

# DETERMINANTS OF ADOPTION OF COMMON SERVICE CENTERS FOR AVAILING E-GOVERNMENT SERVICES



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A THESIS  
SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR  
THE FELLOW PROGRAMME IN MANAGEMENT  
INDIAN INSTITUTE OF MANAGEMENT  
INDORE

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APRIL 2016

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## ABSTRACT

Governments in developing countries are increasingly promoting delivery of e-Government services through outlets manned by intermediaries for overcoming hurdles of availability of Internet, literacy levels of citizens and PC penetration, especially in rural areas. This channel of delivery is of critical significance for improving access of e-Government services to the users in rural areas but has largely been overlooked in prior research. A study that can identify the key factors that influence adoption of these outlets by the users is likely to be very relevant for the countries that are making large investments for promoting e-Government in rural areas. For example, investment to the tune of Rs 4750 crores is planned by the year 2017 for setting up Common Service Centres (CSCs) in rural areas as part of *'Digital India'* program of Government of India. This investment can bear fruit only if the CSCs are accepted by users for availing government services. Therefore, the objective of the study is to identify the determinants of adoption of common service centres in rural areas and empirically test their effect on users' intention to adopt these outlets for availing e-Government services.

These CSCs are operated by an intermediary, called as the Village Level Entrepreneur (VLE), and use information communication technology (ICT) tools for providing services related to government, financial, social and private sectors such as land records, banking, identity cards, online applications etc. Since this context of delivery of e-Government through an intermediary in rural area is a less researched area, mixed-method research design is deployed for the study. An exploratory study is carried out to identify the factors that may influence adoption of these outlets. Findings from the exploratory study and from prior research in context of delivery of e-Government services through intermediaries reveal that constructs from technology acceptance, service quality and trust literature may be relevant for the study. Accordingly, in this study, we have proposed and empirically tested a framework to study the determinants of adoption of Common Service Centres for availing e-Government services.

State of Madhya Pradesh in India is found to be apt for carrying out the study because it is in mid-range among all states in India in terms of e-readiness, literacy rate and has almost completed its target of setting up CSCs. Since Hindi is the dominant language used across Madhya Pradesh, the survey questionnaire is translated to Hindi for carrying out empirical testing of the model. Data from 328 respondents is collected from 77 villages in 12 districts

in the state of Madhya Pradesh. Analysis of data is carried out using partial least square (PLS) technique with hierarchical modelling.

Analyses of the results from the study reveal that behaviour of intermediary manning the outlet has maximum impact on citizens' intent to use these delivery outlets. Other factors that emerge as significant in this context are easy process in obtaining services, usefulness of the outlet and positive word-of-mouth about the outlet among the prospective users. Multi-group analysis is carried out for testing moderation effect of age and education of the respondents. It reveals that respondents with lower education level tend to rely more on word-of-mouth for using these CSCs. Mediation effects of ease of using CSCs on relationship between usefulness and intention to use CSCs is verified as hypothesized.

The study makes several theoretical contributions. First, behaviour of the intermediary is conceptualized and empirically tested as a key factor in promoting acceptance of these outlets by the users in rural areas. This factor was not investigated in prior research and has important practical implications. Secondly, the study has conceptualized and tested three contextual factors, namely, accessibility, word-of-mouth and one-stop shop that were not part of earlier studies on e-Government adoption and which may influence acceptance of CSCs by the users. Another contribution of the study is that it has conceptualized service quality and trusting belief as multidimensional formative construct rather than reflective constructs. Past literature has debated on correct specification of these constructs. Finally, the study has applied the procedure for testing hierarchical model using PLS technique by conceptualizing trusting belief as second order and service quality as third order construct. Few studies have reported empirical testing upto third-order hierarchical construct and therefore this study can provide guidance to future researchers for higher-order modelling.

Findings of the study have important managerial implications for guiding necessary policy changes in recruitment and training aspects of VLEs, increasing ease of process at CSCs and increasing their usefulness by introducing interoperability features in the services being provided at the CSCs. Suggestions for generating a positive word-of-mouth about the CSCs too emerge from the study.

**Keywords:** *e-Government delivery, intermediary, developing countries, rural area, behaviour, service quality, adoption, empirical study, technology acceptance.*

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## **LIST OF ABBREVIATIONS**

AVE	Average Variance Extracted
B2B	Business-to-Business
B2C	Business-to-Consumer
BI	Behavioural Intention
CB-SEM	Covariance Based SEM
CMV	Common Method Variance
CR	Composite Reliability
CSC	Common Service Centre
CSE	Computer Self Efficacy
D&M	Delone & McLean
DIT	Department of Information Technology
DOI	Diffusion of Innovation
DTH	Direct-to-Home
DTP	Desk Top Publishing
EFA	Exploratory Factor Analysis
EGDI	e-Government Readiness Index
EPI	e-Participation index
FMCG	Fast Moving Consumer Goods
G2C	Government-to-Citizen
HCI	Human capacity index
HOC	Higher Order Construct
ICT	Information Communication Technology
IDT	Innovation Diffusion Theory
IT	Information Technology
IU	Intention to Use
KMO	Kaiser-Mayer-Olkin
LOC	Lower Order Construct
LVS	Latent Variable Score
MAPS	Model of Acceptance with Peer Support
MGA	Multi Group Analysis
MM	Motivation Model

MMP	Mission Mode Project
MOC&IT	Ministry of Communication & IT
MP	Madhya Pradesh
NeGP	National e-Government Policy
NIC	National Informatics Centre
OSI	Online service index
OSS	One Stop Shop
PBC	Perceived Behaviour Control
PC	Personal Computer
PCI	Perceived Characteristics of Innovating
PLS	Partial Least Square
PPP	Public Private Partnership
RMSR	Root Mean Squared Residual
SCA	Service Centre Agency
SCT	Social Cognitive Theory
SDA	State Designated Agency
SEM	Structural Equation Modelling
SET	Self Efficacy Theory
SN	Subjective Norm
SRMR	Standardized Root Mean Square Residual
TAM	Technology Acceptance Model
TCI	Telecommunication index
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UN	United Nations
UNPAP	United Nations Public Administration Programme
UTAUT	Unified Theory of Acceptance and Use of Technology
VIF	Variance Inflation Factor
VLE	Village Level Entrepreneur
VSAT	Very Small Aperture Terminal
WOM	Word of Mouth