

# **An analysis of Biometric Identification Management System (BIMS) as an e governance tool in Uganda's Refugee Food Assistance program for Rwamwanja refugee settlement**

By

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# Introduction

- ❑ In recent decades, the advancement in information and communication technologies (ICTs) has revolutionized the way governments interact with citizens and deliver public services.
- ❑ This transformation, commonly referred to as electronic government or E-government, entails the use of digital platforms and technologies to enhance governance processes, improve service delivery, and foster citizen participation (Strazza, 2022).
- ❑ The concept of E-government emerged in the late 20th century as governments recognized the potential of ICTs to streamline administrative processes, increase transparency, and promote efficiency in public service delivery. Initially, E-government initiatives focused on automating routine tasks such as online tax filing or permit applications.
- ❑ However, as technology advanced and connectivity became more widespread, the scope of E-government expanded to encompass a broader range of services and interactions (Fernández et al., 2023).

# Literature review

- ❑ The global average value of the E-Government Development Index shows substantial improvement, with the proportion of the population lagging in digital government development decreasing from 45.0 per cent in 2022 to 22.4 per cent in 2024 (United Nations, 2024).
- ❑ Both the United States and Canada have robust strategies in place at multiple levels to guide whole-of-government digital-government efforts (Tony Blair Institute for Global Change, 2024).
- ❑ E-governance and Digital transformation in the European Union, ENDE, is a Jean Monnet network including prestigious experts on digital transformation holding Jean Monnet actions on digital aspects (Troitino, 2024).
- ❑ In Africa has faced both opportunities and challenges” especially in terms of digitalization of service delivery public sector programs and projects (Centre for African Studies, 2024).
- ❑ Most East African Countries such as Kenya have continued to encounter a series of setbacks in their efforts to achieve the set targets of a robust governance system through use of the national ICT policies that are still in formative stages (Okaka, 2015).
- ❑ E. governance in Uganda is an emerging trend as exemplified by the Internet Governance Forum (UIGF) that convened at Protea Hotel in Kampala, on August 2, 2024, which drew attention to critical issues surrounding digital identities (African Centre for Media Excellence, 2024).
- ❑ In the recent years, the Uganda government rolled out its Global Biometric Identity Management System (“BIMS”) to more accurately identify the size of the refugee population (Khan, 2018).

# Context

- Uganda government through UNHCR rolled out its Global Biometric Identity Management System (“BIMS”) to more accurately identify the size of the refugee population, verify the accuracy, duplicates, new births and deaths, prevent fraud and corruption in refugee camps to be able to deliver food assistance to the right people in a timely manner and track it effectively.

# Research issue

- However, within four years of the rollout of the BIMS,,
  - ◆ there have been inconsistencies surrounding the provision of food and cash assistance to refugees in Rwamwanja
  - ◆ A number of complaints have been raised by the refugees over missing names, inconsistency in family sizes, un-clarified switching of beneficiaries between cash manifest and food log, un-credited accounts, shared accounts and wrong account numbers

# Study objective

- ❑ To assess the contribution of Biometric de-duplication to Refugee Food Assistance programmes in Rwamwanja Refugee Settlement camp

# Theoretical framework for e governance

- The study is informed by the diffusion of innovation theory developed by Rogers. The theory is characterized by five factors: Innovation, individual, task, environmental and organizational (Mustonen-Ollila and Lyytinen, 2003; Moore and Benbasat, 1991)

# Methodology

- ❑ A cross-sectional survey design was adopted with a population of 126 which include 24 ADRA staff, 20 WFP staff, 5 OPM staff, 10 UNHCR staff, 11 Refugee Welfare Committees (RWCs), 20 Food Management Committees (FMCs) and 36 Cash Management Committees.
- ❑ A sample size of 120 was determined using Krejcie and Morgan's (1970) tables. Krejcie and Morgan (1970).
- ❑ A simple random sampling technique was used to sample ADRA and WFP staff and also FMCs and CMCs.
- ❑ Purposive sampling was adopted for relevant OPM staff, UNHCR staff and RWCs (Refugee Welfare Committees).
- ❑ Data was collected using a semi-structured questionnaire complemented with interviews and secondary data



## Presentation of results.

The items were structured basing on biometric de-duplication variable of the study. Items were measured on a five-point Likert scale where code 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree and 5 = Strongly Agree and analysed basing 5 questions which are statistically tabulated and presented in the table 1 below with the frequencies and percentages

Items	SA	A	N	D	SD	Mean	Std. D
I received the BIMS innovation and application with ease	5.2%(3)	7.0%(4)	8.2%(5)	29.5%(34)	59.6%(18)	4.48	5.76
I do not understand all the captions in the BIMS innovation used in this camp	19.2%(11)	29.8(17)	14(8)	28%(16)	8.7%(5)	1.58	1.42
There are always continuous discussion about the implication of BIMS program in this camp	1.7%(1)	14%(8)	14%(8)	50.8%(29)	19.2%(11)	3.73	4.03
The information from the BIMS is always used in the making of decisions in this camp	00%(0)	1.7%(1)	14%(8)	45.6%(26)	36.8%(21)	4.22	1.23
The shortcoming in the BIMS are used in improving its performance in this camp	00%(0)	1.7%(1)	22.8(13)	28%(16)	45.6%(26)	3.74	5.45
I understand and know about updates of refugee information on BIMS	3.5%(2)	17.5%(10)	12.2%(7)	38.5%(22)	26.3%(15)	3.39	1.24

# Interpretation of results

□ With respect to whether they received the BIMS innovation and application with ease, the mean = 4.48 which corresponded to agreed, indicated the majority of the respondents agreed that they received the BIMS innovation and application with ease. Responses to the question as to whether they do not understand all the captions in the BIMS innovation used in this camp, the mean = 1.58 indicated that they understand all the captions in the BIMS innovation used in this camp.

□ As to whether there are always continuous discussion about the implication of BIMS program in this camp, 50.8% (29) agreed. The mean = 3.73 indicated that there are always continuous discussion about the implication of BIMS program in this camp. Responses to the question as to whether the information from the BIMS is always used in the making of decisions in this camp, the mean = 4.22 indicated that the information from the BIMS is always used in the making of decisions in this camp.

□ With respect to whether the shortcoming in the BIMS is used in improving its performance in this camp (28%) agreed with 1.7% disagreeing. The mean = 3.74 which corresponded to agreed indicated that the shortcoming in the BIMS are used in improving its performance in this camp. As to whether they understand and know about updates of refugee information on BIMS (37.9%) agreed with 17.5% disagreed. The mean = 3.39 meant that they understand and know about updates of refugee information on BIMS.

## Regression results:

Hypothesis two stated that biometric de-duplication significantly contributes to refugee food assistance programmes in Rwamwanja Refugee Settlement camp. The hypothesis was tested using the regression analysis. The results of the hypothesis are given below in Table 2

**Table 2: Regression Analysis for Biometric de-duplication**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change R square	Change F	df1	df2	Sig. Change	F	Predictors: (Constant)
1	.545	.297	.301	1.0567	.297	7.346	2	168	.000		

, Biometric de-duplication

The regression model result for biometric de-duplication and refugee food assistance programmes in Rwamwanja Refugee Settlement camp was positive and significant. The results of the R squared (R<sup>2</sup>) - which tells how a set of independent variables explains variations of a dependent variable yielded an adjusted R Square of =0.297 or 29.7%. This means that the independent variable dimension of biometric de-duplication accounts for 29.7% of the variations in refugee food assistance programmes in Rwamwanja Refugee Settlement camp. The model further shows a standardized coefficient of value of biometric de-duplication as being positive (.297). This suggests that holding other factors constant, one unit of improvement in biometric de-duplication would result into an improvement in refugee food assistance programmes in Rwamwanja Refugee Settlement camp by a magnitude of 0.297 units. The regression finding was in agreement with the earlier correlation finding and therefore serves to further explain that the alternate hypothesis that 'biometric de-duplication significantly contributes to refugee food assistance programmes in Rwamwanja Refugee Settlement camp' is confirmed and validated.

# Conclusion

□ The result for biometric de-duplication and refugee food assistance programmes in Rwamwanja Refugee Settlement camp was positive and significant. The results of the R squared ( $R^2$ ) - which tells how a set of independent variables explains variations of a dependent variable yielded an adjusted R Square of  $=0.297$  or  $29.7\%$ . This means that the independent variable dimension of biometric de-duplication accounts for  $29.7\%$  of the variations in refugee food assistance programmes in Rwamwanja Refugee Settlement camp.

□ In view of the above, the results of this research will help the NGOs develop actionable strategies to implement and maintain a biometrics database. This will serve as credential identity and preserve the record of individuals who are denied access to refugee food assistance. This calls for establishing a biometric data base at settlement to help clear cases of de-duplication. BIMS should be upgraded or improved to capture details of minors as well.