

# Red Tape Reduction on Transport Management System

Anish Paudyal  
Department of Computer  
Science and Engineering  
Kathmandu University  
Dhulikhel, Nepal  
ap02409818@student.ku.edu.  
np

Prabesh Pokhrel  
Department of Computer  
Science and Engineering  
Kathmandu University  
Dhulikhel, Nepal  
pp02410118@student.ku.edu.  
np

Shiva Raj Bhatt  
Department of Computer  
Science and Engineering  
Kathmandu University  
Dhulikhel, Nepal  
sb02407118@student.ku.edu.  
np

Dr. Sushil Shrestha  
Department of Computer  
Science and Engineering  
Kathmandu University  
Dhulikhel, Nepal  
sushil@ku.edu.np

**Abstract**— Trust in the government has been a major worry for people all around the world. People's perception of their satisfaction with public agencies is substantially influenced by their performance, which ultimately affects whether or not they have faith in the government (s). In the majority of scholarly publications on this relationship, the "performance-satisfaction-trust" model is frequently used to describe it. The primary hypotheses have been empirically evaluated against the data gathered for this purpose, and a theoretical framework linking E-government innovation to the perceived reduction in red tape, people's satisfaction, and trust in government has been developed. This study adds to the body of literature by incorporating the mediating effect of perceived reduction in red tape between E-government innovation and citizens' satisfaction in a performance-satisfaction-trust model. The study uses survey information gathered from the citizens who use the Department of Transport Management (DOTM) website run by the Government of Nepal Ministry of Physical Infrastructure and Transport. The study uses a structural equation path model that takes important latent constructs into account. According to the study, using an online transportation management system (in this case, an E-government innovation) contributes to the perception of reduced red tape, which in turn results in citizen pleasure. Ironically, the public has less trust in Physical Infrastructure and Transport Ministry and its personnel. As a result, the study advises the government of Nepal to take itself more seriously and develop unique tactics to enhance its accountability and reflect its credibility with the general public.

**Keywords** - *E-government Innovation, Citizens' Satisfaction, Red Tape, Nepal*

## I. INTRODUCTION

Red tape is an idiom referring to regulations or conformity to formal rules or standards which are claimed to be excessive, rigid or redundant, or to bureaucracy claimed to hinder or prevent action or decision-making[1]. It is usually applied to governments, corporations, and other large organizations. Things often described as "red tape" include filling out paperwork, obtaining licenses, having multiple people or committees approve a decision and various low-level rules that make conducting one's affairs slower, more difficult, or both[2].

Red tape has been found to hamper organizational performance and employee well-being by meta-analytic studies in 2020. A related concept, administrative burden, refers to the costs citizens may experience in their interaction with government even if bureaucratic regulations or procedures serve legitimate purposes[3].

Citizens' perception of satisfaction from the quality of services and other goods delivered by/through public

agencies enhance public trust in those agencies and often measures of satisfaction can be useful indicators of general trust in government institutions[4]. The growth in satisfaction with any product or service may lead higher degree of the trust in it. And the meaning of satisfaction comes from the performance or quality of a product or service that an agency has to offer the people. Different determinants influence citizens' perception of satisfaction towards their government(s)[5]. Hence, the performance of public agencies fundamentally determines the perception of citizens' satisfaction which ultimately leads trust in government(s). Majority of the academic works on this relationship often recite as 'performance-satisfaction-trust' model [6].

Removing needless red tape – such as duplicate processes and rules that do not add protections – will save time, money, and resources while still protecting the environment, keeping citizens' safe and healthy, and upholding fiscal accountability[7]. The expression "cutting of red tape" generally refers to a reduction of bureaucratic obstacles to action. Public administration scholars have studied the impact of red tape on public servants through research on administrative performance, behavioral impact, and rule quality[8].

Business representatives often claim red tape is a barrier to business, particularly small business. In Canada, the Canadian Federation of Independent Business has done extensive research[9] into the impact of red tape on small businesses. 'As of 2018, small businesses were subject to 15,875 regulatory requirements from Health Canada, 1,808 from the Canada Revenue Agency and 4,519 from Finance Canada. According to data compiled by the federal government, a total of 136,121 federal requirements were imposed on businesses, in addition to provincial requirements. The Canadian government's One-for-One rule recommends that regulators offset new costs in the two years following the implementation of new regulation. From 2012 to 2018, 131 individual regulations were eliminated by Ottawa, reducing the administrative burden by \$30.6 million. However, during that same time period, 76 new regulations were exempted from the One-for-One rule[10].

In this backdrop, the motivation behind this research is an attempt to evaluate the DOTM implementation situation from citizens' perspectives. Hence, this study explains about E-government implementation situation as government innovative behavior in the Transport Management

Department and its acceptance from citizens' sides. For this purpose, a theoretical framework linking E-government innovation to the perceived reduction of red tape, citizens' satisfaction and trust in government, is developed and main hypotheses are tested empirically. In performance-satisfaction-trust model, this study contributes to the field of literature by adding the mediating role of perceived reduction of red tape between E-government innovation and citizens' satisfaction. Practically, it again becomes imperative and essential to know about the hugely funded online transport management system in DOTM and evaluate its situation from citizens' perspective.

## II. LITERATURE REVIEW

### A. E-Government Innovation

Digital innovations in the public sector have attracted increased attention from researchers since the take-off and rapid development of e-government in the past decade, especially in developed countries. E-government is defined as the process of implementation, diffusion and use in public administration of Information and Communication Technologies (ICT) to achieve innovative forms of information and public services provision. The majority of E-government innovation studies reveal it as part of managerial approach rather than legal or political expression of government. E-government innovation as technological dimension in government sectors is primarily associated with process innovation. In this type of innovation, there is the huge and direct role of leadership and organizational environment. The agility and adaptation in governments are necessary to respond faster to need of citizens[11].

The study attests that E-government innovation (also known as ITCs innovation in public sectors) continues to take place around the globe. E-government innovation associates with smart government and it gets embedded with other innovations such as social and institutional innovation. The study also finds that there are missing links between government innovativeness and citizens' satisfaction, and trust mediated by perceived red tape. However, there are studies showing the relationship between E-government, citizen satisfaction, and trust. Hence, this study is based on the conventional wisdom of which presumes the use of E-government as government innovative behavior and its relationship with citizen satisfaction and trust.

### B. E-Government and Red Tape

E government is a concept of 24/7 government. It removes standard office time and saves public expenses. The adoption of new information and communication technologies can partially affect the negative effects of red tape in the form of procedural delay[12]. There are some other studies [13] which elucidate the role of E-government for red tape reduction. And some of the studies present that the potential for E-government to cut Bureaucratic red tape is heavily context and situation dependent. This study introduces red tape as a mediator in the performance satisfaction-trust

model. The use of E-government is for better, faster, and easier government process. Based on this conventional wisdom and finding some missing links between the constructs, the study purposes and tests a new model empirically.

### C. E-Government and Citizens' Satisfaction

Majority of the E-government related studies are linked with citizens' satisfaction and adoption. Hence, citizens' satisfaction is often discussed in terms of E-government adoption. In the recent years, the study on E-government adoption models has also continued worldwide with the increasing use of ICTs in government institutions. There are examples from different countries about the E-government services, citizens' satisfaction, and their use. Different antecedents (e.g. system quality, information quality, cost and trust, social influence, facilitating conditions, security, and privacy, trust, accessibility, awareness of public services, citizens' ICTs literacy) play a significant role for citizens' satisfaction and adoption of E-government services[14].

### D. E-Government and Trust in Government

There can be a direct link between e-participation and public trust. However, different dimensions facilitate between the impact of e-participation and trust in government. The e-participation process, citizens' development and empowerment, government transparency and public trust in government are interlinked. Similarly, Janssen, Rana, Slade, and Dwivedi recognized 20 factors affecting citizens' perceptions of E-government trustworthiness. Citizens' trust in government largely depends on transparency, accountability and improved performance of the government. And digital government tools are considered as key to improving the relationship between government and citizens. also examine the relationship between E-government use, attitudes about E-government and trust in government.

### E. Citizens' Satisfaction and Trust

Governments that enjoy greater levels of public trust can function more easily and effectively than those with less public trust. In this context, trust may be considered to occupy a key role in making governments operate correctly as well as found that the citizens' degree of trust in government was influenced by levels of satisfaction with government performance. This serves as a logical extension of the factors that were laid out by. Thus, it is often assumed that a decline of trust in government may be, at least in part, tied to lower levels of citizen satisfaction.

## III. RESEARCH METHODOLOGY

### A. Research Model and Hypothesis Development

The study proposes and examines a research model introducing the mediating effect of perceived red tape

reduction linking between E-government innovation and citizens' satisfaction and trust in government based on the performance-satisfaction-trust model.

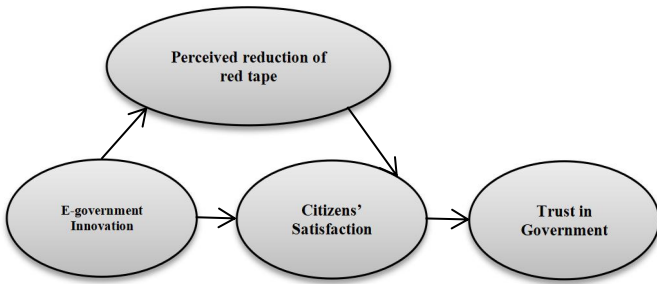


Figure 1: Research Model

#### Research hypotheses:

H1: Innovation in e-government is directly and significantly related to the perceived reduction of red tape.

H2: Innovation in e-government is directly and significantly related to citizens' satisfaction.

H3: Citizens' satisfaction is positively correlated with perceived red tape reduction.

H4: Trust in government is directly and significantly correlated with citizens' satisfaction.

H5: E-government innovation and citizens' satisfaction are mediated by perceived red tape reduction.

#### B. Sampling and Data Collection

To test the research hypotheses of the study, we collected data through a self-administered questionnaire taking references of previous research studies. For the data collection, questionnaires were circulated among the Nepalese citizens who were using the Transport Management System of Department of Transport Management (DOTM) under Ministry of Physical Infrastructure and Transport for the purpose of registration or form filling of any kind. The sampling frame was constructed within the Kathmandu valley (specifically the citizens of Kathmandu, Lalitpur and Bhaktapur Districts). This study used convenience sampling .

#### C. Measurement

Table 1: Reliability and Validity Measurement

Constructs with underlying items	Cronbach's $\alpha$	KMO	CR	AVE
E-government Innovation	0.738	0.717	0.729	0.577
Perceived Red Tape reduction	0.802	0.727	0.733	0.522
Citizens' Satisfaction	0.793	0.768	0.812	0.638
Trust in Government	0.938	0.838	0.875	0.838

<b>E-government Innovation</b>	<b>0.738</b>	<b>0.717</b>	<b>0.729</b>	<b>0.577</b>
The DOTM introduces innovative ideas in a systematic way.				
The DOTM transforms innovative ideas into useful applications.				
<b>Perceived Red Tape reduction</b>	<b>0.802</b>	<b>0.727</b>	<b>0.733</b>	<b>0.522</b>
The DOTM reduces burdensome work that arises from tight rules and regulations.				
The DOTM reduces the time that would have been consumed with the traditional system.				
The DOTM reduces a lot of frustration.				
<b>Citizens' Satisfaction</b>	<b>0.793</b>	<b>0.768</b>	<b>0.812</b>	<b>0.638</b>
I am satisfied with the usefulness of information that is available through the DOTM.				
I am satisfied with the find-ability of different functions within the DOTM.				
<b>Trust in Government</b>	<b>0.938</b>	<b>0.838</b>	<b>0.875</b>	<b>0.838</b>
I rely on the DOTM.				
The DOTM is honest.				
I consider the staffs that work within the DOTM to be trustworthy.				

#### D. Reliability and Validity

We measure the internal validity and reliability of the items with Cronbach's alpha ( $\alpha$ ), composite reliability (CR), average variance extracted (AVEs). The overall reliability of the 10 items is more than 70% ( $\alpha > 0.7$ ) as shown in Table – 1. The CR values of all latent constructs are greater than 0.70. Similarly, AVE values of all constructs are greater than 0.5. Similarly, the ASV values are less than AVE values. Hence, all these tests confirm that there is no issue of validity and

the reliability on the sampling performed. Similarly, the study also examines the issue of sampling adequacy through the Kaiser-Meyer-Olkin (KMO) test. The overall KMO for the items is greater than 0.65 which shows that the sampling is mediocre. This implies that sampling is not quite adequate as per the demand put eligible enough to carry out the research.

#### IV. DATA ANALYSIS AND FINDINGS

**Table 2: Hypothesis Reliability and Validity Measurement**

<i>Paths</i>	<i>Estimate (Standardized)</i>	<i>S.E.</i>	<i>CR</i>	<i>P</i>
<b>Red Tape Reduction &lt;-- E-government Innovation</b>	<b>0.145</b>	<b>0.068</b>	<b>1.778</b>	<b>0.040</b>
<b>Citizens' Satisfaction &lt;-- Red Tape Reduction</b>	<b>0.166</b>	<b>0.044</b>	<b>1.015</b>	<b>0.008</b>
<b>Citizens' Satisfaction &lt;-- E-government Innovation</b>	<b>0.138</b>	<b>0.082</b>	<b>1.145</b>	<b>0.055</b>
<b>Trust in Government &lt;-- Citizens' Satisfaction</b>	<b>0.026</b>	<b>0.122</b>	<b>0.244</b>	<b>0.82</b>

As seen in the table -2, the hypothesis H1, H2, H3 are supported but H4 is not. Hypothesis 1 is supported by the data ( $\beta = 0.145$ ,  $p < 0.040$ ) as expected. It displays that E-government innovation is positively and directly associated with perceived reduction of red tape. Similarly, the results support hypothesis 2 (H2) i.e. E-government innovation is positively and significantly associated with the citizens' satisfaction level ( $\beta = 0.138$ ,  $p < 0.051$ ). Likewise, the result of SEM ( $\beta = 0.166$ ,  $p < 0.008$ ) also supports hypothesis 3 (H3). That means perceived reduction of red tape is positively and directly related to the citizens' satisfaction with the use of ITS. The positive relation appeared to be quite reasonable as using easier way of transport management activities can reduce the administrative burden. Ironically, the structural path between citizens' satisfaction and trust in government also seems to be positive but not directly linked (statistically insignificant) as per the result  $\beta = 0.026$ ,  $p < 0.82$ . Hence, hypothesis 4 (H4) seemed to be insignificant. In the model, the mediated effect of E-government innovation on citizens' satisfaction (H5) is significantly different from zero (i.e.  $p = 0.048$  two-tailed tested). A two-tailed test will test both if the mean is significantly greater than the variable and if the mean significantly less than the variable. In the analysis, the standardized indirect (mediated) effect of E-government innovation on citizens' satisfaction is 0.045.

#### V. DISCUSSION

The main tenet of good governance has been economy with equity, efficiency, and effectiveness. As a result, it was anticipated that the administrative load brought on by the

usual course of government business would have been decreased by utilizing electronic governance. E-government, the idea of being able to access the government at any time and from anywhere, has become a significant type of government, especially since the 2000s.

Given the significance of the emergence of e-government in the public sector, both theoretically and practically, this study looked at how much using it would assist to cut down on perceived red tape. This study added more evidence to previous studies showing digital governance minimizes laborious tasks by doing away with numerous formal and prescribed procedures between citizens and public agencies.

The idea that users will be more satisfied if an organization performs better is a popular one in the performance-satisfaction-trust model. As a result, there is more trust in that company. Previous research has also shown that there may be other connections between trust and fulfillment (i.e., more fulfillment is correlated with greater trust). According to the study's hypothesis, public satisfaction would be positively correlated with public confidence in the government. Ironically, this hypothesis appeared to be insignificant indicating that residents' satisfaction with the online tax system did not necessarily translate into increased faith in the government's operations and personnel' conduct.

The study may have several drawbacks similar to other survey research studies, including self-selection bias, sampling bias, and fewer samples than the study's target population. However, all potential ethical concerns were properly considered and dealt with during the data gathering period. Additionally, we obtained the respondents' prior approval before retaining their privacy.

Government can be changed through e-government. It is a useful tool for cutting down on administrative steps, saving time, and money. As a result, it makes the government more effective, efficient, transparent, and reliable. This study demonstrated that Nepalese citizens who used the transport management system thought the technology made it simpler to complete the related tasks.

#### VI. CONCLUSION

In this study, citizens' perceptions are analyzed to test the conventional knowledge that links E-government practices to perceived reductions in red tape, citizen satisfaction, and trust in the government. We were able to locate earlier studies that examined the mediating effect of perceived administrative burden reduction in the performance-satisfaction-trust model (particularly in the Transport Management System) and implemented similar model to analyze the mediating effect of reduction in red tape in it. The use of ICTs in government is frequently referred to as ICT innovation, and it is believed to lighten administrative burdens. This idea served as the foundation for this study's planning and hypothesis-setting. Contrary to expectations, only hypothesis 4 (H4) was rejected out of the four that were tested. The study indicates that E-government innovation is positively and significantly connected to perceived low red tape, higher citizens' satisfaction.

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