption, unethical practices, and lack of government commitment are some challenges that Zimbabwean government policy is failing to curtail. Policies help to curb illicit deals and corruption and influence efficiencies rather than providing bottlenecks.

Furthermore, the government policy should provide a legal framework that can monitor the administrative systems that take a long time to approve the requirements for further procurement processes as the bureaucracy drastically increases over time, thereby increasing the cost of funding. The study's findings also demonstrate a positive relationship between the factors determining successful donor-funded procurement and those factors. The researcher concluded that based on the research results, government policy should be proactive in support of the general populace who benefits from such procurement policies such that the laboratories perform above the current scenarios where donors are not held responsible for supporting the laboratory system and the policy should compel adequate funding that brings in confidence in the laboratory systems. The results below confirmed the above argument;

- ✓ Government policy moderates the pre-donation preparation process – effective donor-funded procurement relationship (β= 0.15, p-value =0.038).
- ✓ Government policy moderates the donation requirement process –effective donor-funded procurement relationship (β =0.24, p-value = 0.000).
- ✓ Government policy moderates donation recipient preparation process – effective donor-funded procurement relationship (β = 0.22, p-value =0.001).
- ✓ Government policy moderates the donation implementation process – effective donor-funded procurement relationship (β = 0.18, p-value = 0.004).

In addition to the above, medical laboratory services cannot be separated from the core health business as is the case in the Zimbabwe health services and this importance of the laboratory services became bare during COVID-19 period, hence the MLS should be supported the same way other departments are supported such as

pharmacy and hospitals in terms of procurement and health funding. This may improve overall health outcomes. Additionally the study's practical implications are that there is a need for resource allocation based on higher needs as the laboratory has been underfunded for a long time. Furthermore, the researcher proposes policy changes removing the ineffective one or just making adjustments to the current existing ones. The stakeholders could use this information to advocate for policy changes that address the identified issues to improve overall health outcomes through donor-procurement support. In support of the above point, donor-funded initiatives could be used for programme development and support for health related support.

Limitations

Difficulties in finding secondary data related to the study and the fact that data was not collected directly from the donors themselves, this may limit the generalizability of the study. However, the author made use of donor-funded employees that are funded by the various donors supporting the laboratory services to cover the weaknesses of data collection and then primary data was collected in their various capacities from the scientists to procurement officers. Future researches may engage the donor funding the laboratory services directly but this may take time as the authorising letter for one to conduct research is from the donors' home country.

Conflict of Interest

There is no conflict of interest.

References

Abuja Declaration Report. (2001). African Summit on HIV/AIDS, Tuberculosis and other related infectious diseases, Abuja, Nigeria, 24-27 April 2001. Retrieved November 14, 2022, from https://au.int/sites/default/files/pages/32894-file-2001-abuja-declaration.pdf

Adoms, D., Hussein, E. K., & Agyem, J. A. (2018). Theoretical and conceptual framework; mandatory ingredients of quality research. *International Journal of Scientific Research*, 7(1), 438-441.

Ahsan, K. and Gunawan, I. (2010) Analysis of Cost and Schedule Performance of International Development Projects. International *Journal of Project Management*, 28, 68-78. https://doi.org/10.1016/j.ijproman.2009.03.005

Alexander, P. (2010). Rebellion of the poor: South Africa's service delivery protests - a preliminary analysis. *Review of African Political Economy*, 37:123, 25-40. https://doi.org/10.1080/03056241003637870

Bachtiger, P., Adamson, A., Chow, J. J., Sisodia, R., Quint, J. K., & Peters, N. S. (2021). The Impact of the COVID-19 Pandemic on the Uptake of Influenza Vaccine: UK-Wide Observational Study. *JMIR public health and surveillance*, 7(4), e26734. https://doi.org/10.2196/26734

Baporikar, N & Randa, I. O. (2020). "Organizational Design for Performance Management in State-Owned Enterprises," International *Journal of Service Science, Management, Engineering, and Technology (IJSSMET), IGI Global*, 11(4), 1-25. https://doi.org/10.4018/IJSSMET.2020100101

Bernard, H. (2000) Social Research Methods: Qualitative and Quantitative Approaches, Sage, Thousand Oaks.

Biesta, G., & Burbules, N. C. (2003). Pragmatism and educational research. Philosophy, Theory, and Educational Research Series.

Carvalho, M. M., Patah, L. A., & de Souza Bido, D. (2015). Project management and its effects on project success: Cross-country and cross-industry comparisons. *International Journal of Project Management*, 33(7), 1509-1522. https://doi.org/10.1016/j.ijproman.2015.04.004

Chigora, P., & Chisi, T.H. (2009). The Eight Years of Interaction: Lessons from Zimbabwe's Look East Policy and the Future of African Countries and Asia-Pacific Region.

Coase, R.H. (1937), The Nature of the Firm. *Economica*, 4: 386-405. https://doi.org/10.1111/j.1468-0335.1937.tb00002.x

Creswell, J.W. and Plano Clark, V.L. (2011) Designing and Conducting Mixed Methods Research. 2nd Edition, Sage Publications, Los Angeles.

Gautier, L., & Ridde, V. (2017). Health financing policies in Sub-Saharan Africa: government ownership or donors' influence? A scoping review of policymaking processes. *glob health res policy* 2, 23 (2017). https://doi.org/10.1186/s41256-017-0043-x

Gatome-Munyua, A., Sieleunou, I., Barasa, E., Ssengooba, F., Issa, K., Musange, S., Osoro, O., Makawia, S., Boyi-Hounsou, C., Amporfu, E., & Ezenwaka, U. (2022). Applying the Strategic Health Purchasing Progress Tracking Framework: Lessons from Nine African Countries. *Health Systems & Reform*, 8(2), e2051796. https://doi.org/10.1080/23288604.2022.2051796

Global Fund, (2021). Audit report: Global Fund Grants in Zimbabwe. Geneva

Grover, V. and Malhotra, M.K. (2003), Transaction cost framework in operations and supply chain management research: theory and measurement. *Journal of Operations Management*, 21: 457-473. https://doi.org/10.1016/S0272-6963(03)00040-8

Hangulu, L., & Akintola, O. (2017). Health care waste management in community-based care: experiences of community health workers in low resource communities in South Africa. *BMC public health*, 17(1), 448. https://doi.org/10.1186/s12889-017-4378-5

Hauken, M. A., Larsen, T. M. B., & Holsen, I. (2019). "Back on Track": A Longitudinal Mixed Methods Study on the Rehabilitation of Young Adult Cancer Survivors. *Journal of Mixed Methods Research*, 13(3), 339-360.

https://doi.org/10.1177/1558689817698553

Jailobaeva, K., Falconer, J., Loffreda, G. et al.(2021). An analysis of policy and funding priorities of global actors regarding noncommunicable disease in low- and middle-income countries. *Global Health* 17, 68. https://doi.org/10.1186/s12992-021-00713-4

Kihlstrom, J. F. (2013). The person-situation interaction. In D. E. Carlston (Ed.), The Oxford handbook of social cognition (pp. 786-805). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199730018.013.0038

Larson-Hall, J. (2010). A Guide to Doing Statistics in Second Language Research Using SPSS. https://doi.org/10.4324/9780203875964

Mackenbach, J. P., McKee, M. (2013). Evaluating the impact of health policies on population health in Europe, 23(2), 195-201. https://doi.org/10.1093/eurpub/cks192

Madlongwa, E. T. (2014). Local government at the heart of poor service delivery. Available at: http://www.psam.org.za/research/1460540011.pdf

McNabb, D. E. (2010). Research Methods for Political Science: Quantitative and Qualitative Approaches (2nd ed.). New York, NY: M.E. Sharpe, Inc.

Mischel, W. (1968). Personality and assessment. John Wiley & Sons Inc.

Morgan, D. L. (2007). Paradigms Lost and Pragmatism Regained: Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research*, 1(1), 48-76. https://doi.org/10.1177/2345678906292462

Moyo, D. (2009) Why Foreign Aid Is Hurting Africa. The Wall Street Journal, 21st March.

National Health strategy Plan (2017). National Health Strategic Plan 2016-2020. Harare, Ministry of Health and Child Care.

OECD, (2021). The Global recovery is strong but imbalanced. OECD Economic Outlook, 2021(2), 1-10.

Odaro, E.D. (2014). Causes of Poor Service Delivery in Africa and Their Impact on Development. Consilience: *Journal of sustainable development*, 34-45.

Olalere, N., Gatome-Munyua, A. (2020). Public financing for health in Abuja: 15% of an elephant is not 15% of a chicken. Addis: Africa Renewal.

Oswalia J, Vasdev K., (2021). Emerging and re-emerging infectious diseases - past, present and beyond. *MOJ Biol Med*, 6(1):5-8. https://doi.org/10.15406/mojbm.2021.06.00121

Park, Y. S., Konge, L., & Artino, A. R., Jr (2020). The Positivism Paradigm of Research. *Academic Medicine*, 95(5), 690-694. https://doi.org/10.1097/ACM.0000000000003093

Parker, D. W., Dressel, U & Chevers, D. (2018). Agency theory perspectives on public-private partnerships: International development project. *International Journal of Productivity and Performance*, 67(2), 239-259. https://doi.org/10.1108/IJPPM-09-2016-0191

Passey, D. (2020). Theories, theoretical and conceptual frameworks, models and constructs: Limiting research outcomes through misconceptions and misunderstandings. Studies in Technology Enhanced Learning, 1(1), 1-20. https://doi.org/10.21428/8c225f6e.56810a1a

Petrose, L.G., Fisher, A. M., Douglas, G. P., Terry, M. A., Muyla, A., & Chawani, M. S. (2016). Assessing Perceived Challenges to Laboratory Testing at Malawian Referral Hospital. *Am J Trop Med Hyg*, 94(6),1426-1432. https://doi.org/10.4269/ajtmh.15-0867

Rechel & McKee. (2012). Organisational models for delivering essential public health capacity in Europe.

Schaffer, L. M., Oehl, B., & Bernauer, T. (2022). Are policymakers responsive to public demand in climate politics? *Journal of Public Policy*, 42(1), 136-164. https://doi.org/10.1017/S0143814X21000088

Shannon-Baker, P. (2016). Making Paradigms Meaningful in Mixed Methods Research. *Journal of Mixed Methods Research*, 10(4), 319-334. https://doi.org/10.1177/1558689815575861

Streubert, H., & Carpenter, D. (1999). Qualitative Research in Nursing: Advancing the Humanistic Perspective (2nd ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Tashakkori, A., & Teddlie, C. (2003). Handbook of Mixed Methods in Social and Behavioural Research. Thousand Oaks, CA: Sage.

United Nations Report. (2021). The Sustainable Development Goals. Retrieved August 22 2022, from https://unstats.un.org/sdgs/report/2021/The-Sustainable-Development-Goals-Report-2021.pdf

UNICEF. (2021). The resources on the Sustainable Development Goals. Retrieved August 22 2022, from https://www.unicef.org/sdgs/resources

Tribhuvan, S. (2021). Factor Analysis as a tool for survey Analysis. *American Journal of Applied Mathematics and Statistics*, 9(1), 4-11. https://doi.org/10.12691/ajams-9-1-2

Tsai, E., Allen, P., Saliba, L. F., & Brownson, R. C. (2022). The power of partnerships: State public health department multisector collaborations in major chronic disease programme areas in the United States. *Health Research Policy and Systems*, 20(1), 80. https://doi.org/10.1186/s12961-021-00765-3

Witter, S., Chirwa, Y., Chandiwana, P., Munyati, S., Pepukai, M., & Bertone, M. P. (2019). The political economy of results-based financing: The experience of the health system in Zimbabwe. *Global Health Research and Policy*, 4(1), 20. https://doi.org/10.1186/s41256-019-0111-5

Weerasekara, D. T., Disaratna, V., Withanage, K. T., & Perera, B. A. K. S. (2023). Procurement management in the foreign-funded construction projects implemented in Sri Lanka. *International Journal of Construction Management*, 2021(1), 1-13. https://doi.org/10.1080/15623599.2021.1956674

Williamson, O. (1979). Transaction cost economics: The governance of contractual obligations. *Journal of Law and Economics*, 22(2), 233-261. https://doi.org/10.1086/466942

World Health Organisation. (2011). Procurement Resource Guide. Geneva: WHO.

World Health Organisation. (2015). Health in 2015 from MDGs to SDGs, Geneva: WHO.

World Health Organisation. (2015). Guidance for establishing a National Health Laboratory System. Regional Office for Africa. Brazzaville: WHO.

World Health Organisation. (2019). Monitoring Health for the SDGs, sustainable development goals, World Health Organisation. Retrieved March 12 2022, from http://apps.who.int/iris/handle10665/272596.

World Health Organisation. (2020). Country Cooperative Strategy (2016-2020), Zimbabwe. Harare: WHO.

Cite this article as:

Mayavo, C. (2024). Donor-funded procurement effectiveness in the public health medical laboratory services: Examining the moderation role for government policy in donor-support. *GHMJ (Global Health Management Journal)*, *7*(2). 55–65. https://doi.org/10.35898/ghmj-72984