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Impact of Digital Technologies Enhancing Transparency and Reducing Corruption in Government Institutions

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ABSTRACT

The digital transformation of government services has emerged as a powerful tool in enhancing transparency and curbing corruption across public institutions. This research investigates that new technologies curbing the corruption and drove transparency in government sector Pakistan especially in Sindh. This study focuses on the new technology PIFRA adopted in treasury department Khairpur district. Multifaceted impact of digital technologies such as E-Governance platforms, systems, on improving accountability and minimizing opportunity for corrupt practice within government sector to information government can reduce discretionary powers of officials, stream services delivery, and foster a culture of openness. This study uses a quantitative method approach, quantitative data analyses from global indices such as corrupt practices index. This research based on hundred four respondents the employees of government institution treasury Khairpur, among the all hundred four respondents hundred four questions were distributed and the data was analyzed using SPSS, the findings show that there are positive and correlation between digital technologies with transparency and digital technologies with reducing corruption and corruption between transparency. The recommendations offer government seeking to leverage digital technologies and strategic avenue for good governance transparency and public trust and for any scholar to there is still need of research in this why government not ready to adopt new technologies.

Keywords: Digital Transformation – DT, Enhancing Transparency – ET, Reducing Corruption – RC, Project to Improve Financial Reporting and Auditing - PIFRA.

Introduction

Digital transformation is the process of using digital technologies to create or modify existing business institutions customer experience to meet changing business and government institutions, government digital transformation is the practices of using technologies and solutions to modernized government operations, service, employee's experiences, and constitution engagement Salesforce. (ND).

What is digital transformation? Digital transformation involves the use of digital technologies to improve the efficiency, value are innovation of an organization, often changing the way services are delivered and how customer interact with customers it allows different branches in

government to improve the operation and uses the resources more efficiently Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013). Technologies have redefined work, from hybrid work, big data, automation, customer experiences, software suits, and more. Government services are not known for being dis jointed slow, and, tedious. Digitalization present a unique opportunity for government to finally face these challenges and stigmas head On, power digital transformation Andrew Dennis December 20 (2024), We find that digital transformation significantly enhancing enterprise information transparency, and the relationship is more pronounced in non-technological enterprises, enterprises with high ownership concentration, and enterprises with high levels of intellectual property protection. Digital transformation in the public sector means new ways of working with stake holders, building new work of service delivery and creating new forms of relations (European Commission, 2013), However beyond the beyond the consultancy of availability resources, (Eggers & Ballman 2015).

Digital transformation can significantly boost transparency in Pakistan government sector by facilitating accost information, streamlining process, and reducing the potential for corruption (Google 2025). Government and social sector can be huge beneficiary of digitalization. It can bring a lot of efficiency to

Government services, increase agriculture productivity, and help extend health and education services to far-lung and the background areas of countries. To reap these benefits, investigating in human capital, improving consumer access to e- government services, dedicated cell for agriculture startup adopting phase vise digitalization of the education and health sector, preparing national electronica health, records, and arranging capacity building workshop for teachers, doctors, formers, and female can play a huge role in the uptake digitalization in government and social sector, www.Oicc.org.pk.

Research Objectives

1. To analyze the impact of Digital Transformation in enhancing transparency in government sector institution.
2. To analyze the impact of Digital Transformation in reducing corruption in government sector institution.

Research Questions

1. Is there any positive impact of increasing transparency on digital transformation?
2. Is there any positive impact of reducing corruption on digital transformation?

Literature Review

Digital transformation now a days is very popular almost every private organization and institution have adopted new technologies to save their time and resources but in government sector specially in Pakistan there is need to adopt technologies its quite clear for any government to adopt changes to meet the desire have to leave old methods of controlling and record keeping.

Digital Technologies

It is the practice of using technology and digital solution to modernized government operations, services, employee's experiences, and constitutional engagement, digital transformation government is the set of policies, procedure and guidelines that governs the process of digital transformation within the organization, institution, robllewellyn.com.

It refers to the cross-cutting drivers of digital transformation agenda, such as digital skills in the public sector, an appropriate and conducive legal and regulatory regime, strong enabling and safeguarding institutions, and an environment that foster innovation in the public sector. Effective regulations, improved technical skills, and accountability institutions are analog

complements of digital investments are highlighted in the World Development Report, WDR 2016.

Digital transformation are facilitated by fast moving development in infrastructure, social media, mobile technologies, such as an internet and other digital network, robotics and artificial intelligent (AI). Another fast moving technological development, which is further adding to the digital transformation potential devices, lips 2020

Transparency

Transparency is fundamental at every level of government because too much secrecy leads to an abuse of powers and reduce accountability, the government that lacks transparency often result in the instability of the state, transparency in government inoculates the faith of people in the government. By giving access to seeking information, the government becomes accountable to the public, this ensures the efficient expenditure of public accounts, thus, and it plays an important role in reducing corruption. Anjali Kumar, Christopher Muscato (2020).

Unfortunately not many officials in Pakistan understand the importance of good governance, due to political influence, Pakistan's democratic institution, institutions are unable to carry out their responsibilities and functions on their own (Muzzafar, & Chaudhary, 2017). Pakistan is republican and democratic state with a parliamentary system; however it has trouble building a long-lasting democracy. Fair elections are not being conducted by the democratic institutions that are essentials in democracy's advancement. Fair election grant freedom to vote for any party they want in power but this not a case of Pakistan, (Abbasi, 2022).

The authorities parties perform with greater efficiency and honesty when they are aware that they are being watched and monitored by public (Mumtaz & Tariq, 2021). There are unbreakable link between transparency and protection of right to information and good governance. In order to guarantee the correct implementation of the legislation pertaining to this right, an efficient process can be developed by including all state agencies. Laws the guarantee a liberal regime for information sharing and essential for maintaining the rule of law and promoting peace, There are institutional barriers and limitations to the lavish enforcement of this right and offer solution of allocating different responsibilities to the legislative, executive and judiciary in Pakistan (Qaiser, Khushbakhat & Qaiser, 2020).

Corruption

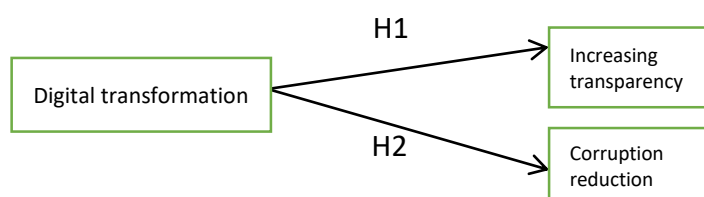
Corruption is defined as "abuse of public power or authority for private benefits, (Anokhin & Schulzi, 2009, p.465). Corruption is demonstrated in different form such as bribery, clienteles, embezzlement, lobbying, patronage; corruption creates distrust in citizens hindering effective delivery of public services Khan, Krishnan (2019). Corruption perception index (CPI) claims that nation with low CPI are plugged by untrustworthy and badly functioning public institutions (Transprancy.org) and negative information about public expenditures and stronger standard when it comes to integrity for public officials (transparency .org) accordingly, we argued more efficient government are better able to control corruption.

From 2008 to 2018, the black money obtain from corrupt practices laundered abroad in the form of dollars, these practices continued and resulted an escalating demand for the dollar in Pakistan. Corruption is also responsible for poor public infrastructure including hospitals and schools, the authentic post.com, (2025). The political corruption is pervasive issue found in both developed and developing countries. Traditional form of political corruption, such as graft, bribery, extortion, kickbacks, continued to be common practices, even in country typically less corrupt like the united states, problems praised due access market where influencing peddling and corrupt government contracting are prevalent, Shannon, V.P.,Funderberk, C., & Fisher, J. (2016).

Dater mental impact of corruption on economic development, under scoring the critical need for Effective anti-corruption measure to support sustainable economic advancement,

It underscore the significant of implementing institutional reforms while championing transparency and accountability mechanism as vital tool in the fight against corruption, Shabbier, (2017). The survey was conducted by marketing and Research consultants under the auspices of TI Pakistan. The general objective of survey was to measure the nature and extend of corruption. At the heart of Pakistan recent anti-corruption drive are countries National Anti-Corruption strategy (NACS) launched in 2002, the National Accountability Bauru (NAB). Accountability courts (lapsed in 1994), Anna Hakobyan, Transparency International, (2004).

Research Model



Research Hypothesis

1. There is positive and significant impact of digital transformation on transparency.
2. There is positive and significant impact of digital transformation on corruption.

Research Methodology

This is quantitative research which aimed to investigate the impact of digital transformation especially in treasure department of khairpur this research is conducted from Employees of Government institution treasure department Khairpur of District Khairpur mirs. Specially after the implementation of PIFRA System-on efficiency of , reduction corruption and enhancing transparency It is based on Questionnaires for conduct the survey from Employs which were directly involved with the PIFRA system khairpur, the sampling formula of Morgan 1970s was used the total November of employs of this department is 198 among them we need 104 of employees based on confidence level of ninety-six percent of margin of error also random sampling was used, the data of this research is conducted through survey because of time saving I used cross Sectional Time Horizon and the result of this data are analyzed through SPSS software four basic test are analyzed in this research first is demographic statistic test to know about the age , gender , education and experiences of respondents. Second test is reliability test to know the reliability and validity of the data third test is correlation to know the relation between variables with each other's, fourth test is regression test to know the significant and relationship of variables with each other's.

Data Analysis

Demographic Analysis

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	94	90.4	90.4	
	Female	10	9.6	9.6	
	Total	104	100	100	

Total Gender respondents are 104 employees. Out of total gender respondents of 104 employees, 10(9.6%) of them are female employees, the remaining 94(94.4%)of the gender are male employees ,The cumulative of can be interpreted as 9.6 of the gender respondents are female employees and 100% of the gender respondents are male and female employees .

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	4	3.8	3.8	3.8
	26-34	58	55.8	55.8	59.6
	35-44	41	39.4	39.4	99.0
	45-Above	1	1.0	1.0	100.0
	Total	104	100.0	100.0	

Total age respondent are 104 employees. Out of the total age respondent 104 employees, 4(3.8%) of them belongs to (18-25) years age group, 58(55.8%) of them belongs to (26-34) years age group, 41(39.4%) of them belongs to (35-44) years age group and remaining 1(1%) is belongs (45-above) years age group.

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Inter	15	14.4	14.4	14.4
	Graduate	83	79.8	79.8	94.2
	post Graduate	6	5.8	5.8	100.0
	Total		100.0	100.0	

Total education respondent are 104 employees, out of the total education respondents of 1004 employees, 15(14.4%) are intermediate, 83(79.8%) are graduate and remaining 6(5.8%) have done post degree.

Experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3	31	29.8	29.8	29.8
	4-6	27	26.0	26.0	55.8
	7-9	31	29.8	29.8	85.6
	10-Above	15	14.4	14.4	100.0
	Total	104	100.0	100.0	

Total experienced respondents are 104 employees, out the total experienced respondents are 104 employees, 31(29.8%) have (1-3) years' experience, 27(26%) have (4-6) years' experience, 31((29.8%) have (7-9) years' experience and remaining 15(14.4%) 10-above years' experience.

Reliability Analysis

Reliability Statistics	
Cronbach's Alpha	N of items
.852	15

This means that there is good internal consistency and reliability of items in your scale our questionnaires' with Cronbach's alpha 0.852 and 15 items. In essence, the expected Alpha value is 0.7 and anything higher than 0.8 is considered to represent good reliability.

Correlation Analysis

Correlation				
		TI	DC	DT
TI	Personal correlation	1	.311	.778
	Sig. (2-tailed)		.001	.000
	N	104	104	104
DC	Personal correlation	.311	1	.468
	Sig. (2-tailed)	.001		.000
	N	104	104	104
RC	Personal correlation	.778	.468	1
	Sig. (2-tailed)	.000	.000	
	N	104	104	104
**. Correlation is significant at the 0.01 level (2-tailed)				

Correlation between TI and DT moreover, the result show a positive correlation of 0.778 that is significant at 0.01 levels of significance. Thus arise strong indication that high levels of transparency are positively correlated with digital transformation (DT).

Correlation between RC and DT The first type of correlation is positively corrected, where person correlation coefficient is equal 0.486, which gives a moderate correlation level and is significant at .01

Level. This infers that high level of TI is correlated with the high level of DT in a moderate degree.

Regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.814	.662	.655	1.16835
a. Predictors: (Constant), DT				

The total coefficient of determination which is R^2 is equal to 0.662; thus approximately 66.2% of the variation in the most probable dependent variable (Digital Transformation) is accountable by the variation in dependent variables (TI and RC). This augurs well with the model because most of the variance is explained by these predictors they are showing very high percentage.

ANOVA 1						
Model		Sum of square	Df	Mean square	F	Sig.
1	Regression	269.968	2	134.984	98.886	.000
	Residual	137.869	101	1.365		
	Total	407.837	103			

a. Dependent Variable: TI

b. Predictors: (constant): DT

The ANOVA is provided to evaluate the overall significant of regression. The F value is 98.886, which represent the variation by the model to variation that is not explained by the model. A high F value shows that the model has a strong capacity to predict the dependent variable than the intercept only model. The statically significant value of p value is .000 which prove that all the combined predictors (TI and) have a huge impact on digital transformation (DT) at the conventional level of significance.

ANOVA 2						
Model		Sum of square	DF	Mean square	F	Sig.
1	Regression	260.66	2	134.886	98.886	.000

Residual	145.32	101	1.365		
Total	405.98	103			

a. Dependent variable: RC

b. predictors: (constant), DT

The ANOVA table access how significance is regression model all together. It shows clearly that the regression model is significantly from zero to overall basis F-Statistic thus, the statically significant value of p is .000 which prove that all the combined predictors (RC) has huge impact on digital transformation (DT) at the conventional level of significance.

Coefficients					
Model		Unstandardized Coefficient		Standardize Coefficients	T
		B	Std. Error	Beta	Sig.
1	(Constant)	.704	.713		.986
	TI	.655	.057	.700	11.499
	RC	.291	.071	.251	4.119

Independent:v

Result reveal the both dependent variable increasing transparency and reducing transparency are positive and significant predictors of digital transformation, but the transparency has a strongest impact as it measured t-value and standardized coefficient. The model emphasize that enhancement of these predictors should enhance transparency and reduce corruption as you increase digital technologies.

Hypothesis Acceptance and Rejection Table

H1 There are positive and significant impact of digital transformation on Accepted transparency

H2	There are positive and significant impact of digital transformation on corruption	Accepted
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Conclusion

This research was conducted to investigate the adopting of digital transformation on PIFRA system of department of treasure khairpur, was PIFRA system supportive to increase transparency (H1) which was proven positively in this research and second (H2) reducing corruption was also proven positive in this research. The results support the hypothesis if you increase the digitalization in any institution your transparency level and corruption from department will decrease. The quantitative analysis confirms if you bring digital tools your corruption level decrease and transparency will increase. Both hypothesis are accepted and proven accepted. This study's limitations can be enhanced in future research, for example, that what could be the role of government why government and employees of the government not demanding the new technologies why they are avoiding are the not enough have knowledge are need to be trained employees are the are afraid of public the record are old employees are not trained to operate new technologies are other factor find out. Digital transformation has revolutionized the way government and organizations operate, significantly impacting transparency and corruption. By leveraging Digital technologies, such as e-governance platforms, data analytics, and block chain, transparency has increased, and corruption has decreased. Digital transformations have enabled real-time access to information, streamlined process and reduce human intervention, thereby minimizing opportunities for corruption. Additionally, digital platform has facilitated citizen's engagement, enabling them to monitor and report on government activities, further promoting transparency and accountability. While challenges persist, the benefits of digital transformation in promotion transparency and

reducing corruption are undeniable, paving the way for more accountability and efficient government (Henriette, Feki, & Boughzala, 2015).

Future direction

Examine the role of transparency and accountability in digital transformation with employs performances including their effect on organizational culture, decision making and risk management explore the contest of digital trust and it's significant in digital transformation, including its relationship with transparency accountability, and security.

Systematics reviews of existence literature on digital transformation to identify gaps, trends, and areas for further research, conduct depth studies of organizations undergoing digital transformations to gain insight into the best practices, challenges, and outcomes.

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