



Original Article

Factors Affecting Weights and Measures Officers in Revenue Collection: A Case of Weights and Measures Agency in Dar es Salaam

Happy Titi¹*

¹ Jordan University College, P. O. Box 1859, Morogoro, Tanzania.

* Author for Correspondence Email: titihappytiti@gmail.com

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This study aimed to investigate the factors affecting weights and measures officers (WMO) in revenue collection, a case at Dar es Salaam. The study employed a cross-sectional research design, whereas a sample size of 63 respondents that, include 59 WMO and 4 RM of WMA from Dar es Salaam were involved. A simple random sampling technique was used in the selection of WMO, and a purposive sampling technique was used in the selection of the regional managers (RM) of four administrative regions. Questionnaires, interviews, and documentary reviews were used for data collection. The collected quantitative data were analysed by using descriptive statistics, while qualitative data were analysed by using thematic analysis. The study found that lack of regular training on revenue collection, the existence of fraud, shortage of WMO and shortage of budget hinder their revenue collection at WMA. The study recommends that WMA should improve the provision environments of the service delivery to satisfy its customers. WMA needs to train its WMO in customer services, customer satisfaction and professional skills, WMA should look for sustainable and definite sources of revenue to generate funds for its budget, and WMA should put in place human resource policies, such as recognition policy and rewards, and training policy to enhance professional excellence and motivation of WMO to be results oriented.

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INTRODUCTION

The history of weights and measures is traced back to early human civilisation. The measurement system is undoubtedly one of man's greatest and most important inventions that cannot be left aside in the history of the evolution of civilisation. Every human being on our planet is affected by measurements in one way or another. Imagine, from the moment we are born and throughout our daily lives, the act of weighing or measuring is an important and often vital part of our existence (URT, 2013).

Worldwide, the concern of measuring the quality of services provided by the WMA has become of great concern. For instance, the USA established weights and measures departments as fully-fledged legal metrology for the aim of tracing and monitoring the quality of services provided (Racine, 2011). This department was made responsible for ensuring that measurements operate reliably as well as for controlling the quality of the service provided and shielding consumers from dishonest operators.

In western countries, standardised weights and measures, well-established regulations and a well-developed set of laws and penalties for breaches have been developed accordingly (GAIN, 2019). It has therefore been pointed out that legal WMA has brought measurable societal and economic impact following its ability to regulate operating instruments, protect consumers, and further it reduces chances for uncertainties of measuring instruments, and as a result, it helps to enhance customer satisfaction (Antwi & Matsui, 2018).

In Tanzania, WMA was established for the sake of undertaking three major functions, namely, to provide certification of weights and measures instruments, to increase consumer awareness in

matters relating to weights and measures, and to transform the WMA into an efficient, effective, and well-managed agency (USAID, 2004). These functions affect all life aspects including the economic aspect through revenue collected by WMO.

Revenue collection is an integral function of Government agencies in a country where fiscal federalism is employed (Fjeldstad & Moore, 2009). Thus, in fiscal federalism, the aim of any Government agency's revenue collection including WMA is to collect what is owed. In recent years (from 2018/2019 to 2020/2021) there have been fluctuations in revenue collected by WMA in Dar es Salaam.

From this perspective, there is a need to improve the collection of revenues by speeding revenue collection performance and assuring accountability is targeted. Allan (2008) pointed out that the aim and targets are generally achieved through improvements in the efficiency of the revenue collection process, commonly expected after WMA is empowered. In this perception, WMA is very important as it ensures a well-functioning society has confidence in all measurements with transparency for consumers, businesses, and regulators.

As to ensure the main functions of WMA are well undertaken, the WMO has been assigned to undertake the following duties, carrying out verification of weights, measures, weighing, and measuring instruments; caring for and maintaining any working standards which may be entrusted to his care; to keep records and make such reports as the Commissioner may require; and to give effect to the directions of the Commissioner (URT, 1983).

Recently, studies about WMA have been the subject of numerous scholars in developing countries such as Kenya and Tanzania, as documented by Wanjiru (2012), Bengesi (2018), Mhoja (2017), and Ibrahim and Mashenene (2021). These studies focused on services offered by WMA, challenges faced by customers as they access WMA services, and factors that influence customer satisfaction with WMA services.

For instance, Ibrahim and Mashenene (2021) have investigated the effect of the service quality of WMA on customer satisfaction and found that there are wide service quality gaps between expected service quality and performance of the WMA. This gap raised the question of whether WMO faces a number of challenges resulting in failing to meet the expected service quality by customers. In this case, more research is clearly needed to further expand the understanding of factors affecting WMO face since little research has been done in this area. From such a perspective, this study sought to address the gap by investigating the factors affecting WMO in revenue collection at WMA in Dar es Salaam.

THEORETICAL LITERATURE REVIEWS

This study was guided by Reinforcement Theory (Process Theory). This theory was developed by Skinner in 1934. Reinforcement theory proposes that you can change someone's behaviour by using reinforcement, punishment, and extinction. Rewards are used to reinforce the behaviour you want and punishments are used to prevent the behaviour you do not want. Extinction is a means to stop someone from performing a learned behaviour. The technical term for these processes is called 'operant conditioning'.

This theory is relevant to this study in the following ways. Positive reinforcement may be used at WMA to good effect when there is a workplace change on the horizon. Fear of the unknown may produce unwanted behaviour in favour of the change, which may be helped by introducing positive reinforcement. In this case, positive reinforcement could be introduced in team meetings/briefings, informal brew chats, or individually via one-to-

ones. Also, positive reinforcement is useful where the behaviour/performance/attitude of WMO to work has recently started to improve, and WMA wants the individual to sustain the desired behaviour and/or outputs. Negative reinforcement can be used to encourage employee completion of reports in a timely manner rather than face the consequences of being 'named and shamed' and chased in public for non-completion.

RESEARCH METHODOLOGY

This section presents the methodology that guided the study. The study employed a cross-sectional research design, whereas a sample size of 63 respondents that, include 59 WMO and 4 RM of WMA from Dar es Salaam were involved. A simple random sampling technique was used in the selection of WMO, and a purposive sampling technique was used in the selection of the RM of four administrative regions. Questionnaires, interviews, and documentary reviews were used as the methods of data collection. The collected quantitative data were analysed by using descriptive statistics, while qualitative data were analysed by using thematic analysis.

RESEARCH FINDINGS AND DISCUSSIONS

This section presents results on the second specific objective that aimed to assess challenges limiting WMO in performing their duties efficiently in revenue collection.

Shortage of WMO

The results in *Table 1* show that 12 respondents, equivalent to 20.3%, strongly agreed that the shortage of WMO is one of the challenges WMO face in revenue collection at WMA. 21 respondents equivalent to 35.6% agreed, 6 respondents equivalent to 10.2% were neutral, 10 respondents equivalent to 16.9% disagreed, and the remaining 10 respondents equivalent to 16.9% strongly disagreed. These findings reveal that majority of respondents (55.9%) agreed that, the shortage of WMO hinders their revenue collection at WMA.

Table 1: Shortage of WMO

Detail	Frequency	Percentage (%)
Strongly Agree	12	20.3
Agree	21	35.6
Neutral	6	10.2
Disagree	10	16.9
Strongly Disagree	10	16.9
Total	59	100

Source: Field Data (2022)

The result indicates that WMA runs its activities with very few WMO, which causes a low collection of revenue. The available WMO cannot afford to work around the whole area of Dar es Salaam on time and accurately as a result some other areas have either never been visited or visited rarely and thus leading to the low collection. Furthermore, failure to visit those areas also causes low customer satisfaction since such customers fail to get WMA services such as verification of measuring instruments and inspection of packed goods.

These findings were supported by an interviewee who explained the following: -

Shortage of WMO in our agency causes low satisfaction since a customer can come to the WMA office seeking assistance, but he can be told to wait for some days till the weights and measures agency officer returns back from other districts where they have been assigned perform other duties.

These findings concur with the study by Bengesi (2018) on factors hindering the use of standard weights and measures along the Irish potato supply chain in the Njombe region, who found weak institutional capacity and an inadequate number of personnel in the WMA. Furthermore, the study found that there ineffectively of the Weights and Measures Act Cap 340 (RE: 2002).

Lack of Regular Training

The results in *Table 2* show that 18 respondents, equivalent to 30.5%, strongly agreed that lack of regular training on revenue collection is one of the challenges WMO face at WMA, 19 respondents equivalent to 32.2% agreed, 6 respondents equivalent to 10.2% were neutral, 9 respondents equivalent to 15.3% disagreed, and the remaining 7 respondents equivalent to 11.9% strongly disagreed. These findings reveal that majority of respondents (62.7%) agreed that the lack of regular training on revenue collection hinders their revenue collection at WMA.

Table 2: Lack of Regular Training

Detail	Frequency	Percentage (%)
Strongly Agree	18	30.5
Agree	19	32.2
Neutral	6	10.2
Disagree	9	15.3
Strongly Disagree	7	11.9
Total	59	100

Source: Field Data (2022)

The result indicates that the WMA does not have a comprehensive documented training policy to facilitate capacity building in terms of equipment and facilities and career development on revenue collection. The reason behind the lack of training includes financial resources, inadequate human

resources, insufficient training centres/facilities, and the unwillingness of executives.

The lack of regular training on revenue collection implies that the service provider environment in WMA is not impressive. Now the world of

technology has changed, so changes in technology should go with more training for WMO in order to increase their competence in revenue collection.

These findings were supported by an interviewee who explained the following: -

Most of our WMO did not have enough skills in revenue collection; it is the responsibility of both the agency and Government to equip its WMO with more knowledge and skills in order to carry out all services rendered by WMA.

These findings concur with the study by Wanjiru (2012) who revealed that WMO admitted that they required training on the application and testing of the electronic weighing and measuring instruments. Furthermore, WMO admitted that they were relying

on manufacturers even while doing their verification work which is supposed to be the other way around.

Corruption Practices

The results in *Table 3* show that 7 respondents equivalent to 11.9% strongly agreed that corruption practices are one of the challenges WMO face in revenue collection at WMA, 6 respondents equivalent to 10.2% agreed, 5 respondents equivalent to 8.5% were neutral, 24 respondents equivalent to 40.7% disagreed, and the remaining 17 respondents equivalent to 28.8% strongly disagreed. These findings reveal that majority of respondents (69.5%) disagreed that corruption practices hinder their revenue collection at WMA.

Table 3: Corruption Practices

Detail	Frequency	Percentage (%)
Strongly Agree	7	11.9
Agree	6	10.2
Neutral	5	8.5
Disagree	24	40.7
Strongly Disagree	17	28.8
Total	59	100

Source: Field Data (2022)

The result indicates that, in rendering WMA services such as surprise inspection of measuring instruments, *lumbesa* operation, calibration of fuel tanks, calibration of petrol pumps, and other services, WMO did not experience corruption practices. This implies that WMA staff are performing their duties without demanding bribes from their customers. Furthermore, these results imply that WMA serves customers to the maximum level without bureaucracy, which means that customers were highly satisfied by the services provided through the WMA slogan of “Free Corruption Agency”.

These findings were supported by an interviewee who explained the following: -

In our office, we serve our customers without bureaucracy. For instance, after WMO verify the weighing instrument of trader and found it is OK, the WMO issue a certification for the fees received from the customer.

These findings are in agreement with the study by Mhoja (2017) on factors influencing customer satisfaction with WMA services in the Mbeya region and found that 100% of respondents had never experienced any example of corruption practices within WMA services.

Existence of Fraud

The results in *Table 4* show that 15 respondents equivalent to 25.4% strongly agreed that the existence of fraud is one of the challenges WMO face in revenue collection at WMA, 20 respondents equivalent to 33.9% agreed, 7 respondents equivalent to 11.9% were neutral, 10 respondents equivalent to 16.9% disagreed, and the remaining 7 respondents equivalent to 11.9% strongly disagreed. These findings reveal that majority of respondents (59.3%) agreed that the existence of fraud hinders their revenue collection at WMA.

Table 4: Existence of Fraud

Detail	Frequency	Percentage (%)
Strongly Agree	15	25.4
Agree	20	33.9
Neutral	7	11.9
Disagree	10	16.9
Strongly Disagree	7	11.9
Total	59	100

Source: Field Data (2022)

The result indicates that the existence of fraud among customers does affect revenue collection by WMO. Such fraud is either directly or indirectly committed in the use of weight, weighing, or measuring instrument whereby WMO expect to charge fees. In this perspective, the Government, through its agencies such as WMA and Tanzania Police Force should ensure existing laws and regulations are effectively implemented.

These findings were in agreement with study by Odd-Helge, et al. (2008) who observed that direct interactions between taxpayers and collectors facilitated corruption acts at the collection points. The study further observed that the presence of

corruption in some public organisations also contributed towards low revenue collection.

Shortage of Budget

The results in *Table 5* show that 11 respondents equivalent to 18.6% strongly agreed that shortage of budget is one of the challenges WMO face in revenue collection at WMA, 16 respondents equivalent to 27.1% agreed, 9 respondents equivalent to 15.3% were neutral, 12 respondents equivalent to 20.3% disagreed, and the remaining 11 respondents equivalent to 18.6% strongly disagreed. These findings reveal that majority of respondents (45.7%) agreed that the shortage of budget hinders their revenue collection at WMA.

Table 5: Shortage of Budget

Detail	Frequency	Percentage (%)
Strongly Agree	11	18.6
Agree	16	27.1
Neutral	9	15.3
Disagree	12	20.3
Strongly Disagree	11	18.6
Total	59	100

Source: Field Data (2022)

The result indicates that the WMA budget cannot cover to the maximum all activities which are supposed to be rendered across the country and hence cannot increase the revenue collected. Furthermore, the shortage of budget caused some activities which are supposed to be done by the WMA to slumber. This effect causes the WMA budget to fail to cover all costs needed to run all activities and thus will cause low revenue collection.

Lack of Awareness among Customers

The results in *Table 6* show that 6 respondents equivalent to 10.2% strongly agreed that lack of awareness of WMA services among customers is one of the challenges WMO face in revenue collection at WMA, 6 respondents equivalent to 10.2% agreed, 9 respondents equivalent to 15.3% were neutral, 15 respondents equivalent to 25.4% disagreed, and the remaining 23 respondents equivalent to 39% strongly disagreed. These findings reveal that majority of respondents (64.4%) disagreed that the lack of awareness of WMA

services among customers hinders their revenue collection at WMA.

Table 6: Lack of Awareness of WMA services among Customers

Detail	Frequency	Percentage (%)
Strongly Agree	6	10.2
Agree	6	10.2
Neutral	9	15.3
Disagree	15	25.4
Strongly Disagree	23	39.0
Total	59	100

Source: Field Data (2022)

The result indicates that WMO has played a great role in ensuring customers have awareness of WMA services. Some of the services offered by WMA include legal control of measuring instruments through type approval, verification, re-verification, and calibration of measuring instruments used or intended to be used in trade, health, safety, and environment. Furthermore, in the case of manufacturing and importation, WMA is involved in checking the correctness of quantities indicated on and contained in the pre-packages. In this perspective, understanding some of the services by customers increases the revenue collected by WMA since once a customer access any service, he/she has to pay a fee.

CONCLUSION AND RECOMMENDATIONS

This study presents new insights into the factors affecting WMO in revenue collection in Dar es Salaam. Findings revealed that, despite WMO doing a good job in undertaking their roles, they are affected by factors such as lack of regular training on revenue collection, fraud, shortage of WMO and shortage of budget. In this case, actors such as Government, customers and WMO themselves should undertake several measures to ensure the collected revenue increase.

The study recommends that WMA should improve the provision environments of the services delivery to satisfy its customers; WMA needs to train its WMO in customer services, customer satisfaction, and professional skills, WMA should look sustainable and definite sources of revenue to generate funds for its budget, and WMA should put

in place human resource policies, such as recognition policy and rewards, and training policy to enhance professional excellence and motivation of WMO to be results oriented.

REFERENCES

- Allen, R. (2008). Reforming fiscal Institutions: The Elusive Art of the Budget Advisor. *OECD Journal on Budgeting*, 2008(3), 1-9.
- Antwi, A. O. & Matsui, K. (2018). Price Perception on Weights and Measures at the Local Markets of Ghana. *Kasetsart Journal of Social Science*, 30(2018), 1-6.
- Bengesi, K. M. (2018). Factors Hindering Use of Standard Weights and Measures along Irish Potato Supply Chain in Njombe Region, Tanzania. *International Journal of Business and Management*, 13(8), 196-206.
- Fjeldstad, O. & Moore, M. (2009). *Revenue Authorities and Public Authority in Sub-Saharan Africa*. Bergen: Chr Michelsen Institute.
- GAIN. (2019). USDA Foreign Agricultural Service. *Global Agricultural Information Network*. GAIN Report Number 1837.
- Ibrahim, S., & Mashenene, R. G. (2021). Effect of Service Quality of Weights and Measures Agency on Customer Satisfaction in Dodoma City, Tanzania. *Sustainable Education and Development*, 1, 224-234.

- Mhoja, H. (2017). *Factors Influencing Customer Satisfaction on the Weights and Measures Agency Services: A Study of Mbeya City in Mbeya Region* (Master Dissertation Mzumbe University).
- Odd-Helge, F. (2003): To Pay or Not Pay; Citizen's Views on Tanzania by Local Authorities in Developing Countries. *Journal of Social Sciences*, 30(2), 439-452.
- Racine, J. (2011). *Harnessing Quality for Global Competitiveness in Eastern Europe and Central Asia*. Geneva: World Bank Publications.
- Skinner, B.F. (1934). *The Extinction of Chained Reflexes*. Bergen: Chr Michelsen Institute.
- URT. (1983). *The Weights and Measure Act*. Dar es Salaam: Government Printer.
- URT. (2013). *The Weights and Measures Agency (WMA): Framework Document*. Dar es Salaam: Government Printer.
- USAID. (2004). *Study on Weights and Measures Practices in Tanzania*. Dar es Salaam: USAID.
- Wanjiru, N. F. (2012). *Challenges Facing the Use of Technology on Legal Metrology: The Case of Meru Municipality, Kenya* (Master Dissertation The University of Nairobi).