IMPACT OF PERSONAL IDENTITY MANAGEMENT IN E-GOVERNMENT ON CORRUPTION AND GOVERNMENT-CITIZENS RELATIONSHIPS

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Abstract

E-Government initiatives like Personal Identity Management (PIM) promises great prospects in many developing countries including Pakistan. However, there are many significant challenges to be faced yet. It has been observed that many e-government initiatives like establishment of e-government directorate, Computer training courses to government employees and IT wing at Establishment Division failed because of unsatisfactory preparation and political shakiness. At governmental level, there is realization that e-Government initiatives like PIM at National Database Registration Authority (NADRA) may provide customer-focused, cost effective and easy to use services for citizens and businesses, and have potential to bring betterment in the internal workings of government. This quantitative research was conducted using a structured questionnaire amongst 200 respondents and explores the perceived role of e-Government initiative like that of PIM in determining government-citizens' relationship and reducing corruption. The results of the study support the hypothesis that e-Government initiative is positively related to improved government–citizen relationships and corruption reduction. The research also proposes that while e-Government initiatives (NADRA-PIM) can make notable contributions in bringing improvement in public services but they can best do in enhancing by and large relationships between governments and citizens.

Keywords: E-government, Personal Identity Management, government-citizens relationship, corruption reduction, National Database Registration Authority

1. Introduction

Identity management now constitutes the core concept of many governments all over the world in service delivery to its citizens. Traditional systems of identity management are being replaced with digital identity management by the governments, as the governments are now expanding its tentacles of e-government, more particularly in transactional area of service delivery to its citizens (EU Ministerial E–Government Declaration, 2005). Personal Identity Management System (PIMS) has been defined as following: -

 "The set of business processes and a supporting infrastructure for the creation, maintenance, and use of digital identities" (J Lewis- Burton group, 2003 in; Scorer, 2007, p.43).

In Countries like USA, Canada and UK, the permeation of Information and Communication Technologies (ICT) into the governmental functions has considerably changed the working of these governmental Institutions. Extensive Web presence, deployment of digital data capturing

techniques, the provision of governmental services to the general public has become instant, reliable, transparent and most particularly easier. In UK, efforts have been made where Personal Identity Management system may provide the basis for future realization of E-government. Currently individuals are holding different identities for set of varied services both for interaction with government and private sector in UK, Australia, Hong Kong, Singapore, Austria and Ireland (Greenwood, 2007).

 Though it may not be source of concern for both citizens and governments, but it is a matter of inconvenience in terms of managing different identities. In UK efforts have been made to bring the system where individuals may be uniquely identified and this huge database may be used for provision of various services to the citizens. Few Socio-technical problems like that of data security and privacy of personal information may hamper its implementation and are extensively being discussed.

E-government semblance in a country like Pakistan has manifested itself with initiation of Personal Identity management through National Database Registration Authority (NADRA). NADRA being a government entity, is completely responsible for issuance of Computerized National Identity Cards (CNIC), has introduced some e-government initiatives which materialized its benefits of reduced corruption and improvement of citizens-government relationship to great extent through its various services of ID issuance, verification of data and utility bill payments.

There exists a strong nexus between National identity management and e-governance, both are intertwined with each other so much so that without realization of importance of ICT at governmental level, the concept of national identity management is not possible and without having an effective and efficient identity management system, actualization of "E-governance" phenomenon looks distant dream. The world is convinced of the fact that the quality of public sector governance has a direct relationship with increased economic opportunities and effective and efficient delivery of services to the citizens (Mairead, Martein and Richard, 2008).

According to Rick Webb (2006), Accenture's Chief Technology Officer for state and local government, Citizens today want better, faster and lower-cost services from government and there's a tremendous demand to accomplish this objective. Citizens have become accustomed to do things online, like banking and buying products and they are expecting the same level of services from their governments that they are getting in the private sector. Therefore provision of services through a concept of e-governance is no more a choice but a demand on the governments.

The increasing role of electronic data capturing system at different levels and in different organizations has led to the creation of information society which entails that individuals be uniquely identified. This factor has utmost importance in the concatenation of procedures of authentication, identification and enrolment within the emerging trends of e-government, e-business phenomenon and more particularly in future implementation of e-democracy systems (Beynon and Davies, 2007). The perpetual engagement of an individual with multiple electronic services in public, private and voluntary sectors often led to the accumulation of varied nature of different electronic identifiers for each service and ultimately possession of physical tokens in the shape of credit cards, debit cards and driving license etc. by the individual. This issue of multiple identities has caused considerable inconvenience both for the individual and for the organizations resultantly, wastage of resources, duplication of efforts and colossal problem of identity management in the information society (Clarke, 1994).

In the context of identity management one such effort is underway in UK which foresees the implementation of an identity management system where individuals will be uniquely identified and they will be issued "entitlement cards". The unfolding of such a scheme will lead to opening of some pragmatic socio-technical issues e.g. centrality of database, data hacking, safe custody of personal data etc that may impede the implementation of such projects. According to Beynon and Castells (1996), information society giving a legal cover to identity management by the government has some potential benefits both for the organizations and individuals but it also poses some serious threats and challenges of data protection, data privacy and more particularly the public confidence in information governance by the UK government.

NADRA through its personal identity management system i.e. deployment of online application for capturing digital data of the citizens of Pakistan to provide services to other governmental, semi-governmental organizations, private businesses and institutes, it has spread its tentacles in varied areas like e- toll for National Highway Authority(NHA), Arms license for Ministry of Interior (MOI), distribution of government funds for Benazir Income Support Program (BISP) to poor people of Pakistan, Automated Border Control (ABC) with the involvement of Federal Investigation Authority (FIA), management of Internally Displaced Persons (IDPs) due to war on terror, Provisions of funds to flood victims, verification services to both government institutions and private citizens through Verisys using SMS, helping out in launching Machine Readable

Passport (MRP), and last but not the least, Computerization of Electoral List for future realization of e-democracy in Pakistan.

Initially, in 1990, NADRA, Immigration and Passport (IMPASS) and Electronic Government Directorate (EGD) were brought into existence to achieve the objective of e-government in Pakistan. The study's major focus was to discover level of e-government benefits like that of reduction in corruption and enhancement in government-Citizen relations by implementation personal Identity Management system has been achieved. If we delineate these objectives in straight lines following three objectives are explicitly surfaced.

a. To identify the role of Personal Identity Management System in realization of E-government in Pakistan?

b. To identify the impact of Personal Identity Management on reduction of Corruption?

c. To understand the role of Personal Identity Management in Government-citizens Relationship?


2.   Literature Review

According to Clarke (1988) personal identity have the connotation of personality, a single entity and individualism, where as identification refers to the process by which individuals are uniquely identified. Moreover, in information system the rationale of identification process is association of torrent of data with a particular human being (Clarke, 1988). In information society personal identity management revolves around three inter-related processes of authentication, identification and enrolment which formed the basis for initiation of e-business and e-government in any country. The process of personal identity management itself is not free of socio-technical issues which confronts and challenge its purposiveness, effectiveness and data protection ability. With the growth and advancement in information and communication technology (ICT), individuals in a society may take on different identifiers due to their involvement in multiple electronic services offered by public and private organizations (Beynon et al., 2007). This phenomenon of multiple identities for single human being often overstrains the individuals and as well as the organizations in the information society. Uniqueness in identification is critical to the success of information system as the individuals have to interact with various forms of governance structure (Thompson, 2003). According to Checkland (1999), this effort on the part of government (UK) to provide legitimacy to electronic identity will certainly arise some potential issues regarding data protection

and data privacy. In a rush to forming of e-government, more often it happens that government becomes more techno-centric than governance-centric and by this way they lost the vision of good governance (Leitner, 2003).

However, constitution of e-government is far ahead of just inclusion of technology in the government processes rather it includes much of the socio-economic novelties and politico-administrative somersaults based on ICT infrastructure and developments. Thus to achieve meaningful advancement in efficient public service delivery, governments should avoid any technical biases and should rely on strengthening personal identity management infrastructure (Lietner, 2003).

The following graph which was adopted from the work of Hodgkinson (2002) shows how governments take initiative for use of technology in their day to day affairs and transforms from online government to e-government concept.
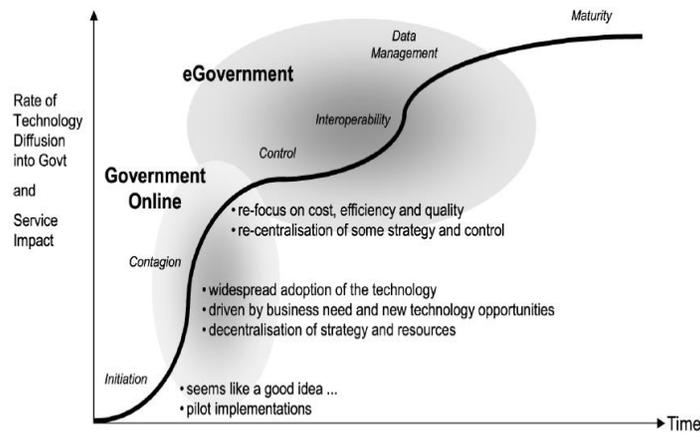
Source: Hodgkinson (2002)

Fig. 1.   **E-Government Maturity Diagram**

Excellence in e-government demands that efforts are to be effectiveness-driven and not merely have efficiency-focus. This will require the initiative to be led by good governance motivated by goal/purposes and additionally, these schemes must be outcome-focused. We must also recognize that government is a service business and it is the most diverse service business in the world. Information Technology only helps governments achieving excellence in their services as it does in the private sector (Beynon et al., 2007).

The need for personal Identity Management(PIM) system-E-government in the public sector has therefore been recognized by both 1) individuals and 2) the governments alike; for the one faced

with the challenge of 'doing more with less' while the other has an increased demand to adapt and provide specialized solutions. This means a 'big change' is on its way which will change the customary way of conducting the governments' business by removing or minimizing redundancies, delays and corruption(Aldona, 2006).

As a popular term used in the development sector 'good governance' refers to the process of decision-making and the process by which decisions are implemented (or not implemented). Bad governance on the other hand is being increasingly regarded as one of the root causes of all evils within our societies (UNESCAP's report).

Every country has some form of governance and the journey from legacy systems to an integrated Personal identity management (PIM) System is just like moving to the concept of New Public Management i.e. governance to e-governance. This is where the performance monitoring and measurement of the public sector has become very critical. As per the report on good governance by Centre for Civil Society, India, the output is more important than the process. The current administrative setup does exactly the opposite. It lays emphasis on procedure and has little regard to the output (http://go.worldbank.org/10.08.2011:23:11). A PIM system that not only automates the work flow but provides control on measuring key performance indicators is pivotal to New Public Management.

With personal Identity Management (PIM) system support, e-government achieves all the major characteristics of good governance vis-à-vis participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law. It assures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society (Aldona etal). Although some of the advanced countries have come close to it but it is commonly believed that good governance is an ideal and is difficult to achieve in its totality (Ogden and Richards, 1923).

Maureen A. Pirog & Craig L. Johnson in a case based study emphasized the significance of the government's humanitarian services by employing latest digital technologies of Electronic Fund Transfer (EFT) and Electronic Benefit Transfer (EBT) for implementation of future strategy in normal as well as emergency relief. The use of digital technologies like that of EFT and EBT will to greater extent materialize the concept of lean and responsive government. Use of digital technologies for unique identification, meaning full cooperation among different sectors in

government as well as non-government actors will play significant role in the success of these digital technologies and ultimately an efficient and effective government.

Toshio Obi, Institute of E-government at Waseda University in its release of 2008 "World e-Government Ranking" concluded a comparative study of selected few Countries with E-government infrastructure and found that for accomplishment of e-Government objectives, the involvement of Citizens is of vital importance for which general awareness campaign of usage of e-Services should be launched gradually. The inevitable interaction of governments with its Citizens by the employments of ICT has led to the creation of e-Citizenship which has further transformed into "e-Community" under the umbrella of comprehensive e-government.

Review of the human history revealed that for centuries transactional activities in a society were initiated on the basis of personal acquaintances and faith, however with coming of era of bureaucratic culture, the identification process was changed to paper-based process. With the passage of time, the most commonly reliable identifiers in the society became the "Passport", "Birth Certificate" or "Driver's License" (Camp, 2003). For better understanding of PIM following elaborations have been made.

a. " A set of data management systems and practices to increase confidence in the identity of individuals where appropriate" (Crompton, 2004, p. 1)

b. "A process of representing and recognizing entities as digital identities in computer networks" (Josang, Fabre, Hay, Dalziel & Pope, 2005, p.99).

Sprouting of out of this paper based relationship between government and citizens, the command over the personal administrative affairs of the citizen could not last any more whether completely or partially (Caplan, 2001).

The growing use of digital technologies created an environment for e-government and e-commerce wherein the realization of a system of digital PIM has become more evident than before. But if we look at from the implementation point of view, the dynamic of digital PIM are altogether different from the paper-based identification as it is informational representation rather than physical representation (Lips, Taylor & Organ, 2006).

The growing trends in governments to deploy digital PIM solutions to help materialize the transactional form of e-governance revealed that benefits thus achieved outweigh the cost with the improved ability of the governments to protect human rights, putting into effect the responsibility and lowering of transactional and coordination cost (FIDIS, 2005).

As Lips and Pang conclude that in the choices for adopting PIM in a society, governments must be honest not only to further the confidence of the citizens in expanding role of transactional services offered by e-government models but also to create environment where in the decision may rest with the user for preferred use of e-services in dealing with government (Lips & Pang; 2008). In simplest way, two definitions of e-government can be quoted as follows:

(1). Department of Information Resources, State of Texas defines E-government as "Government Services that take place electronic communications among all level of governments, citizens, and the business community including; acquiring and providing products and services; placing and receiving orders; providing and obtaining information; and completing financial transactions".

(2) Gartner in 2000 defined E-government as "E-government is the continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationship through technology, the internet and new media".

The most eloquent definition of e-government is the employment of novel means of information and communication technologies by the government with specific focus on web based applications in the provision of services to its citizens and businesses with the aim of not only giving easy access to government information but also to improve upon its services (Lips et al., 2008).

E-government was not mere retransformation of means of doing businesses by the governments all over the world but also advancements in new information and communication technologies that spurred the growth of e-government(Zhiyuan Fang; 2002).

According to Blake Harris (2000) the ultimate aim of the e-government is to employ the latest information and communication technologies by the different government departments in delivering services to its citizens, businesses and industry in an efficient way that will resultantly decrease corruption, enhance transparency, authorizing citizens, more convenience, financial growth and cost effectiveness. E-government enhances its credibility by bringing governments and businesses closer and closer ever (Zhiyuan, 2002).

In India, Various e-government projects like e-Choupal, e-Seva and AMCUS are playing pivotal role in abridging gap between urban and rural India, Citizens and government and most particularly private Sector Organization and government, with efficient use of latest identifications technologies available in the market (M. L. Singla, 2005)

In most of under developed Countries now there is strong realization on the part of governments to carry out some e-government initiatives which are more customer-focused, cost effective and

Citizen friendly just to bring out change in the internal working of the governments. By this way, they have not only achieved some success in reducing the corruption from the ranks of the government functionaries but to greater extent they have enhanced confidence of the general public in the working of the governments (Pathak, Gurmeet, Rakesh, Rafia and Smith, 2008).

Due to easy access to global information, omnipresence of e-commerce and quick responses from the internet, e-citizens are now more obstreperous from public administration for supreme efficiency, more intelligibility and better services. Consoles, accessibility and a harmonized look of applications will now determine the government citizen relationship (Birgit, 2002).

In the modern-day personal identity management (PIM), people resist to share their personal information with respect to public bodies while on the other hand they unintentionally or willingly share the same personal information while using the social media and other commercial/non-commercial online activities. The foremost reason is the fact that people do not consider themselves to be a static data units that will not change over the period of time rather our contention is that PIM must be a system of kind that revolves around the willful use of identity or identities by the human being during one's lifetime (Zoonen and Turner, 2014).

In the trusted identities environment where in every stake holder may verify identities on some mutual consented terms, the importance of relationship between privacy concerns and trust with institutional assistance and association, have profound effect in generation of trusted identities that will ultimately lead to the equipoise where huge number of benefits of the trusted identities can be materialized (Adjei, 2013)

Instead of brazening out the government's power, effective citizen participation, supported by electronic government initiatives may unwrap options to collectively construct conducive development circumstances as well as an environment advantageous to the complete satisfaction of human, social, political and economic rights (S. Lannerstrom, 2005). This is not only pertinent to citizens by enhancing their capacity for participation and social power, examining or oversight, but is also significant in the case of leaders or politicians and civil servants by mounting levels of consciousness on the significance of acting and making decisions conducive to the collective well-being (Bhatnagar, 2004). The notion of e-government preceded PIM for its ability to improve democracy and responsiveness to citizens and bring citizens closer to political leaders and enhanced public outreach. Model is shown in Fig 2 and following hypothesis were developed in this regard:-

H1: Personal Identity Management in E-Government is positively related to improvements in government-citizen relationship.

H2: Personal Identity Management in E-Government is positively related to corruption reduction.

H3: Improvements in government-citizen relationships account for more corruption reduction as compared to other variables.

H4: Government citizen relationship mediates the relationship between Personal Identity Management & Corruption reduction.
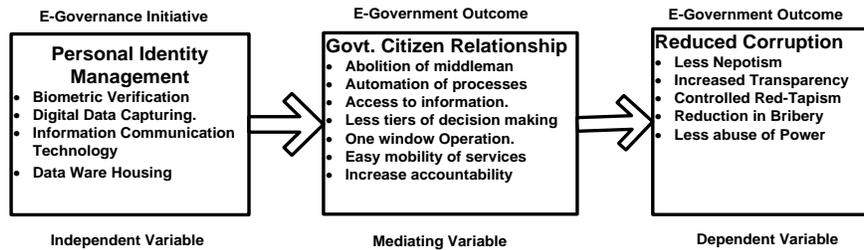

Fig. 2. **Model**

3. Research Methodology

It is quantitative and applied research in which correlation between Personal Identity Management System (E-government initiative in Pakistan) and reduction in Corruption and improvement in government citizen relationship has been measured by using a structured questionnaire. The type of study was cross-sectional.

The structured questionnaire has been portioned into seven sections each with a definite purpose like in first section demographic information is being retrieved with nominal scale. The purpose of retrieving personal information of the respondents is to analyze the bent of their mental approach while answering to the question.

The population includes around 14000 employees of the organizations plus only those well-educated and technically well aware citizens who have either undergone one or more services of PIM. Unit of analysis were individuals. Among the major characteristics of population that not a single respondent in this research has been included who has not attained at least secondary level education. Most of the people are service men, business men, housewives and unemployed youth.

The sampling technique employed here was convenient stratified random sampling and strata included subgroups like NADRA, Passport, telecom companies, Semi government and governmental organizations (that are using PIM services) officials and Citizens of Pakistan who are using any of NADRA service like registration for CNIC, National Identity Card for Overseas Pakistanis (NICOP), Pakistan Origin Card (POC), Family Registration Certificate (FRC) or CRC (Child Registration Certificate), Verification System of NADRA (Verisys), KIOSK, verification through SMS alerts, BISP beneficiaries, Flood victims, IDPs, Birth Registration at union Councils (CBRC), Web complaint system, Web tracking facility, Call centers and passport service etc. The study reports the result of 200 x respondents from all over Pakistan and from the countries where in concentration of Pakistanis is high and NADRA registration facility for issuance of ID card is available like Italy, Norway etc.

The justification for using convenient random sampling technique comes from the fact that e-government initiative as that of PIM in Pakistan currently involve many stakeholders most particularly the Organizations that are using PIM verification services and also those Citizen of Pakistan who have directly experienced any of PIM service and hold some technical knowhow of the e-government concept. The plus point of this approach was that it attached extra value to random sampling by ensuring that the population is sampled randomly, resultantly, the enhanced possibility of accuracy.

The data collection method adopted here, was face to face filling of questionnaire and in some cases narration/comprehension of the questions has been made by repeatedly reading the questions before the respondent just to avoid any wrong interpretation of questions being asked. For Senior/top management prior appointments were made and in detailed/lengthy sessions questionnaires have got to be filled. Not a single questionnaire has either been emailed or sent through post.

Data analyses techniques involve the use of t-tests, correlation and regressions on the collected data. However, before running a test, it was required that data be made ready for hypothesis testing. In this regard, some precautionary measures such as data editing and goodness of the data by codifying the data have been taken. Goodness of the data was checked by highlighting the highest and lowest value on the descriptive statistics. Another method used to check the goodness of data employed factor analysis through Cronbach's alpha and split-half reliability tests.

4.   Data analysis

The data were collected from 89% male respondents and 11% female respondents. The most of the respondents related to 20 to 25 years age group and 28 % of respondents related to the 36-40 age group. 49% of respondents got university education and 47 of respondents attend college. 61% of the respondents were married and 39% of respondents were unmarried. 57% of respondents were related to services industry, 20% of respondents were students and 12 % were unemployed. Results are shown in Fig 3.

Age Group	Percent	Gender	Percent	Education	Percent	Marital Status	Percent
20-25	43.5	Male	88.5	Secondary	47.0	Married	61.0
26-30	16.5	Female	11.5	University	49.0	Un-Married	39.0
36-40	28.5			Professional	4.0		
41-45	11.5						

Job Status	Percent	Job Level	Percent
Service	57.0	Top	10.5
House Wife	7.5	Middle	30.5
Un-employee	12.0	Supervisor	40.5
Student	20.5	Lower	18.5
Other	3.0		

Fig. 3.   Summary Demographic Profile.

4.1 Magnitude of Public service Corruption in Pakistan

In the view of respondents experience about corruption, Pakistani respondents view that corruption in Pakistani public service agencies are increasing. Approximately 87% of respondents feel that corruption in Public service agencies are increasing and only 13% of respondents. Results are shown in Table 1.

	Frequency	Percent
No	26	13.0
Yes	174	87.0
Total	200	100.0

Table 1. Magnitude of Public Service Corruption in Pakistan

4.2 Range of public service corruption in Pakistan

A large number of respondents rated public service corruption as very high and fairly high. Approximately 85 % of respondents rated public service corruption very high or fairly high 5.5% of respondents rated corruption as medium and only 3.5 %of respondents rated it fairly low. Results are shown in Table 2.

	Frequency	Percent
Fairly Low	7	3.5
Very High	169	84.5
Fairly High	13	6.5
Medium	11	5.5
No	0	0
Total	200	100.0

Table 2. Range of Public Service Corruption in Pakistan

4.3 Experience of time and cost factors in public service delivery and corruption

Table 3 and Table 4 represent the time and cost factor associated with service delivery and how people experience the cost the service user bear in term of spending time in government offices and awaiting results. Only small percentage of user thinks that they are not bearing any cost and time in government offices and numbers of respondents considered cost and time, a major problem.

	Frequency	Percent
Time is not a problem - Totally Agree	5	2.5
Time is not a problem - Mostly Agree	18	9.0
Time is not a problem - Somewhat Agree	10	5.0
Okay-Time Factor makes no difference	6	3.0
Time is a problem -Somewhat Agree	8	4.0
Time is a problem – Mostly Agree	90	45.0
Time is a problem – Totally Agree	63	31.5
Total	**200**	**100.0**

Table 3. Time factor in Public Service Delivery

	Frequency	Percent
Cost is not a problem - Totally Agree	3	1.5
Cost is not a problem - Mostly Agree	4	2.0
Cost is not a problem - Somewhat Agree	7	3.5
Okay-Cost Factor makes no difference	32	16.0
Cost is a problem -Somewhat Agree	46	23.0
Cost is a problem – Mostly Agree	48	24.0
Cost is a problem – Totally Agree	60	30.0
Total	**200**	**100.0**

Table 4. Cost factor in Public Service delivery

4.4 Correlation Analysis

Table 5 indicates the relationship of different variables. According to the result, there is a significant positive relationship between e-Government initiative and Government citizen relationship (0.457) at the level of 0.01. There is a significant positive relationship between e-Government Initiative and Corruption reduction (0.202) at the level of 0.01. Furthermore, there is positive relationship between Government Citizen Relationship and Corruption reduction having value (0.407) at level of significance.

	Government Citizen Relationship	Corruption Reduction	PIM
Government Citizen Relationship	1		
Corruption Reduction	.407(**)	1	
e-Government Initiative	.457(**)	.202(**)	1

** Correlation is significant at the 0.01 level (1-tailed).

Table 5. **Correlation Analyses**

4.5 Regression Analysis

Table 6 represents the regression result. The regression result indicate the positive impact of e-Government initiative on Government citizen relationship having value ($\beta = 0.457$, $\rho < 0.01$) and 20.9% variance explained by independent variable. Result demonstrates the positive impact of e-Government Initiative on Corruption Reduction having value ($\beta = 0.202$, $\rho < 0.01$) and 4.1% variance explained by independent variable. There is a positive impact of Government Citizen Relationship on Corruption Reduction found having value ($\beta = 0.407$, $\rho < 0.01$) and the total variance explained by 16.5%.

Predictors	Government Citizen Relationship		Corruption Reduction	
	β	R^2	β	R^2
e-Government Initiative	0.457**	0.209	0.202**	0.041
Government Citizen Relationship			0.407**	0.165

Table 6. **Regression Analysis**

4.6 Hierarchal regression

To check the Mediating effect of Government-Citizen Relationship in the relationship of e-Government Initiatives and Corruption Reduction, we conduct hierarchal regression. In First step, we regressed Corruption Reduction by e-Government Initiatives and in Second step, we Regress Corruption Reduction by e-Government Initiatives by putting Government Citizen Relationship in between the relationship. The result of Mediation analysis demonstrates the Mediating effect of Government Citizen Relationship in the relationship of e-Government initiatives and Corruption Reduction. The value of Main effects size reduces ($\beta = 0.202$, $\rho < 0.01$ to $\beta = 0.020$, $\rho > 0.05$) and explained variance reduces ($\Delta R^2 = 0.00032$) and become insignificant. The Mediation result shows that Government Citizen Relationship is the variable that translates e-Government initiative to Corruption Reduction. Results are shown in Table 7.

Predictors	β	R^2	ΔR^2
STEP 1 (Main effects)			
e-Government Initiatives	0.202**	0.041	
STEP 2			
Government- Citizen Relationship	0.0397**	0.165	
e- Government Initiatives	0.020	0.166	0.00032
** Significant at the level of 0.01			
Dependent Variable: Corruption Reduction			

Table 7. **Mediation Analyses**

Generally speaking, most of the respondents consider that government agencies/Departments in Pakistan are not well equipped and triggered off to construct sound government-citizen partnerships. Pakistani Citizens visualize very less of the internal workings of government on this front. Bureaucracy is more or less redundant and very less consideration is being given to improving transparency with effective utilization of e-Government processes. Time, cost and red-tape procedures are major hurdles in public service delivery. Government of Pakistan should be hard pushed to build up citizen-centric models that involve enhanced partaking of key stakeholders outside government i.e. in private sector to achieve efficiencies and advance the resources available to citizens.

Government of Pakistan is required to undertake watchful steps to guarantee better reach and access, otherwise discrepancies in access to resources will only exacerbate the existing level of corruption and social and economic injustice. Thus investments in ICT/ e-government initiatives

like that of PIM need to be linked with more extensive development agendas in Pakistan in order to bring effective improvements in government citizen relationship and ultimately reduction in corruption from the public sector.

The data analysis revealed the fact that considerable improvements in government-citizen relationship has led to reduction of corruption in various departments that are utilizing PIM in e-government in provision of various services to general public. The data reliability has not only enhanced general public confidence in public service departments but on the other hand these departments have also achieved enhanced level of work efficiency, transparency, accountability, flow of information, abolition of red tapism, responsiveness & service flexibility and access to information for general public.

5.   Findings and recommendations

In addition to some narrated requirements given in the questionnaire for successful implementation of e-government initiatives in Pakistan, respondents were given open choice to express their views in the last section on the subject i.e. PIM in E-government and fight against public sector corruption. Resultantly, the response that we received is worth mentioning here in our last part of thesis and will certainly be helpful for future research endeavors.

The gist of all the suggestions, proposals and admonitions is that whenever initiatives like that of Personal Identity Management system is undertaken at governmental level it should not be void of such provisions which completely ignores the overall status of literacy in the country, and also penetration of internet and its related IT infrastructure in the country. Some funds out of such initiative should be earmarked for the uplifting of the standard of education and basic infrastructure without which such projects may face a big failure.

In fight against corruption, though ICT and use of latest technology with effective support of database like that of PIM may play pivotal role but road to the success lies in the extent of access to public information, laxity in bureaucratic rules and last but not the least the political will of the government. Furthermore, to fore thwart any misuse of such information, tempering with databases by the officials, hacking of information by the criminals some Cyber laws must be introduced to make such projects a success in fight against corruption.

Among the potential barriers that lie in the successful implementation of such projects that will ultimately realize into transparency in government practices and working, is the bureaucratic delaying tactics. As materialization of e-government concept in Pakistan means reining in the high handedness, accountability of actions, and most particularly the curtailing the power of bureaucracy.

The success of Personal Identity Management System in manifestation of e-government in Pakistan lies in the integration process i.e. different governmental entities in the lines of Immigration and Passport (IMPASS) be aligned with NADRA database. The departments like that of Police, FIA, Land revenue system, excise and taxation, FBR, Judiciary most particularly lower courts and Customs where incidence of corruption is high be integrated with National Database so that system of governance may evolve where in accountability through system should be facilitated.

6.   Managerial Implications

From the management point of view, the study has also made some important contributions in the field of Personal Identity Management as e-government tool by highlighting various areas of concerns that may lead to ultimate success of the system. Some of which are as under: -

- PIM should not be taken as database model solitarily rather the system should be introduced and integrated as complete solution in implementation of e-government.
- In this study it has also been underlined that Software Interfaces/Solutions most particularly web based applications can play pivotal role in enhancing government-citizen relationship.
- The study also highlights the importance of managerial control from the strategic point of view in running the governmental affairs in case PIM in e-government is successfully implemented.
- The study also gives an insight into the importance of data for planning and development purposes and that has many economic prospects in future growth and development of the Country.

7.   Conclusion

While e-Government initiatives like that of PIM promise great prospects in many developing countries like that of Pakistan, however still some significant challenges need to be faced. As, it has been observed that many e-government initiatives like that of establishment of e-government directorate fail because of unsatisfactory preparation and political shakiness. These challenges require successful execution of corresponding right technologies with comprehensive and progressive reforms programs and government schemes. The surveys in Pakistan narrated description in this research confirm that corruption is considered to be major dreadful effects on the functioning of government departments in Pakistan and the public sector red tapism is the prevalent stumbling block in the way of improved government-citizen relationships. It can easily be recommended that e-Government initiatives like that of PIM can facilitate in eradication of corruption and also in nurturing of government-citizen relationships in developing countries like that of Pakistan. As it is evident that e-Government initiatives cannot eliminate all the structural supporters that generate corruption in society and most particularly in Government institutions, but, with the well-conceived and planned implementation strategies, such initiatives can strengthen these critical variables in combating corruption and bringing improvements in government-citizen relationships.

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