

## **Technology Influence on Performance of Cash Transfer Programmes in the Public Sector in Nairobi County, Kenya**

**Beth Njoroge<sup>1\*</sup>, Peter Kihara<sup>2</sup>, Paul Gichohi<sup>3</sup>**

<sup>1, 2, 3</sup>*Kenya Methodist University, P.O. Box 267, 60200Meru, Kenya.*

\*Correspondence email: [bethdelight@gmail.com](mailto:bethdelight@gmail.com)

### **Abstract**

Cash transfer program has been identified by most developing countries as an important component of social protection however; the program has experienced challenges in the implementation process. This study aimed at establishing the relationship between technology and performance of cash transfer program in Nairobi County- Kenya with an intention of helping the Government of Kenya and other stakeholders involved in the implementation of the cash transfer program to establish policies and framework geared towards social protection rights. The study was grounded on two theories namely, general systems theory, and the McKinsey 7s model. Descriptive research design was used on a target population size of 102 respondents: that is, 9 sub-county children officers, 34 nominees of both the Member of Parliament and the county woman representative, and 592 complainants. Purposive sampling technique was applied in sampling sub county children officers and the nominees of both the Member of Parliament and the county woman representative, while, simple random sampling was used on complainants. The overall sample size was 102 respondents. Data was collected using questionnaires whose reliability was tested using Cronbach alpha test. Experts' opinion was sought in addressing validity of the instruments. Data was analyzed using SPSS version 22. A simple linear regression model was established in order to determine how technology influenced the performance of the cash transfer programme. The study revealed that technology has a positive and statistically significant relationship with the performance of the cash transfer programme. The results further revealed that performance of the cash transfer programme in Nairobi County can be explained by 40.5% of technology. The study recommends that organizations should continuously adopt new technologies to improve performance in the implementation process of their programmes to ensure that their objectives and goals are efficiently and effectively achieved.

**Keywords:** *Cash transfer, Public sector, Social protection rights, Grievances, Technology.*

## **Introduction**

Globally, social protection is increasingly viewed as an essential policy response seeking to promote social justice of whom social inclusion and cohesion are integral parts (Devereux, McGregor, & Sabates-Wheeler, 2011). Cash transfer (CT) is a direct, regular and predictable non-contributory cash payment that helps poor and vulnerable households to raise incomes as stated by the Department for International Development. It encompasses a range of instruments such as social, pensions, child grants or public works programs and a spectrum of design, implementation and financing options (Odero, 2014). Kenya and other development actors invest in social protection as a key tool aimed at addressing poverty (Kabare, 2015). The current social assistance programs in the country are guided by specific policies and Acts that include: The National Food Security and Nutrition Policy 2007, which covers programmes that increase access to food and improve nutrition, as well as measures to ensure food sufficiency and security (National Children's Policy, 2010; National Policy on Older Persons and Aging, 2009; National Policy on Youth, 2006; and the National Gender and Development Policy, 2000). Key Acts of Parliament relevant to social protection in Kenya include the Education Act 2007; the HIV Prevention and Control Act 2006; the Children's Act 2001; Social Assistance Act 2012; and the Persons with Disabilities Act 2003 (GoK, 2017).

In Kenya, the cash transfer programmes are based on categorical targeting identified based on prevailing indicators of poverty and vulnerability. These categories include: cash transfer for orphans and vulnerable children (CT-OVC); the Older Person Cash Transfer Program (OPCT); and the Cash Transfer-People living With Severe Disability (CT-PWSD). Cash transfer for orphans and

vulnerable children aims at supporting households living with and taking care of orphans and vulnerable children. The older person cash transfer programme aims at providing regular and predictable cash transfer to vulnerable older persons in identified households by building the capacities of the older persons so as to improve their livelihoods. The objective of CT-PWSD is to enhance the capacities of the caregivers through cash transfers thereby improving the livelihoods of persons with severe disabilities and mitigating the effects of disability on the household (GoK, 2017).

Cash transfer programmes as means of social protection are funded by the Government of Kenya. A study on social protection for orphans and vulnerable children in Kenya by Akuma (2014) noted that there is a need to design and implement an effective information system both for capturing data on orphans and vulnerable children and for continuous monitoring and evaluation of the programs. In a study on effectiveness of the cash transfer program improving the lives of orphans and vulnerable children in Dujis Sub County by Nasengo (2013) it was revealed that inadequate management affected the effectiveness of the cash transfer programme. In addition, the study established that identification of the beneficiaries was not properly done and this could have negative effects on the implementation as well as the performance of the cash transfer program.

However, the performance of this programme has experienced a number of challenges such as unpredictable disbursement of funds, inefficiencies, and fiscal costs. It has become difficult to achieve the overall goal which cash transfer programs sought to achieve. The program uses slow technological methods to transfer cash from the treasury to the beneficiaries hence resulting in delays. A need therefore arises to investigate the influence of technology as a

capacity building strategy on the performance of the cash transfer program.

The purpose of this study was to establish the relationship between technology as a capacity building strategy and performance of the orphans and vulnerable children cash transfer program in Nairobi County, Kenya. The main objective is to determine the influence of technology on performance of the cash transfer program in Nairobi County.

## **Theoretical Review**

This study was guided by the general systems theory which was originally proposed by biologist Ludwig von Bertalanffy in 1928. This theory posits that a system is characterized by the interactions of its components and the nonlinearity of those interactions. According to Carayannis, Campbell and Rehman (2016), systems can be thought to be composed of elements that are bound together by a self-rationale that is based upon systems theory conceptual pillars in order to ensure that the performance is not only sustainable, but also long lasting (Mele, Pels, & Polese, 2010). Technology can be viewed as sub-systems of the cash transfer program.

## **Empirical review**

The past decade has witnessed how technology has changed lives as well as the way businesses are done. It is no doubt with the use of technology, organizations have been in a position to reach as many customers as possible as well as collaborate with partners across the world (Shaqiri, 2015). There are quite a number of technological tools that organizations can use to enhance their performance. For instance, in a study to establish how technology influenced hotel industry (Pedroche, Anton, Andrada, & Karaboytcheva, 2015) noted that the

central reservation system was one tool that was influential at the inter-organizational level whereas internet and intranet were the most influential at the intra-organizational level.

In a study on impact of information technology and internet in businesses, Shaqiri (2015) concluded that organizations that integrate technology in the way they carry out their businesses are likely to be efficient as well as create competitive advantage. This conclusion is similar to a recommendation by Kariuki (2015) which noted the need for organizations to embrace technological tools to give them an edge but also to improve the delivery of services to their customers. However, as much as organizations need to be technologically innovative so as to be competitive in the market, organizations need also to train their employees on the same. This will make them efficient and effective (Adeyeyetolulope, 2014). A study on the influence of technological assets on organizational performance by Sanchez, Morales, and Rojas (2018) revealed that improvement of technological skills and support for technology promoted the performance of organizations.

In Pakistan for instance, a study aimed at determining the impact of information technology on organization performance by Shaukat and Zafarullah (2009) revealed that technology had a positive impact on how organizations performed, with the banking sector having the highest impact followed closely by multinational manufacturing companies. In Tanzania, a study by Foya (2015) on the influence of technology-based customer relationship management on service quality in the telecommunications industry discovered that information technology systems that support system functionality were not enough alone; the effectiveness of employees in performing

their tasks counts on the level of service quality offered.

According to a study done in Nairobi on impact of information technology on performance of organizations by Kariuki (2015), it was revealed that technology use had a positive relationship with the organization's performance. In addition, this study revealed that use of technology explained more than eighty percent of organization performance. In study on technology acquisition strategies and performance of organizations, Kimwele (2017) argued that the usage of any technology which an organization has acquired depends on several factors. Some of these factors are the relevance of the technology, market trends, technological capability of the organization, human and financial resources.

The use of technology in the cash transfer program in Kenya is gaining momentum. A report by Hermon-Duc (2012) done in Northern Kenya established that the use of M-Pesa services was an efficient way of delivering assistance in spite of the challenges encountered in using the technology such as lack of security hence funds falling into the wrong person since it would be easy to get the M-pesa pin to access funds. In addition, it was reported that this pilot project had an impact in terms of strong beneficiary empowerment as well as a sense of dignity. According to GoK (2012) a number of safety net programmes currently make use of or are looking to use the smart card as well as agency banking network to make cash transfers to beneficiaries. However there has been lack of a fully integrated system that is free from manipulation. In addition, the rates of cash transfers are high for most sectors. Software used in money transfer has been a target to cybercrimes. So if all this is taken care of, the use of mobile money transfers will end up eliminating some of the costs,

time, and risk that beneficiaries incur when collecting their payments.

### **Materials and methods**

This study adopted a descriptive survey design to obtain an accurate picture of the individuals being studied. According to Nairobi City County Government NCCG(2018) there are 17 sub-counties. According to the director of children services, there are 9 sub county children officers in the entire Nairobi County. These sub county children officers are in charge of the 17 sub-counties that make the Nairobi City County. In addition, from each constituency there are two nominees of the area member of parliament and the county woman representative (GoK, 2017). Data available from the director of children services indicated that the number of households under the orphans and vulnerable children were 5,918. About 10percent of the caregivers (529 caregivers) who headed these households usually had complaints which they presented to the sub-county children officer. The Complaints represented one of the category which the researcher intended to collect information from.

In this study, the researcher used purposive sampling to get information from all the 9 sub-county children officers and the nominees of the members of parliament and the county woman representative. In the case of complainants, the researcher took 10percent of the total number in this category. Citing Roscoe rules of thumb about determining an appropriate sample size, Hill (1998) suggests that a sample size of 10percent of the parent population is recommended. Questionnaire was used as the main instruments of data collection. The study relied on instruments developed in other related studies as well as concepts generated from a broad range of appropriate literature and experts' opinion. For this study

an alpha coefficient of 0.7 and above was considered reliable. The researcher performed data quality checks and then entered data and analyzed using statistical package for social sciences (SPSS) version 21.0.

Alpha test. The findings of this test are as shown in Table 1. A reliability coefficient indicates the goodness of the items in the data for carrying out statistical analysis.

**Results**

In order to determine the reliability of the instrument, the researcher used Cronbach

**Table 1: Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.899	.903	5

The findings in Table 1 indicate that the Cronbach’s alpha is 0.899. This therefore, indicates a very high level of consistency for the scale used to measure the relationship between capacity building strategies and the performance of the cash transfer programme in Nairobi County.

**Response Rate**

In this study, (10percent ) of the respondents were sub county children officers, (31percent) were nominees of both the area member of parliament, whereas (59percent)were complainants. In addition, (27percent)of the respondents were males whereas (73percent)were females. It can be concluded that majority of the respondents in this study were females. The study also established that more than half of the respondents had attained secondary school education. This is an indication therefore,

majority of the respondents are able to read and write and only (14percent) of the respondents indicated that they had not attained any form of education. In terms of age distribution, the study established that (18percent) of the respondents were aged between 18-35 years; (29percent) were aged between 36-45 years; 32 (percent) were aged between 46-60 years whereas (15percent) were aged 60 years and above. Based on these findings it is evident that more than (50percent) of the respondents were aged forty six years and above.

**Table 2: Respondent Background Information**

Variable	Response	Percent
Category of the respondent	Children officer	10.6
	CSA	30.6
	Complainant	58.8
	Total	100.0
Gender	Male	27.1

	Female	72.9
Highest level of education	Total	100.0
	None	14.1
	Primary	34.1
	Secondary	29.4
	College	22.4
Age bracket	Total	100.0
	18-35	17.6
	36-45	29.4
	46-60	37.6
	Above 60 years	15.3
	Total	100.0

### **Influence of Technology on Performance of the cash transfer Programme**

An analysis of the relationship between technology and performance of the orphans

and vulnerable children cash transfer programme in Nairobi County was also carried out. The findings of this analysis are as shown in Table 3.

**Table 3: Statement Relating to Technology**

<b>Statement</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Mode</b>
The CT program uses technology to efficiently run its services		4.7%	49.4%		45.9%	4
The CT programme has implemented the latest technology in its operations management		3.5%	50.6%		45.9%	4
CT uses banks as service providers during the payment to caregivers		1.2%	36.5%		62.4%	5
Each beneficiary gets the exact money entitled to them		4.7%	9.4%	37.6%	48.2%	5
Beneficiaries easily access the money during payment cycle		2.4%	11.8%	40.0%	45.9%	5

From the results in Table 3, ninety five percent(mode=4) of the respondents indicated that cash transfer programme uses technology to efficiently run its services. Ninety six percent (mode=4) of the

respondents responded that the cash transfer programme had implemented the latest technology. In addition, it was established that almost all the respondents (mode=5) reported that this cash transfer programme

used banks as service providers while paying caregivers. Eighty five percent reported that they received the exact amount they were entitled to get from this programme. Eighty six percent of the respondents reported they easily accessed money they were entitled to get. Based on the foregoing, this high proportion of respondents reporting positively about technology use in the cash transfer programme is an indication that technology has improved performance of this programme. The findings in this study are in agreement with a study on impact of information technology on organization

performance by Shaukat and Zafarullah (2009) which established that technology impacted positively on how organizations performed, with the banking sector having the highest impact followed closely by multinational manufacturing companies. Kariuki (2015) also revealed that the use of modern technology influenced organizational performance. There is no doubt that with proper use of the right technology, an organization or a programme can perform efficiently.

**Discussion**

**Table 4: Influence of Technology on Performance of the cash transfer programme: Coefficients'**

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
1 (Constant)	4.829	2.582		1.870	.065
Technology	.875	.116	.636	7.511	.000

a. Dependent Variable: Performance of OVC-CT

From results in Table 3, the regression coefficient is positive meaning that for a unit change in technology, the performance of orphans and vulnerable children cash transfer programme changes by 0.875 With p-value (=0.000) being less than 5% and coefficient of the simple linear regression model being positive, it can be concluded, therefore, that technology has a positive and significant relationship with performance of cash transfer programme. The simple linear regression showing the relationship between the independent variable and the dependent variable is as shown;

$$y = 4.829 + 0.875 x_1$$

Where;

y = performance of cash transfer programme

x<sub>1</sub> = technology

Based on this simple linear model therefore, a unit increase in technology results, results in an increase of 0.875 units in performance of cash transfer programme.

**Table 5: Independent Variables and Performance of cash transfer programme Model Summary**

---

Model R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.636 <sup>a</sup>	.405	.397

---

a. Predictors: (Constant), Technology

b. Dependent Variable: Performance of OVC-CT

Result in Table 5 indicates that a correlation coefficient (R) of 0.636 this shows a strong positive relationship between the two variable under investigation. Therefore it can be said to be above average level of prediction of the performance of orphans and vulnerable children cash transfer programme in Nairobi County. The results also reveal a coefficient of determination (R square) of 0.405. This means that technology alone can explain 40.5 percent of the performance of orphans and vulnerable children cash transfer programme in Nairobi County. Based on these findings, therefore, there are other factors that account for 59.5 percent that can explain variation in performance of the orphans and vulnerable children cash transfer programme in Nairobi County.

### **Conclusion**

The findings of this study have demonstrated that technology has a positive and statistically significant relationship with the orphans and vulnerable children cash transfer programme performance. With a

majority of the respondents indicating that the OVC-CT programme has embraced the latest technology in its operations, means that organizations end up performing efficiently. This will also ensure that the customers (beneficiaries in this case) do not incur unnecessary or hidden costs while accessing their funds. It can also be concluded that with the use of modern technology, programmes or organizations will end up achieving their objectives and goals.

To enhance performance of the cash transfer programme, the study recommends that there is need to employ new technology strategies such as money transfer using mobile phone services, and the latest version of management information system to assist in data collection and generation of the payroll to ensure speed and safe transfer of cash to the caregivers, enabling updates to be submitted in time in order to effect the changes needed for caregivers to collect their money without delays

## References

- Devereux, S., McGregor, J. A. & Sabates-Wheeler, R. (2011). Introduction: Social Protection for Social Justice. *IDS Bulletin* 42(6), 1 – 9. DOI: 10.1111/j.1759-5436.2011.00265.xed.). New York: John Wiley & Sons, Inc.
- Kabare, K. M. (2015). *Social Protection in Kenya: The Use of Cash Transfer Programmes in Progressively Addressing Poverty and Vulnerability* (Unpublished thesis). Linnaeus University, Växjö.
- Odero, S. A. (2014). *The effect of social cash transfers on financial inclusion in Kenya: a study of Kenya social protection interventions* (Unpublished project report). University of Nairobi, Kenya.
- GoK (2017). *Operation Manual for Consolidated Cash Transfer Program*. Nairobi: Ministry of East African Community, Labour and Social Protection.
- Akuma, J. M. (2014). Social protection for orphaned and vulnerable children in Kenya: Initiatives, opportunities and challenges. *European Journal of Social Sciences Education and Research*, 2(1), 235-241.
- Nasengo, D. W. (2013). *Effectiveness of cash transfer program in improving the livelihoods of orphans and vulnerable children in Dujis District, Garissa County* (Unpublished project report). University of Nairobi, Kenya.
- Mele, C., Pels, J., & Polese, F. (2010). A Brief Review of Systems Theories and Their Managerial Applications. *Service Science* 2(1-2), 126-135.
- Berisha-Shaqiri, A. (2015). Impact of information technology and internet in businesses. *Academic Journal of Business, Administration, Law and Social Sciences*, 1(1), 73-79.
- Adeyeyetolulope, C. (2014). The Impact of Technological Innovation on Organizational Performance. *Industrial Engineering Letters*, 4(3), 97-101.
- GoK (2012). *Kenya social protection sector review*. Nairobi: Government Printer.
- Hill, R. (1998). What sample size is enough in the internet survey research? *Interpersonal computing and technology: An electronic journal for the 21<sup>st</sup> century*, 6(3-4), 1-1.
- Hermon-Duc, S. (2012). *MPESA project analysis: Exploring the use of cash transfers using cell phones in pastoral areas*. Retrieved on 10/8/2018 from [www.fao.org/fileadmin/.../MPESA%20Project%20analysis%20TSF-VSFG\\_Fianal.pdf](http://www.fao.org/fileadmin/.../MPESA%20Project%20analysis%20TSF-VSFG_Fianal.pdf)