

# Analysis of Generative Behavior and its Influence on Employee's Performance in the Ministry of Education, Science and Technology, Kenya

Naomi Nkirote<sup>1</sup>, David Kiragu<sup>2</sup>

<sup>1</sup>PhD Candidate

<sup>2</sup>Ass. Professor, School of Business Management and Economics, Dedan Kimathi University of Technology, P. O Box Private Bag, Dedan Kimathi, Kenya

Email: [drkiragu\[at\]gmail.com](mailto:drkiragu[at]gmail.com)  
[david.kiragu\[at\]dkut.ac.ke](mailto:david.kiragu[at]dkut.ac.ke)

**Abstract:** *Over time in human capital management, employee's agility has been cited to a logical link with an employee's productivity and performance. Largely, this has been deemed to apply commercial enterprises. The ability of a staff to voluntarily and actively share information and knowledge while simultaneously learning is said to be an important measure of employee agility. This study investigated the influence of generative behavior on employee performance in the Ministry of Education Science and Technology (MoEST) in Kenya. The study was founded on Vertical Dyad Linkage Theory. The study adopted a post - positivism research paradigm and used a mixed research design. From a target population of two thousand one hundred and sixteen employees, a purposive sample of 416 employees was drawn. A pilot study was conducted from MoEST employees in Laikipia, Isiolo and Meru counties to pretest the data collection instrument. Confirmatory Factor Analysis (CFA) and test of regression assumptions were carried out prior to inferential analysis using bivariate linear regression analysis. CFA generated eleven quality measures for employee generative behavior with factor loadings between .524 and .941. The results indicated that generative behavior was associated with R - Square of .381, F - statistic of 113.046 and p - value of .000, a beta coefficient value of  $\beta=0.922$  and associated p - value of .000 < .05. These results imply the generative behavior had a positive and statistically significant influence on employees' performance. Based on these findings, the study recommends that the Ministry and Public service at large should continually review, build and invest in cultivating employee's ability to share information and knowledge voluntarily, as well as learning in order to sustain and drive great performance among employees. Further, the study recommends that employee generative behavior capacity should be assessed not only for effective succession planning capacity within the ministry, but also for comprehensive human capital management.*

**Keywords:** Confirmatory Factor Analysis, Generative Behavior, Employee Performance, Regression analysis.

## 1. Introduction

### 1.1 Background of the Study

The government of Kenya has since 1992 put initiatives in place to improve service delivery through its agile workforce (Asgari et al., 2018). The public procurement and disposal legislation, which was passed in 2015, is one of the most significant initiatives to enforce agility in the public sector. It aims to improve procurement processes by, among other things, directing resources as quickly as possible where they need to go within the government and preventing resource waste. The Kenya government has also increased the anti - corruption efforts through implementation of the anticorruption and economics crime act (2003), which was aimed at reducing wastage hence increase in workforce agility (Asgari et al., 2018). Records have it that in some sections, the public education sector in Kenya battles poor performance where the employees and employer's points out inadequate agile workforce (Miring'u, 2019). In his study, Ndegwa, (2017) classified variables that contributed to poor employee performance among government officials in the education field into three categories: individuals, institutional & structural factors, and legal & regulatory factors. Tamtam & Tourabi (2020) posit that for a person to be agile, there must be flexibility or adaptability. Therefore, positive behaviors and self - anticipating are some among

other activities that unquestionably promote change processes which is essential for an agile workforce. An agile workforce is one that has the ability to recognize the need for new services, product, process, or technology as well as the need to improve the current structures (Cai, Hunag, Liu & Wang 2018). In a study by Bersin et al., (2014) in the USA, integrating ongoing and prospective requirements in human resource staffing, investing in enhancing the HR group's performance, regularly assessing HR's client attendance, and lowering within HR the levels of authority can all help the public sector be more agile. The Kenyan public education sector's organic structure, which is characterized by minimal institutionalization, autonomous decision - making, and a featureless structure, can also encourage employee agility (Alavi, 2018, Alavi & Abd - Wahab, 2019, Alavi, Abd - Wahab, Muhmad & Shirani, 2019). Employees must be adaptable in order to adjust to environmental changes and profit from emerging business prospects in a constantly shifting industry (Pitafi & Ren, 2021). A workforce is notably needed to have a progressive attitude, be highly skilled, be sequential in skill development and issue - solving, and seek knowledge or ask clarification questions in order to facilitate organizational adaptability and flexibility capacities (Muduli, 2018). Additionally, staff members must be proactive in taking initiative, querying, and reevaluating problems (Pitafi, Liu, & Cai, 2018).

## 1.2 Problem Statement

Although workforce agility may not be the only factor that determines performance, it plays a key role in employee engagement and resultant performance. Various studies have been published on agility but not in the MoEST. For instance, Alavi, (2018) research was on SME's, while that of Bas`karada & Koronios (2018) was on international organizations. These studies were done prior to 2019 and in the private sector. This study was on the public sector, and in particular the education sector and thus represents a contextual gap that this study seeks to fill. COVID 19 necessitated a lot of changes that were both resource and technological related. This study was done in a post COVID era and thus brought a new perspective on the subject, based on the challenges and changes that have been adopted. Most studies done on agility, for instance those by Al - Kasasbeh, Halim & Omar, (2016) in USA and Tessarini & Saltorato, (2019) in Brazil were both using undefined population, sampling was not statistical and the analysis of data collected was not procedural. This presents a methodological gap that this study addresses by using concise scientific research methods. It is also noted that majority of researches on workforce agility have focused on the speed and flexibility from an operations perspective, while studies on cognitive attributes of agile workforce affecting individual employee performance needs to be explored. The problem of dealing with unpredictable, dynamic and constantly changing environment has been a prevailing topic both in industry and academia for decades now and this has been emphasized by a study conducted by Sherehiy, Karwowski & Layer, (2017). This has necessitated the need to cross - examine how the MoEST in Kenya will achieve improved employee performance under the ever - growing agile workforce and a globally competitive and adaptive human resource base as dedicated in the Kenya Vision 2030. Previous researches have focused more on challenges facing private sector leaving a gap on behavioral factors that affects performance of employees in the public service. This study therefore sought to evaluate the influence of workforce agility on employee performance in the MoEST in Kenya's and recommends strategies for achieving a greater workforce performance.

## 1.3 General Objective

The general objective of the study was to evaluate the influence of generative behavior on employee performance in the Ministry of Education Science and Technology in Kenya.

## 2. Literature Review

### 2.1 Vertical Dyad Linkage Theory

This theory was proposed by Dansereau, Graen and Haga, (1975). The authors viewed the quality of relationship between members and leaders as the leeway to comprehending leader - effects on teams and generative

behavior effects on organizations and members. Erdogan and Bauer, (2015) posit that the vertical dyad linkage theory hold squarely on the basic assumption that leaders affect the group members through the quality of the relationships that they build with them. Similarly, Chmiel, Fraccaroli, and Sverke, (2017) consider vertical dyad linkage to be a theory that emphasizes on generative behaviors in an organization. Workers in any organization set up should be able to learn from their leaders and exhibit technological/technical capabilities, managerial capabilities, soft skills capabilities and social networking skills capabilities. Vertical dyad connection was defined by Ledlow and Stephens, (2018) as the circumstance in which the leader and the members of each dyad communicate with one another to learn the aforementioned generative behavioral tactics. Relationships that are of high quality are marked by sharing valuable resources, skills, opportunities for development, support, mentoring and other benefits to the employees. It is cited that giving such resources leads to a push to reciprocate to the leader on the side of the members by showing higher levels of voluntary generative behaviors of learning multiple competencies and high loyalty.

Followers and leaders come up with dyadic relationships and individual followers if differently treated by leaders end up with two groups first out - group and second in - group (Erdogan & Bauer, 2015). For an organization to be successful, it must recognize that the in - group is made up of a select few reliable supporters with whom the leader has developed a special, slightly elevated exchange relationship whereas the out - group is made up of the rest supporters with whom the correlation with the leader is more professional (Xu, *et al.*, 2019). The main principle of this theory is that the employees and leader's service delivery is pegged on their relationship quality (Hoye, 2015). Such classification is based on leader - followers working relationships and behaviors acquired, followers' competencies and accomplishments and, the followers' assumed roles and responsibilities (Hoye, 2014).

In his study, Mohammad and Hairul, (2015) asserts that technical learning capabilities, managerial learning capabilities, soft skills learning capabilities and social networking skills learning capabilities are easily acquired by in - group members normally formed almost immediately to enhance a fruitful dyadic relationship with the leader. They are committed to achieving task objectives, display high levels of loyalty and they volunteer for additional duties beyond the ones that they are delegated to do. The leaders then reciprocate by offering the in - group members additional support, high levels of responsibility, handsome rewards and access to resources. The out - group members according to Hoye, (2014) in contrast perform only what they are prescribed to as per the contract and have more formal employment with the leaders. Leaders will then respond by providing limited support, limited trust, low attention and none or few rewards (Mohammad & Hairul, 2015).

The theory has been criticized for failing to address pertinent fairness issues such as communication, decision making, fairness in promotion and pay increment opportunities (Miner and John, 2015). Another criticism is that the theory

defines the basic construct of fairness where human beings are taught to treat everyone equally and get along with everyone (Maslyn, Schyns & Farmer, 2019). Vertical Dyad Linkage Theory is relevant to the study by exploring how leadership has dynamically changed in the Kenyan setup. Workers with a higher quality leader - member exchange relationship become less stressed more motivated and exhibit a high individual performance. The theory can also help employees by exploring and establishing leadership relationships which can assist in maintaining committed and appropriate agile workforce to benefit the Kenya Ministry of Education sector and the netizens by appreciating the indispensable role of employee performance. The theory therefore addresses generative behavior which is a measure of employee agility in this study.

### 2.3 Empirical Literature

Doerwald et al., (2021) 's study on generativity at work, which was carried out in the Netherlands, shows that generativity includes the desire to help and mentor younger individuals as well as the behavior to do so for the benefit of "future generations." In order to encourage and mentor the "next generation" at work, various generative behaviors like technical learning capabilities, managerial learning capabilities, soft skills learning capabilities and social networking skills learning capabilities are essential. In fact, life - span psychology research has discovered a link between generativity and positive outcomes (McAdams et al., 1993). The meta - analysis included relationships between generativity and each antecedent and outcome that were taken into account by at least three separate samples ( $k \geq 3$ ). The findings of this study have been applied to the workplace during the past three decades, where generativity has been linked to a number of successful works, career outcomes, employee performance, effective leadership, and employment involvement after retirement age (Kooij et al., 2013). Overall, further findings point to the need for more study to clarify the mechanisms and boundary constraints governing the impacts of generativity at work as well as how to better comprehend the nomological networks underlying both the generativity drive and generative behavior. It was concluded that employee performance and generativity were positively correlated.

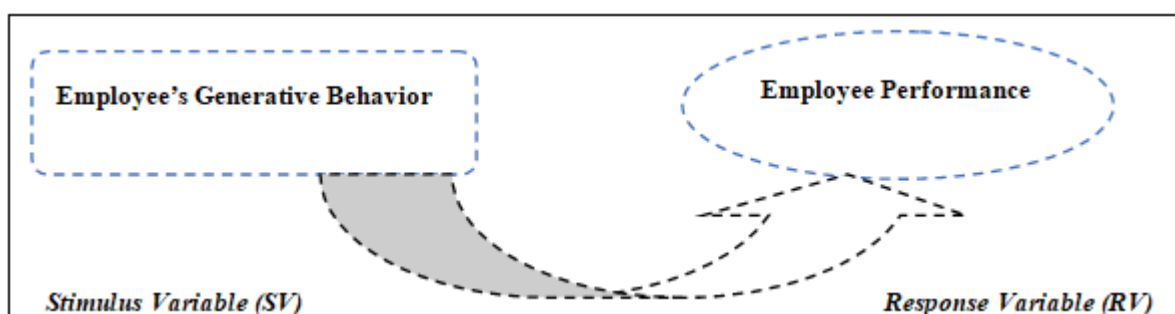
Doerwald, Zacher, Yperen, & Scheibe (2021) researched on generativity at work in Netherlands given its significance for work and career outcomes. The study found out that generativity entails both the motive and the behavior to support "future generations" as well as to promote and mentor younger individuals by learning managerial skills, technological skills, social skills and soft skills. Over the

past three decades, there has been an accumulation of research on generativity in the workplace. A conceptual model based on generativity, lifespan, resource, and motivation theories was created to synthesize this work, and a meta - analysis was carried out. The findings demonstrated that the generativity drive is positively correlated with context - and person - related antecedents, such as technical learning capabilities, managerial learning capabilities, soft skills learning capabilities and social networking skills learning capabilities. Additionally, the generativity motive is positively correlated with outcomes that are connected to motivation, well - being and careers.

Doerwald et al., (2021) study on the relationship between the generativity motive and generative conduct in the US hypothesizes that while the generativity motive and generative behavior are related, they are separate constructs based on empirical data and generative behaviour. The study's goal was to determine whether the strength of correlations between the antecedents and results of generativity varied depending on the assessment method. In contrast to the more distal generativity drive, generative conduct is more closely related to employee performance because of its relation with technical learning capabilities, managerial learning capabilities, soft skills learning capabilities and social networking skills learning capabilities. The methodological study, theory of planned behavior and measurements was carried out and found out that greater connections with the study. Four communication business executives were selected as the sample for this single case study because they have at least a year's worth of knowledge in enhancing employee performance at a company with more than 200 people. The participants were chosen by carefully using criteria sampling (Anderson, Potočnik & Zhou (2014). So as to obtain saturation for this study, four volunteers were necessary. Through member - checking and the study of historical data, data saturation was hastened. Analyses and Data Processing Participant interviews took place in an environment where they felt at ease to give thorough answers. Articles were judged to be relevant after a careful review of their abstract, method, and findings. When it came to the behavior of generativity, the association between it and work performance was stronger. In conclusion, the association between generativity and employee performance was more strongly positive.

### 2.4 Conceptual Framework

This study theorized a logical relationship between an employee's generative behavior as the predictor of an employee performance.



**Figure 1:** Conceptual Framework for Generative Behavior and Employee Performance

## 2.5 Research Gaps

This study was carried out in a social - economic sector and in a devolved system of governance. Confirmatory Factor (CFA) was carried out to numerically evaluate the construct validity of these measures and develop a tool for assessing and measurement of an employee generative behavior.

## 3. Research Methodology

### 3.1 Philosophy, Design, Instrumentation and Data collection

This study adopted a post - positivist research philosophy which argues that the ideas, and even the particular identity of a researcher has the capacity to and indeed influences what they observe. Based on this premise, what the researcher observes therefore impacts upon what they conclude in a study. The paradigm commonly adopts an inferential approach and a deductive logic as the guiding tenet. The respondents of the study were six (6) County employees from each County; Regional Directors (RD) & Deputy Regional Directors (DRD) (48), County Directors (CD) and Deputy County Directors (DCD) (48), Sub - County Directors (S - CD) and their Deputy Sub - County Directors (DS - CD) (48), Education Officers (EO) (136), Administrative Assistants (AA) (48) and finally Clerical Officers (CO) (88). Purposive sampling was used to determine a sample size of 416 respondents. Primary data was collected using a pre - designed five point - likert scaled questionnaire which had the equivalences of agreement "to a very small extent" (1), to a small extent (2), to moderate extent (3), to a high extent (4) and finally to a very high extent (5) (Charandrakandan, Venkatapirabu, Sekar & Anandakumar 2011). SPSS was preferred owing to its systematic capabilities on a wide range of statistical analyses and presentations (Porter & Gujarat, 2009). (Bryman 2021).

### 3.2 Internal Consistency and validity of Instrumentation

Reliability and stability of the measurement tool was evaluated for the eleven measures of generative behavior and nine (9) measures of employee performance using Cronbach alpha coefficient. A coefficient of was 0.690 and 0.848 was achieved respectively and hence acceptable based on the rule of thumb of 0.7 threshold for acceptable level of stability assessment. The eleven (11) statements measuring generative behavior generated a KMO Coefficient of.614, at 55 degrees of freedom and Bartlett's Chi - Square of 991.815, p - value of.000. On the other hand the nine (9) measures for employee performance generated a KMO Coefficient of.782 and Bartlett's Chi - Square of 1218.615

(p - value of.000). These results further point that confirmatory factor analysis was appropriate for enhancing the construct validity and reliability of the measures used in each of the variables. (Montgomery, Peck & Vining, 2001).

### 3.3 Data Analysis and Presentation of Results

The eleven (11) parameters' measuring generative behavior generated a mean and standard deviation coefficient of 3.79 and 1.116 respectively. These two statistics indicated that there was a convergence "agreement to a high extent" on each of the measures of the variable. The parameters were subjected to confirmatory factor analysis (CFA), test of regression assumptions and finally inferential analysis. Hypothesis testing was done using bivariate linear Regression (BLR) model using the equation; Y/Employee Performance =  $\alpha + \beta_1 + \epsilon$ ; where Employee Performance (EP) is (predictor) and  $\beta_1$  is generative behavior measures (predictand). This equation is supported by Montgomery, Peck, & Vining, 2001; Argyrous, 2011).

## 4. Findings & Discussions

### 4.1 Response Rate

A composite response rate of 71.6% was achieved from this study and was considered adequate response rate. Based on this, it was deemed that the principle of generalizability could be achieved on hypothesis testing and that inferences could be drawn from the analysis. The response rate was attributed to anonymity and self - administration of the instrument.

### 4.2 Drivers for Generative Behaviour

Generative behavior was measured using eleven (11) quality statements. These statements were subjected to CFA to check that the variable (generative behavior) as a regressor was finally measured using quality parameters with high constructs validity. Total Variance Explained (TVE), scree plot and rotated component matrix for these measures were extracted and presented.

#### a) Total Variance Explained for Generative Behavior

After confirming the factorability of generative behavior, the next property of interest was to evaluate how strong the eleven (11) parameters measuring generative behavior were in measurement of the independent variable. As a result, the next factor analysis output generated for this predictand was Table 1. In this test, initial Eigenvalues, extraction sums of Squared Loadings and the Rotation Sums of Squared Loadings values were generated and presented. The results are presented in Table 1.

**Table 1:** Total Variance Explained for Generative Behaviour

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.545	50.406	50.406	5.545	50.406	50.406	5.495	49.951	49.951

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
2	2.185	19.866	70.272	2.185	19.866	70.272	2.235	20.321	70.272
3	.952	8.659	78.930						
4	.812	7.378	86.308						
5	.615	5.587	91.895						
6	.278	2.530	94.425						
7	.216	1.966	96.390						
8	.190	1.727	98.117						
9	.158	1.437	99.554						
10	.034	.308	99.862						
11	.015	.138	100.000						

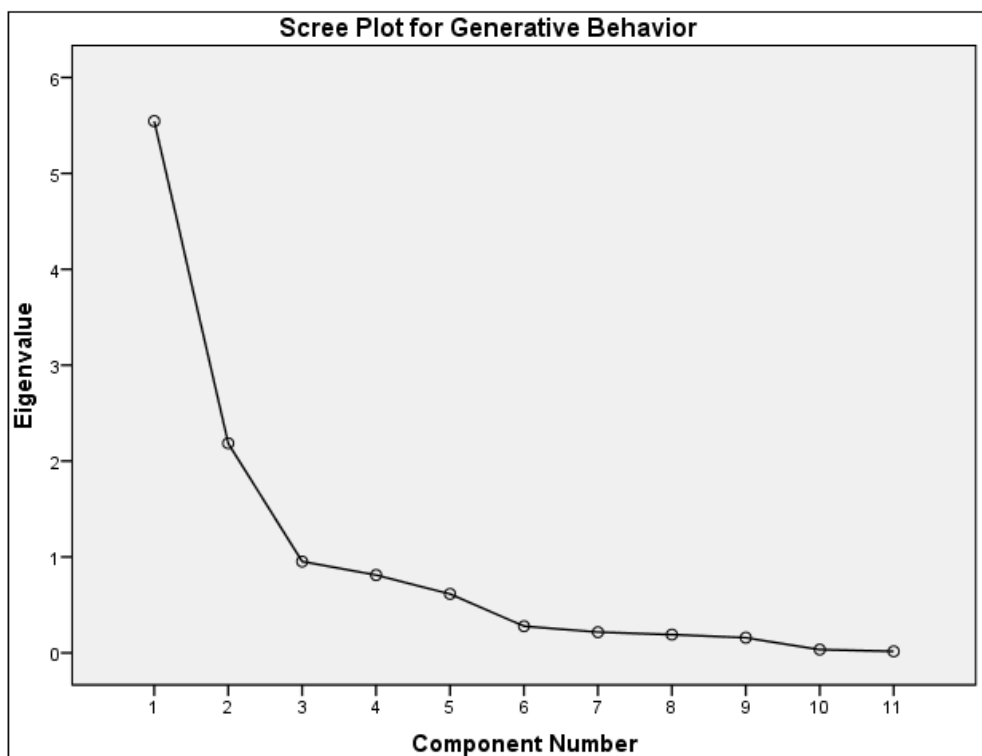
**Extraction Method: Principal Component Analysis.**

Table 1 shows that after the varimax rotation of the eleven statements, two (2) components were generated with eigenvalues above the threshold of greater or equal to one (1). The first component had an eigenvalue of 5.545 with an associated rotation sum of squared loadings of 49.951%, followed by the second with an eigenvalue of 2.185 and an associated rotation sum of squared loadings of 20.235%. Both of these components explained a cumulative variance of 70.272% of the distribution of the variance after the varimax - orthogonal rotation of the statements measuring the variable. The results further show that the first and second component accounts for a variance greater than 60%, meaning that all statements under the two (2) components

were sufficient enough to represent measures for proactive behavior (Tabachnick & Fidel, 2014).

**b) Scree Plot for Generative Behavior**

This study also presented the scree plot in order to graphically examine how many factors to retain for the measurement of the variable of interest, generative behavior for further analysis, a scree plot was generated for the eleven (11) statements and their associated eigenvalue of each statement. A plot for each of the generated component (s) was also presented. The findings are as presented in Figure 2.



**Figure 2:** Scree Plot for Generative Behavior

The results presented in Figure 2 shows a downward curve with a leveling-off (elbow) between component two (2) and component four (4). Further the plot shows that from component two (2) all the other components, that is; component three (3) to component eleven (11), had Eigen values less than 1.00. The deviation of the eigenvalue from the unitary measure of one (1), the less useful it is in the measurement of the variable generative behavior. These

results show that largely only two (2) components were generated by the analysis for the variable generative behavior. (Tabachnick & Fidel, 2014).

**c) Rotated Component Matrix for Generative Behavior**

In order to examine the various constructs for generative behavior, the rotated component matrix for the variables was generated. Through a varimax orthogonal rotation,

components and their associated factor loadings were generated based on eigenvalues with a threshold of greater than one (1). The factor loadings were ordered from the highest to the lowest in absolute values, and were also

suppressed for all loadings of absolute value less than 0.4 loading as the cut - off criteria. The results of the rotated components are presented in Table 2.

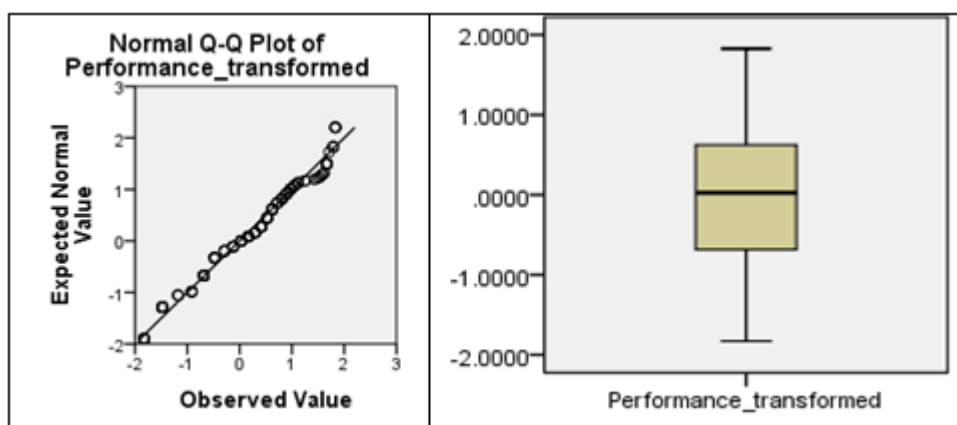
**Table 2:** Rotated Component Matrix for Generative Behavior

		Rotated Component Matrix <sup>a</sup>	
		Component 1	Component 2
Gener 7	Team productivity and creativity are awarded by the ministry.	.941	
Gener 3	Employee coaching is one of the departmental tar - gets in our performance plan	.930	
Gener 1	There is a great culture of productivity in the work - place that is embraced by new employees who join us	.927	
Gener 6	Employees demonstrate a lot of interest and concern for the welfare of their fellow employees	.902	
Gener 4	We have a clear policy of employee mentoring in the workplace	.882	
Gener 8	Employees show great interest in employee - health training and/health talked when they are scheduled	.783	
Gener 2	Long serving employees are involved in training newly hired transferred employees as a practice	-.627	
Gener 5	Employee appear to attach a lot of importance to their work within the MoEST	.524	
Gener 10	Continuous training aimed at improving productivity is budge for in the department.		.911
Gener 9	Supervisors show commitment to discuss results improvements with their juniors as a practice		.893
Gener 11	Employees are financially/time offs supported to improve their skills at work place		.722
<b>Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.</b>			
<b>a. Rotation converged in 3 iterations.</b>			

The results in Table 2 show that eight (8) out of the eleven (11) statements used to measure generative behavior loaded to the first component with factor loading from a high of .941 for statement “team productivity and creativity are awarded by the ministry (Gener7) and a low of .524 in the case of the factor “employee appear to attach a lot of importance to their work within the MoEST “ (Gener5). The results further show that three (3) of the statements loaded to the second component with factor loadings of .911 in the case of the statement “Continuous training aimed at improving productivity is budge for in the department”, (Gener10) for the highest loading factor and a factor loading of .722 for the statement “Employees are financially/time offs supported to improve their skills at work place”, (Gener11). All the statements loaded to either of the two components and there was no cross - loadings across the two components. Based on these results, no statement was dropped from further analysis and hence all the eleven (11) statements were retained as measures of the variable generative behavior.

**4.2 Test of Regression Assumptions**

Four tests of regression assumptions were carried out, test of Gaussian distribution, test of outliers, test of independence and test of linearity. First, the primary data measuring employee performance was weighted for the eleven (11) parameters. Initial results showed that the predictand did not assume a Gaussian distribution and had several outliers. To address this shortcoming, the weighted measures of the predictand were subjected to customize analysis; Z - score Box - Cox transformations through rescaling the continuous target (employee performance) to reduce the skewness of the fields. During the transformation (s) the final mean was set as a mean of zero (0) and the final standards deviation was set with a threshold of one (1). The resultant transformed scores were then subjected once again to the Gaussian distribution using Q - Q Plot. The results of the visual normality tests and test for outliers are presented in Figure 3.. The Quartile by Quartile (Q - Q) and the Box Plot were used to assess the normality of the distribution. The results are presented in Figure 3.



**Figure 3:** Q - Q Plot and Box Plot for Employee Performance

The graphical and visualized distribution of random variables of the differences between an empirical distribution and a theoretical distribution of the weighted Box - Cox scores of employee performance are normally

distributed. This is because the Q - Q plots are fairly spread on the diagonal line from point ( - 2, - 2) to the point (+3, +3). On the other hand, the Box - Plot shows that the median is about the middle of the Box and the associated whiskers

are also about the same size on both sides of the box. This means that the distribution is quite symmetric, a confirmation that the overall distribution is normally distributed and that the distribution does not have outliers. Therefore, Box - Cox Scores were used in the rest of the analysis for the measurement of employee performance. (Porter & Gujarat, 2009)

Secondly test of independence for generative behavior was carried out using Durbin - Watson *d* - statistics. A Durbin - Watson *d* statistics of 1.820 was extracted and was within the recommended range of 1.5 and 2.5 for an acceptable level of no autocorrelation in a variable measure. Finally, the predictor (generative behavior weighted measures) and the predictand (employee performance) were subjected to a linearity test using Pearson's correlation coefficient (*r*). A correlation coefficient of 0.617\*\* was generated at *p* - value

of.000. This statistic implied that indeed a linear relationship existed between the predictor and the predict and. Bivariate linear regression model was deemed appropriate for inferential analysis. (Chatterjee & Simonoff 2013).

**4.3 Inferential Analysis**

The study's null hypothesis (*H<sub>01</sub>*) of the study was: *Generative behavior does not have a statistically significant influence on employee loan performance in the Ministry of Education Science and Technology in Kenya.* To test this hypothesis, the weighted scores of generative behavior measures were regressed against weighted measures of employee performance. Model summary, ANOVA and regression model coefficients output were generated and the results presented in Table 3.

**Table 3: Regression Output for Generative Behavior and Employee Performance**

Generative Behavior	R	R <sup>2</sup>	Sums of Squares	F (1, 297)	Beta (β)	t	Sig
Model Fitness	0.617	0.381					
ANOVA							
Regression			113.046	113.046			0.000
Residual			183.954				
Total			297.000				
<b>Coefficients</b>							
Constant					- 2.414	- 13.068	0.000
Generative Behavior					.922	13.487	0.000

Table 3 shows that the R was 0.617. This implies that generative behavior measures had a strong and high correlation with employee performance. In addition, the R - Square was 0.381 This implies that generative behavior accounted for approximately 38.1% of the variations in employee performance among staff in the Ministry of Education Science and Technology in Kenya. Table 4 further show that F statistic of 113.046 and the associated *p* - value of 0.000<.05. This implies that the generative behavior had a statistically significant influence on employee performance in the Ministry of Education Science and Technology in Kenya at 5% level of significance. Based on these results the Null hypothesis (*H<sub>01</sub>*) that stated: generative behavior does not have statistically significant influence on employee performance in the Ministry of Education Science and Technology in Kenya was rejected and instead confirmed that generative behavior has a positive and statistically significant influence on employee performance in the Ministry. The beta coefficient of generative behavior was.922 and associated *p* value of 0.000. This implies that a unit change in generative behavior is associated with 0.922 changes in employee performance in the Ministry of Education Science and Technology in Kenya.

The resultant linear Model for the generative behavior measures is in the form;  
**Employee Performance= - 2.414 +.922 (Generative Behavior)**  
 .....Model 1

These findings agree to Doerwalf et al., (2019) 's study on the relationship between the generativity motive and generative conduct in the organization towards the employee performance.

Similarly, life - span psychology research has discovered a link between generativity and positive outcomes (McAdams et al., 1993) where generativity has been linked to a number of successful works, career outcomes, employee performance, effective leadership, and employment involvement after retirement age (Kooij et al., 2013; Zhan et al., 2015

**5. Conclusions and Recommendations**

The ANOVA coefficients for generative behavior had an associated *p* - value of *p*=.000 < *p* - value of.05. Based on this, the associated objective's null hypothesis was rejected. This study therefore concludes that indeed, at 5% level of significance, there is a positive and statistically significant relationship between employee's generative behavior and employee performance in the Ministry of Education, science and Technology in Kenya. In addition, the study concluded that in terms of human capital theory, employee generative behavior can and actually does contribute to performance of employee in MoEST in Kenya.

The Ministry of Education endeavors to provide high quality service to her customers in line with the service charter. In order to sustain a high - performance team in the MoEST, management should cultivate and reward employee's generative behavior capabilities in any of the noted areas of interest. Employee ability to actively share information and knowledge while simultaneously also learning in multiple competency domains for example (technical learning capabilities, managerial learning capabilities, soft skills learning capabilities and social networking skills learning capabilities are essential) in the can drive high performance among employees in the Ministry. As such, this behavior

should be cultivated and rewarded in a structured manner within the human capital management in the Ministry.

## References

- [1] Anderson, N., Potočník, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state - of - the - science review, prospective commentary, and guiding framework. *Journal of management*, 40 (5), 1297 - 1333.
- [2] Argyrous, G. (2011). *Statistics for Research: With guide to SPSS*. New Delhi: Sage Publications.
- [3] Alavi, S. (2018). The influence of workforce agility on external manufacturing flexibility of Iranian SMEs. *International Journal of Technological Learning, Innovation and Development*, 8 (1), 111 - 127. <https://doi.org/10.1504/IJTLID.2016.075185>
- [4] Alavi, S. (2018). The influence of workforce agility on external manufacturing flexibility of Iranian SMEs. *International Journal of Technological Learning, Innovation and Development*, 8 (1), 111 - 127. <https://doi.org/10.1504/IJTLID.2016.075185>
- [5] Alavi, S., & Abd - Wahab, D. (2019). A review on workforce agility. *Research Journal of Applied Sciences, Engineering and Technology*, 5 (16), 4195 - 4199. <https://doi.org/10.19026/rjaset.5.4647>
- [6] Alavi, S., Abd Wahab, D., Muhmad, N., & Shirani, B. (2019). Organic Structure, Organizational Learning as the Main Antecedents of Workforce Agility. *Int. J. Agile Manufacturing*, 2; 203 - 218
- [7] Alavi, S., Abd - Wahab, D., Muhamad, N., & Arbab Shirani, B. (2017). Organic structure and organisational learning as the main antecedents of workforce agility. *International Journal of Production Research*, 52 (21), 6273 - 6295. <https://doi.org/10.1080/00207543.2014.919420>
- [8] Al - Kasasbeh, A., Halim, M. A. S., & Omar, K. (2016). E - Hrm, workforce agility and organizational performance: A review paper toward theoretical framework. *International Journal of Applied Business and Economic Research*, 14 (15), 10671 - 10685.
- [9] Asgari, M., Sohrabi, R., Reshadi, M. A. (2018).: Theoretical Model of Workforce Agility Based on the Theory of Planned Behavior. *The 3th International Conference on Behavioral Science*, February 28th. Kish - IRAN.
- [10] Bas'karada, S., & Koronios, A. (2018). The 5S organizational agility framework: A dynamic capabilities perspective. *International Journal of Organizational Analysis*, 26 (2), 331 - 342. <https://doi.org/10.1108/IJOA-05-2017-1163>
- [11] Bryman, A. (2021). *Social Research Methods* (6th Edition). Oxford: Oxford University Press.
- [12] Cai, Z., Huang, Q., Liu, H., & Wang, X. (2018). Improving the agility of employees through enterprise social media: The mediating role of psychological conditions. *International Journal of Information Management*, 38 (1), 52 - 63. <https://doi.org/10.1016/j.ijinfomgt.2017.09.001>
- [13] Chatterjee S. & Simonoff J. S., (2013). *Handbook of Regression Analysis*, John Wiley & Sons, Hoboken, New Jersey.
- [14] Chmiel, N., Franco Fraccaroli, M. Sverke (2017). *An Introduction to Work and Organizational Psychology*. edited by Wiley
- [15] Dansereau, F., Graen, G., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior & Human Performance*, 13 (1), 46-78. [https://doi.org/10.1016/0030-5073\(75\)90005-7](https://doi.org/10.1016/0030-5073(75)90005-7)
- [16] Doerwald, F., Zacher, H., Van Yperen, N. W., & Scheibe, S. (2021). Generativity at work: A meta - analysis. *Journal of Vocational Behavior*, 125, 103521.
- [17] Erdogan, B., & Bauer, T. N. (2015). Leader-member exchange theory: A glimpse into the future. In T. N. Bauer & B. Erdogan (Eds.), *The Oxford handbook of leader-member exchange*. Oxford, England: Oxford University Press
- [18] Hoyer, R. (2004). Leader - Member Exchanges and Board Performance of Voluntary Sport Organizations. *Non - profit Management and Leadership*, 15 (1), 55 - 70.
- [19] Kooij, D. T. A. M., van Woerkom, M., Wilkenloh, J., Dorenbosch, L., & Denissen, J. J. A. (2017). Job crafting towards strengths and interests: The effects of a job crafting intervention on person-job fit and the role of age. *Journal of Applied Psychology*, 102 (6), 971-981. <https://doi.org/10.1037/apl0000194>
- [20] Ledlow, G. J. & Stephens J. H (2018). *Leadership for health professionals Theory, Skills, and Applications*
- [21] Maslyn, J. M., Schyns, B., & Farmer, S. M. (2019). Attachment Style and Leader - Member Exchange. *Leadership and Organization Development Journal*, 38 (3), 450 - 462.
- [22] McAdams, D. P., de St Aubin, E. D., & Logan, R. L. (1993). Generativity among young, midlife, and older adults. *Psychology and aging*, 8 (2), 221.
- [23] Miring'u, A. N. (2019). *An analysis of the effect of Corporate Governance on the performance of Commercial State Corporations in Kenya* (Doctoral dissertation).
- [24] Mohammad N. H., & Hairul S. N (2015). *Procedia Economics and Finance*, 31, 746 - 758
- [25] Montgomery, D. C., Peck, E. A., & Vining, G. G. (2001). *Introduction to Linear Regression Analysis* (3rd edit.). New York: John Wiley and Sons.
- [26] Muduli, A. (2018). Workforce agility: A review of literature. *The IUP Journal of Management Research*, 12 (3), 55-65.
- [27] Ndegwa, K. F. (2017). *Labour Productivity And Performance Of Building Projects In Nairobi County, Kenya*.
- [28] Pitafi, A. H., Rasheed, M. I., Kanwal, S., & Ren, M. (2021). Employee agility and enterprise social media: Role of information
- [29] Pitafi, A. H., Liu, H., & Cai, Z. (2018). Investigating the relationship between workplace conflict and employee agility: The role of enterprise social media. *Telematics and Informatics*, 35, 2157-2172.
- [30] Porter, C., & Gujarat, D. (2009). *Basic Econometrics* (5th Edit). New York, The McGraw - Hill Companies, Inc.
- [31] Tamtam, F., & Tourabi, A. (2020). A framework for measuring workforce agility: Fuzzy logic approach applied in a Moroccan manufacturing company.



Advances in Science, Technology and Engineering Systems Journal, 5 (3), 411 - 418. <https://doi.org/10.25046/aj050352> technology proficiency and work expertise. Technology in Society, 63, 101333.

- [32] Sherehiy, B., Karwowski, W. and Layer, J. K. (2017), "A review of enterprise agility: concepts, frameworks and attributes", International Journal of Industrial Ergonomics, Vol.37, pp.445 - 460.
- [33] Tabachnick, B. & Fidell, L. (2014) Using multivariate Analysis. Boston, Pearson Education Inc.
- [34] Xu, G., & Wang, Z. (2008). The Impact of Transformational Leadership Style on Organizational Performance. The Intermediary Effect of Leader Member Exchange. Long Beach: CA.