

## **E-Commerce Models and Technology for Sustainable Development: An Overview of Indian Case Study**

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### **Abstract**

E-commerce models are essential in sustainable development globally they are among the most important technology and innovation of India's pillars. Technologies are essential parts of the strategic approach that aims to become a completely paperless city through digitalisation. The analyses begin with reviewing the most relevant literature on sustainable e-commerce and the e-commerce models. The primary outcome of this research demonstrated how a thriving environment, marked by adequate investments and opportunities provided by the government, supported e-commerce development and technology adoption. Subsequently, those models are matched with sustainable strategies. The analysis is carried out through an organic growth research framework.

**Keywords:** E – Commerce, Business Development, Technology Adoption

### **I. INTRODUCTION**

E-commerce is a new economic form that has emerged in recent years. Corporate innovation brought on by this new form has attracted the attention of some scholars. Cloud computing, Internet of Things (IoT). The sustainable way for companies to develop is to keep promoting innovation through various means, including adopting e-commerce. Several studies focused on organizational innovation based on the e-marketplace, and provided a possible framework for corporate innovation with e-commerce.

## **Review of Literature**

Ashutosh D. Gaur et al.(2021) the researcher has reported on various emerging trends and issues and challenges in the Ease of Doing Business. The researchers have analyzed India's rank in the Ease of Doing business index of the World Bank and highlighted the various reforms initiated by the Government of India to improve the business environment in India.(Gaur &Padiya, 2022) Ashutosh D. Gaur Jasmin Padiya (2022) study is focused on the Ease of doing business and identifying the factors.

Namita Mishra's (2022), study is designed to know the impact of GST on the Indian Economy with the Help of Its effect on different sectors. The Study is Exploratory and Secondary Data has been used for the study. GST implementation applied at a time for all states lack of policy barrier will remove. GST will promote FDI investment, hence increasing the country's foreign exchequer and subsequently increasing employment possibilities. It will promote new start-ups in India for its business-friendly tax structure. (Mishra, n.d.)

Lee (2023) elaborated on the role of green finance in achieving sustainable development goals with special reference to China. The study discussed sustainable finance initiatives along with environmental, social concerns in China. It also analyzed the emerging trends and practices to promote green finance in the country .The study recommended several policy measures for the private and public sector both such as greening the banking system and greening the bond market to promote market transparency and governance along with promotion of sustainable investments.

## **Objective of the Study**

1. To study the role of GST in ease of doing business from retailers' perspective of sustainability.
2. To investigate the effect of GST on ease of business in the retail sector.
3. To explore and address the concerns of retailers regarding the ease of doing business.
4. To make important suggestions to improve the GST administration regarding ease of doing business on retailers.

## **Research Aims and Questions**

This research aims at shedding light on the broad relationships among e-commerce models and sustainable development. E-commerce is increasingly important in countries' growth. Concurrently, successful and responsible innovating models progressively influence sustainable development.

RQ1. How do e-commerce models jointly influence sustainable development?

RQ2. Are organic or inorganic growth strategies more effective for e-commerce models?

RQ3. Which ESG metrics, mapped with Sustainable Development Goals, can be adequate for

E-Commerce innovating models?

RQ4. Is it possible to provide a meaningful research framework application in the Emirate of Dubai case study?

### **Research Framework**

Sustainable development and environmental, social, and governance (ESG) metrics have been extensively investigated. Similarly, innovation has often been considered the main trigger for the e-commerce models' factor. However, a research gap should be filled by analysing how e-commerce models jointly influence sustainable development

### **Research Design**

For the study, a comprehensive literature examination has been carried out to develop the framework of the research. The primary data was collected through the structured questionnaire selected from small-scale retailers and large-scale retailers on GST and ease of doing business perspective in the Prayagraj district. Secondary data was collected from research journals, websites, and reports of the Department for Promotion of Industry and Internal Trade (DPIIT), District Industries Centre (DIC) Prayagraj, Government and Internet, etc. The data were collected and further analyzed.

#### **Sample Size and Technique**

To give representation to small-scale retailers and large-scale retailers sector the sample size respondent is 150 from Tiruchirappalli District. The respondent was selected based upon the "Cluster Random Sampling technique".

### **Questionnaire**

The survey was outlined for the study. The primary data was collected from different parts of the Trichy District. The questionnaire consists the questions addressing the GST regarding Ease of Doing Business (EoDB) retailers' perspectives. The questionnaire is classified for the understanding of the Goods and Services Tax of selected retailers. Thus, it is framed under different heads, Demographic parameters, Consumer perspectives, Retailer perspectives, GST administrative perspectives related to GST, and ease of doing business of retailers.

### **Methodology**

This research followed different methodologies based on applied modelling for electronic commerce to address the research questions consistently. A relevant literature review investigates the influence determined by the joint effect of e-commerce models (addressing RQ1—research question 1)

A model framework is designed to examine the strategic options derived by the combination of relevant variables such as inorganic/organic growth strategies (adopted for e-commerce models) and effective ESG goals to be achieved (addressing RQ2 and RQ3).

## **Hypotheses**

First of all, some studies have pointed out that e-commerce and economic development have mutually reinforcing relationships and a higher level of economic development actually provides a better innovation environment for companies.

Secondly, the development of e-commerce has a high correlation with the construction of a regional commercial circulation system .On the one hand, the regional commercial circulation system is the basis for the development of e-commerce.

The more mature the commercial circulation system in a certain location, the better the development e-commerce can have

The First Group of Hypotheses (H1) as follows:

- Hypotheses H1a (H1a). E-commerce Development (ECD)→Level of Economic Development (LED)
- Hypotheses H1b (H1b). E-commerce Development (ECD)→Commercial Circulation System (TCS)
- Hypotheses H1c (H1c). E-commerce Development (ECD)→Regional Informatization (RI)

The Second set of Hypotheses (H2) as follows:

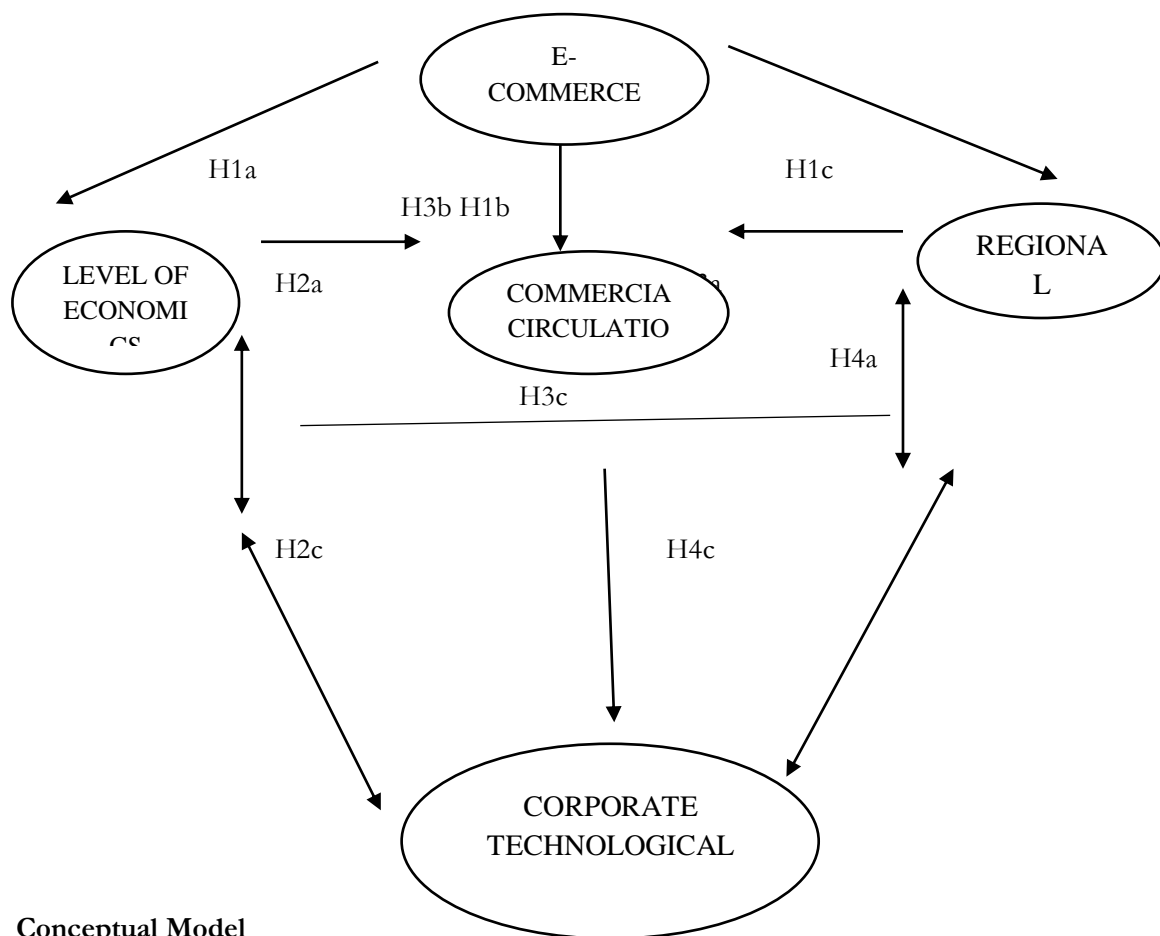
- Hypotheses H2a (H2a). Level of Economic Development (LED)→Commercial Circulation System (TCS)
- Hypotheses H2b (H2b). Level of Economic Development (LED)→Regional Informatization (RI)
- Hypotheses H2c (H2c). Level of Economic Development (LED)→Corporate Technological Innovation (CTI)

The Third Group of Hypotheses (H3):

- Hypotheses H3a (H3a). Commercial Circulation System (TCS)→Level of Economic Development (LED)
- Hypotheses H3b (H3b). Commercial Circulation System (TCS)→E-commerce Development (ECD)
- Hypotheses H3c (H3c). Commercial Circulation System (TCS)→Corporate Technological Innovation (CTI)

The Fourth Group of Hypotheses (H4) as follows:

- Hypotheses H4a (H4a). Regional Informatization (RI)→Level of Economic Development (LED)
- Hypotheses H4b (H4b). Regional Informatization (RI)→Commercial Circulation System (TCS)
- Hypotheses H4c (H4c). Regional Informatization (RI)→Corporate Technological Innovation (CTI)



## Conceptual Model

### Research Methods and Data

The above hypotheses examine the possible paths by which e-commerce may have an impact on corporate innovation. This paper applies the Structural Equation Modelling to evaluate the relationship between the path of e-commerce development and corporate technological innovation. Structural Equation Modelling is known as LISREL analysis and latent variable modelling .

SEM integrates two statistical methods, factor analysis and path analysis, which are suitable for analysing coefficient estimates between multiple factors that cannot be directly measured. A SEM model consists of a measurement model and a conceptual model. The measurement model reflects the relationship between latent variables and measurable variables. The latent variables refer to variables which are not easy to measure directly, such as corporate technological innovation and regional in formalization in this study. These variables generally need to be represented by measurable indicators. The above hypotheses examine the possible paths by which e-commerce may have an impact on corporate innovation.

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#### Data

The data used in this study come from various statistical yearbooks and research reports of India. Among them, the indicators for regional e-commerce development come from the Indian E-Commerce Development Report (2021/2022/2023). The indicators of regional informatization are from Indian Statistical Yearbook, Indian Internet Development Status Report (2021/2022/2023) and Ten cent Internet+ Index Report. The indicators of corporate technological innovation come from the Indian Science and Technology Statistical Yearbook (2021/2022/2023). The indicators of the commercial circulation system come from the Yearbook of Large and Medium-sized Wholesale, Retail and Accommodation Enterprises. The indicator of economic development level come from the Indian Statistical Yearbook (2021/2022/2023). SPSS is used to analyse 20 indicators to construct the database used in this study.

For Example, the Internet+ Index is published by Ten cent, a well-known Internet company in India. The index is a scientific measure of the level of Informatization in India and is authoritative in India.

#### **The Data is Analyzed in Three Steps:**

- Extract the data from the sources (yearbooks\reports) according to previous work and the theoretical assumptions;
- Download the data into SPSS software and standarize the data, then we perform reliability tests using SPSS;
- Use AMOS to estimate the conceptual model according to SEM method

**Table 1. Descriptive Statistics for Each Indicator**

Indicator	Variable Name	Latent Variable	Mean	Standard Deviation	Remarks
E-commerce Scale	gm	E- commerce Development	18.23	25.33	The scale of development
E-commerce Growth	cz	E- commerce Development	25.35	14.15	E-commerce developmentprospects
E-commerce Penetration	st	E- commerce Development	27.56	24.35	The impact of e-commerceon economicdevelopment
E-commerce Support	zc	E- commerce development	13.23	22.15	Support environment fore-commerce development

**Table 2 Reliability Level of Each Latent Variable**

Latent variable	Number of observable variables	Cornbach's $\alpha$ value
E-Commerce Development	5	0.842
Corporate Technological Innovation	4	0.822
Commercial Circulation System	5	0.748
Regional Informatization	6	0.712
Level of Economic Development	5	0.631

## Findings

- Goods and Services Tax system environment was facing filing of multiple returns is a time consuming exercise, high cost incurred by the retailer for hiring chartered accountants and tax experts to expedite the error-free filing of return.
- Problems related to the GSTN and IT infrastructure that concerns raised by retailers about filing returns.
- Filing three returns in a month, registration rules, complex refund rules - there are multiple compliance issues that are worrying the retailer and its stakeholder.
- The lack of an input tax credit (ITC) on civil construction costs raises prices for retailers who open new locations and renovate old ones on a regular basis.

## **Suggestions**

- A simple user-friendly GST return filing process GST Software and App should launch that does not entail high time and financial cost to register businesses would ensure compliance.
- The simplification in GST returns filing procedure measures should be taken towards simplification of GSTR filing and an easy IT interface. Addressed to facilitate userfriendly and timely compliance that will boost revenue collections.
- For ease of functioning under GST that retailers with an annual aggregate turnover of 10 lakh are required to register and they be allotted a twelve digit number, and identification number. It would suggest that the first ten places could be the PAN and the last two be the state code

## **II. CONCLUSIONS**

This study has interesting conclusions in theory and practice. With respect to theory, from the empirical analysis results, it can be seen that the development of e-commerce in China stimulates corporate innovation by improving the level of regional informatization and promoting the upgrading of the regional commercial circulation system. Of these, the path of improving regional informatization level is more significant. With respect to practice, this study has drawn the following conclusions:

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