Critical Success Factors of Electronic Government Procurement (E-GP) Implementation in Sri Lanka

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Abstract - *Electronic Government procurement is one aspect of the E-Government concept. It offers to the value for money, cost-saving, better fiscal policy management, and substantial competition and a stronger marketplace. Many countries all over the world including developing countries such as Bhutan, Napal, and Bangladesh obtained advantage through the digitalization of government procurement. The main objectives of the study are measure to the level of e-procurement practises in the public sector in Sri Lanka and examine to the critical success factors in adopting e-procurement in Public Sector Institutions in Sri Lanka. The population of the study comprises of the national-level public sector entities such as Ministries, Departments, Statutory Boards and Public Companies and Registered vendors. A sample of procurement entities was selected on convenience sample method. This research based on quantitative studies and Quantitative data collected through a structured questionnaire to identify the determinants of successful e-procurement adoption and the level of e-procurement usage. The survey results of this study affirm the pivotal role of organizational, legal, and environmental factors in driving the successful implementation of electronic government procurement, consistent with the findings outlined in the literature review. Concurrently, the survey underscores the limited influence of technology and political factors on the e-government Procurement (e-GP) implementation in Sri Lanka. Despite these nuances, the overarching objective of the research remains unchanged: to offer a streamlined pathway for the swift and effective adoption of Electronic Government Procurement practices across all sectors of the government.*

Keywords: Critical Success Factors, E-Procurement, Public Sector, Sri Lanka

I. INTRODUCTION

Public procurement involves obtaining goods, services, and works to meet government needs, with the primary objective of achieving the best value for public funds. This process not only involves the acquisition of necessary items but also emphasizes creating value through transparency, accountability, and efficient use of resources (Koggalage, 2021). In Sri Lanka, the government allocates approximately 5.6% of its Gross Domestic Product (GDP) to procurement activities annually (Bandara, n.d.).

According to the Procurement Guidelines (2006), procurement encompasses the acquisition of goods or services using public or external funds through methods such as purchase, hire purchase, lease, or rental, including any related services. The ultimate goal is to maximize value for money, considering factors such as the whole life cycle cost of goods or services (Behan, 1994; Barnett et al., 2010). Achieving value for money in public procurements is essential for maintaining transparency, fairness, and efficiency in the expenditure of public funds (Batho Pele Handbook, 2007).

Traditional procurement systems often face challenges such as information asymmetry, high transaction costs, and the risk of corruption and anti-competitive practices. Procurement reforms aim to ensure value for money by enhancing flexibility, quality, and efficiency within the procurement process, supported by the principles of transparency and fairness.

The global trend towards e-government involves the use of information and communication technologies (ICTs) to transform government interactions with citizens, public and private organizations. This transformation aims to enhance citizen participation, strengthen transparency and accountability, and improve service delivery (World Bank, 2005). In developing countries, challenges to e-government reforms include technical and infrastructural issues, poor quality of e-government platforms, inadequate privacy and information security systems, and low levels of computer literacy (Asian Development Bank Institute).

In Sri Lanka, the implementation of the e-GP system "Promise" began in 2019, aimed at enhancing transparency and competitiveness in public sector procurement. However, the system is currently adopted only in a few ministries and departments, with many public institutions still relying on manual processes. The Sri Lankan government anticipates significant cost savings and improved efficiency through the full implementation of e-procurement, despite challenges in infrastructure, cultural adaptation, and policy enforcement.

The adoption of e-procurement in Sri Lanka is supported by internal justifications, such as operational efficiency and cost reduction, as well as external motivations, including enhanced transparency and accountability. The government's e-procurement strategy involves a phased implementation approach, gradually transitioning from manual to electronic processes to maximize the benefits over time (Asian Development Bank Case Study).

Critical success factors for the implementation of e-GP in Sri Lanka include aligning with regional experiences, understanding the technical and infrastructural requirements, and promoting awareness of the benefits among stakeholders. The experiences of other Asian countries, such as Singapore, the Philippines, and the Indian State of Karnataka, provide valuable insights into different business models and implementation strategies for e-GP systems.

The e-GP (electronic Government Procurement) initiative in Sri Lanka, launched in 2016, aims to enhance the efficiency, transparency, and accountability of government procurement processes. The initiative is led by the Information and Communication Technology Agency of Sri Lanka (ICTA) in collaboration with the Ministry of Finance and the National Procurement Agency. It has been implemented in several government entities, including the Ministry of Health, Ministry of Education, Ministry of Defence, and the Department of Public Finance, as of 2021.

While the e-GP system in Sri Lanka is still in the early stages, it has shown promise in improving the efficiency and effectiveness of government procurement. As more government entities and suppliers join the system, it is expected to bring even greater benefits to the Sri Lankan economy.

Compared to other South Asian countries such as Nepal, Bangladesh, India, and Bhutan, which have rapidly developed their e-GP systems, Sri Lanka's implementation is relatively nascent. In these countries, over 60% of public procurement is conducted through e-GP platforms, according to statistics from the Asian Development Bank.

There is a recognized need for further studies to identify the critical factors affecting the implementation of the e-GP system in Sri Lanka. Previous research has primarily focused on the administrative aspects and the local environment, leaving gaps in understanding the broader challenges and factors influencing the system's success Electronic public procurement may improve openness in the process by making it simpler for suppliers to access opportunities and follow the status of their bids. When studying

the critical success factors, the government can recognise the most effective ways to ensure that the procurement process is transparent and open.

Electronic procurement systems are associated with helping to improve accountability by providing an electronic trail of all procurement activities, including bids and awards. When studying the critical success factors the government can identify the most effective ways to ensure that the procurement process is accountable and can be audited and reviewed as needed.

II. RESEARCH PROBLEM

Sri Lanka's e-GP initiative was launched in 2016. The main aim of e-GP implementation is enhancing the efficiency, transparency, and accountability of government procurement processes. The initiative is being implemented by the Information and Communication Technology Agency of Sri Lanka (ICTA) in association with the Ministry of Finance and the National Procurement Agency.

The e-GP system has been implemented in several government entities, including the Ministry of Health, Ministry of Education, Ministry of Defence, and the Department of Public Finance till 2021. The e-GP system in Sri Lanka is still in the early stages of implementation. It shows improving the efficiency and effectiveness of government procurement processes. As the e-GP system is expanded to more government entities and more suppliers are onboarded, it is expected to bring even greater benefits to the Sri Lankan economy.

When considering other south Asian regions, most of the countries that have developed electronic government procurement rapidly consider Sri Lanka. I can get examples from regional Asian countries such as Nepal, Bangladesh, India and Bhutan. According to Asian Development Bank statistics and country detail, it is observed that in all said countries more than 60% of overall public procurement has been done through the e-GP platform.

According to the empirical gap and practice gap, it is apparent that further studies are required to examine what are the exact critical factors which affect the implementation of the E-procurement system in Sri Lanka. As said above previous studies consider and collect data only from the administrative party and examine only the Sri Lanka environment.

Accordingly said empirical and practice gaps justify this study and explore what are critical reasons affect the implementation of Sri Lanka's Electronic government procurement system and what are the implementation challenges of the electronic government procurement system.

A. Research Questions

As per the research problem rationalized with empirical gap and practice-related issues, this study investigates the under mentioned research questions.
1. What is the level of e-procurement practices used in the public-sector institutions in Sri Lanka?
2. What are the critical success factors in implementing e-procurement in Public Sector Institutions in Sri Lanka?

B. Research Objectives

This study mainly addresses the following research objectives.
1. To measure the level of e-procurement practices in the public sector in Sri Lanka.

2. To identify the critical success factors in implementing e-procurement in Public Sector Institutions in Sri Lanka.

C. *Limitations of the Study*

Electronic government procurement (e-GP) is a complex system that involves the use of electronic technologies to facilitate the procurement process in the public sector. The successful implementation of e-GP in Sri Lanka requires the identification of critical success factors and challenges. However, several limitations can be encountered when conducting research on these topics in Sri Lanka.

One limitation is the lack of access to key stakeholders. Conducting research on critical success factors and challenges in implementing e-GP in Sri Lanka necessitates access to key stakeholders like government officials, procurement officers, and vendors. However, it can be difficult to obtain access to these individuals due to bureaucratic barriers or lack of willingness to participate in research.

Another limitation is the limited scope of research. Research on critical success factors and challenges in implementing e-GP in Sri Lanka can be limited by the scope of the study. For example, a study may focus on a specific aspect of e-GP implementation such as procurement planning or vendor registration and may not deliver a comprehensive view of the entire process.

Furthermore, data quality and reliability may also available a limitation. The accuracy and reliability of data on e-GP in Sri Lanka is questionable, as data collection processes and reporting mechanisms may not be standardized or well-established. This can reason it difficult to assess the accurate conclusions from the data.

Finally, cultural, and contextual factors may also impact the success of e-GP implementation in Sri Lanka. These factors may include attitudes towards technology, corruption, and bureaucratic inefficiencies. It can be challenging to identify and measure these factors, and to develop strategies to address them.

When overall considering, while there is a growing interest in researching critical success factors and challenges in implementing e-GP in Sri Lanka, issues can arise as limitations including limited access to key stakeholders, limited scope of research, data quality and reliability, and cultural and contextual factors.

D. *Scope of the Study*

The scope of research for critical success factors and implementing challengers' electronic government procurement (e-GP) in Sri Lanka would be a comprehensive study focusing on identifying and analysing the key factors that contribute to successful e-GP implementation. The researchers hope to evaluate the current implementation level of e-GP in Sri Lanka, considering the economic, political, and social context of the country and the experiences of other regional countries in implementing e-GP systems. The researcher's aim is to provide insights into the critical success factors that are essential for effective e-GP implementation in Sri Lanka.

The study examined the e-GP implementation models and practices of other regional countries to identify the factors that contributed to their success. The research would investigate the challenges and barriers faced by these countries during their e-GP implementation processes and how they overcame them. The study would involve a comparative analysis of the e-GP implementation frameworks, systems, and practices of Sri Lanka and other countries in the region.

The research also studies the role of stakeholders who are government agencies, suppliers, and service providers, in the implementation of e-GP systems. It evaluates the participation and association among stakeholders and analyses the impact of stakeholder involvement on the e-GP success of implementation. The study would provide recommendations on how to strengthen stakeholder engagement to promote effective e-GP implementation in Sri Lanka. Overall, the research aims to develop a framework for the successful implementation of e-GP in Sri Lanka, based on the critical success factors identified from the experiences of other regional countries.

III. LITERATURE REVIEW

It is possible to identify procurement in the public sector as a cross between information systems, public service, and electronic government. In 2020, Mohungoo et al. However, it appears that multiple methods are used to publicize electronic procurement challenges. Most researchers just consider one field of study in electronic procurement kinds of literature.

Vaidya et al. (2006) aims to determine the critical success factors, or CSFs, that are crucial to the successful implementation of e-Procurement projects by surveying specific publications on eProcurement efforts in the public sectors of the UK, US, and Australia. According to the survey, e-procurement initiatives are more expansive and wide-ranging than typical IT development projects. Additionally, standards, interfaces, and security and controls are becoming more important needs compared to other IT projects. The report also pointed out that e-procurement initiatives typically depend less on conventional systems development life cycle (SDLC) techniques and are more gradual and component-driven.

If Vaidya et al. (2006) said that legal and legislative issues did not emerge as CSFs, Benjamin Yen mentioned that creating the required legal framework and technical infrastructure, the selection of appropriate e-procurement solutions and system design is essential to successfully implement an e-GP system.

Bulut and Yen (2013) suggest that the successful implementation of e-procurement is contingent upon several factors, such as the perception of e-procurement among decision makers and other key stakeholders, political and institutional support. However, they mentioned that these factors are not sufficient to ensure success. Rather, a holistic approach that addresses a range of issues is necessary. This may be the reason for creating a legal framework and technical infrastructure, selecting an appropriate e-procurement solution and system design, choosing a funding model that is suitable for the organization, and promoting awareness and encouraging participation among users for successfully implemented E – government procurement in Sri Lanka.

Boafo and Ahudey (2020) status that the e-procurement system can be viewed as an end-to-end solution that integrates and streamlines various procurement processes throughout the organization. A well-designed public procurement system can ensure value for money in government expenditure, which is critical for a country confronting significant developmental challenges. Accordingly, the researcher recommends that, developing countries governments must invest heavily in e-procurement infrastructure to enable its usage in all sectors, Procurement officers must also be trained well to enable its usage, E-Procurement should be mandatory in all public sector procurements in the country.

According to the Rizki et al. (2018) findings, the implementation of e-procurement in infrastructure projects poses challenges in two main areas, namely system

specification and implementation management. The challenges pertaining to system specification include not only issues related to software integration and data management, but also those related to legal and administrative procedures as well as IT infrastructure. On the other hand, implementation management challenges are related to devising an effective roll-out strategy and ensuring the availability of IT skills. However, IT outsourcing was not identified as an issue in the implementation of e-procurement in infrastructure projects. The study also revealed that the implementation of e-procurement has significant impacts on the total cost of acquisition, organizational characteristics, and governance structure.

When studied past literatures (Panda & Sahu, 2012) 11 critical success factors and associated sub-factors which impact on electronic procurement. Those are top management support, E-Procurement Implementation Strategy, Business Case and Project Management, Business process re-engineering, Technology Standards, Security and Authentication, System Integration, Change Management, Performance Measurement, Training and Education and Adoption by Stakeholders.

A. E-Government Procurement Implementation in Sri Lanka

Accordingly, Bandara (n.d.) mentioned four adaptation factors, people, technology, internal organization, and external environment, that possibly influence e-procurement implementation. Accountability, Staff adoption to change, E-procurement knowledge, technical expertness and Ethical practices are identified as indicators of People. Network application, Hardware application, Software application, Interoperability capacity of current IT infrastructure and Assurance for digital security are recognised as indicators of Technology factors. Finance management ability within the institute for new applications, Internal policies & procedures, Organizational readiness for capacity development, Institutional culture, and Institutional structure are identified as indicators of the external environment factor. Finally, finance management ability within the institute for new applications, Internal policies & procedures, Organizational readiness for capacity development, Institutional culture, Institutional structure consider as indicators of internal environment factor. Further there mentioned that technology factor that made a significant influence on the e- procurement adoption in public sector procurement methods in Sri Lanka. Therefore, the expansions in software, hardware, and network application and secured interoperable capacities enhance value addition to public sector procurement sector.

Pharmaceuticals industry In Sri Lanka urged to implemented electronic procurement procedure to obtain pharmaceutical items. There are studies identify Barriers and strategies to implement e-procurement in the state Pharmaceuticals Corporation (SPC) of Sri Lanka. This study identified a Lack of knowledge/ motivation of suppliers, Lack of support from existing policies, Lack of political support, Lack of commitment of the top management, Poor attitudes of the staff, Issues in change management of staff, Poor knowledge and skills of the staff, Lack of funds, Lack of technical expertise (IT), Lack of infrastructure facilities & technology as barriers of challenges. Further identified Training of top management on e-procurement processes Training of staff on e-procurement, change management of the staff, Training of suppliers, change management of suppliers, Establishment of e-procurement Help Centres, designing appropriate business models, Development of infrastructure facilities as strategic for implementing electronic government system (Koggalage, 2021).

Premathilaka and Fernando (n.d.) had research regarding study critical Success Factors Affecting E-Procurement Adoption in Public Sector Organizations in Sri Lanka. This study presents a significant contribution towards understanding the applicability of e-procurement adoption theories to public sector organizations in Sri Lanka. The findings suggest that technology and organizational context variables are crucial factors that influence the adoption of e-procurement in these organizations. Specifically, employee IT knowledge and experience, as well as IT infrastructure, were found to be compatible with the complexity of the technological environment and the knowledge and skills of employees in the organizational context.

Weerasinghe et al. (n.d.) Studied regards Effectiveness of Implementing E-Government Procurement in Sri Lanka from studied previous literatures. They mentioned followings important facts regards effectiveness of Implementing E-Government Procurement in Sri Lanka. The implementation of an e-government procurement (EGP) system is the most vital aspect to develop the procurement process in Sri Lanka. The government is the largest procurement institute in the country and the quality of services deliver to citizens mainly depends on the efficiency and effectiveness of the procurement process. E-procurement is one of the main advanced technologies adopted globally by both the public and private sectors. The purpose of this study is to analyse the methods by which EGP can solve the weaknesses encountered in manual procurement processes in Sri Lanka.

IV. METHODOLOGY

A. *Research Approach*
To ensure the utmost reliability in this study, a quantitative research method has been employed. Malhotra (2007) defines quantitative research as a methodology that aims to quantify data and typically involves applying statistical analysis. Accordingly, Cavana, et al. (2001) argue that researchers should establish a systematic procedure for gathering and interpreting data to obtain valid findings on the relationship between variables.

B. *Population*
The procurement entities comprise various governmental bodies established by the Sri Lankan government, such as departments, ministries, commissions, statutory boards, and public enterprises. These entities directly participate in the procurement process, with involvement from procurement staff members, user departments, tender board members, accounting officers, as well as individuals from accounting and finance departments.

C. *Sample Size*
Determining the appropriate sample size with a confidence interval of 95% requires considering the rule of thumb provided by the Morgan table (Krejci & Morgan, 1970). The sample size refers to the number of respondents that will be included in the study to ensure reliable and accurate results. The confidence interval represents the range within which the true population parameter is expected to lie. In adherence to the table's recommendations, a specific sample size was selected that adequately represented the target population and allowed for meaningful statistical analysis. The chosen sample size was determined based on various factors, including the desired level of confidence, the variability within the population, and the desired precision in the estimation. Thus, out of 1084 procurement entities, a sample of 278 was selected.

The research study aimed to minimize sampling errors and increase the likelihood of obtaining accurate and representative results by adhering to the suggested sample size provided by the Morgan table. This approach ensured that the collected data could be analysed with statistical rigor, enabling the researchers to draw meaningful conclusions and generalize the findings to the broader population.

D. *Sample Selection Method*

The present study investigates a research population the procurement entities. To effectively select a sample from this population, the researcher employed a convenience sample method select to collect data to demonstrate the research objectives. Convenience sampling is a pragmatic non-probability sampling technique widely utilized due to its cost-effectiveness and efficiency, particularly under constrained research budgets. According to Etikan et al. (2016), convenience sampling is especially advantageous for studies where financial and resource limitations are prominent, as it dramatically reduces the costs and logistics involved in gathering data. This method's cost-saving benefits are crucial for pilot studies or initial explorations into a new research area.

E. *Conceptual Framework*

A conceptual framework represents a valuable analytical instrument that manifests in various forms and contexts. Its applicability extends across diverse domains of work, wherein a comprehensive understanding is sought. Primarily employed for establishing conceptual distinctions and structuring ideas, robust conceptual frameworks possess the ability to encapsulate tangible aspects effectively, while simultaneously ensuring ease of recall and application. "fox" and a "hedgehog" as the metaphors to make conceptual distinctions in how important philosophers and authors view the world (Berlin & Isaiah, 1953)

A conceptual framework serves as a guiding framework or roadmap for a research project, enabling researchers to conceptualize and operationalize their study effectively. It plays a crucial role in delineating the pertinent variables involved in the research and illustrating their potential relationships.

Based on a broad review of the literature, the influence of critical success factors on the implementation of electronic government procurement (e-GP) is thoroughly examined in various empirical studies. However, it is important to note that there exist research gaps in the Sri Lankan context, which require further investigation. (Koggalage, 2021; Weerasinghe et al., n.d.) As a result, the following hypotheses have been developed and supported by the body of current research.
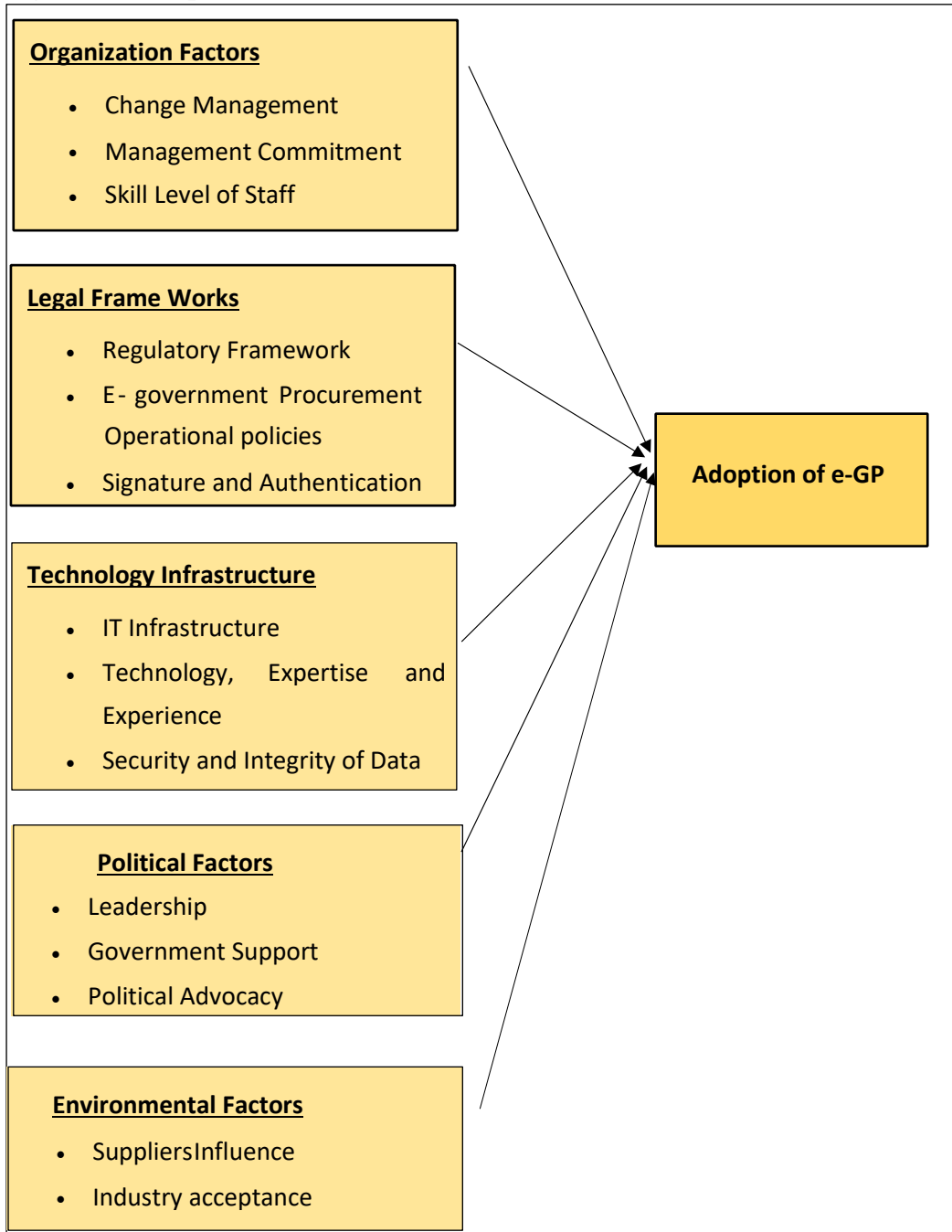
H1: Organizational factors significantly influence to adoption of E-Procurement in government organization in Sri Lanka

This hypothesis suggests that organisational factors highly affect the implementation of E-government Procurement. Previous studies have consistently supported this relationship, highlighting the importance of a well-developed organization in facilitating the implementation of electronic government procurement.

H2: Legal Frameworks significantly influence to adoption of E-Procurement in government organization in Sri Lanka

This hypothesis suggests that Legal Frameworks highly affect the implementation of the E-government.   Procurement Previous studies have consistently supported this relationship, highlighting the importance of a well-developed Legal Framework in facilitating the implementation of electronic government procurement.

Figure 1. Conceptual Framework

Organization Factors

- Change Management
- Management Commitment
- Skill Level of Staff

Legal Frame Works

- Regulatory Framework
- E - government Procurement Operational policies
- Signature and Authentication

Technology Infrastructure

- IT Infrastructure
- Technology, Expertise and Experience
- Security and Integrity of Data

Political Factors
- Leadership
- Government Support
- Political Advocacy

Environmental Factors
- SuppliersInfluence
- Industry acceptance

Adoption of e-GP

Source: Authors' compilation.

H3: Technology Infrastructure significantly influence to adoption of E-Procurement in government organization in Sri Lanka

This hypothesis suggests that Technology Infrastructure highly affects the implementation of E-government Procurement. Previous studies have consistently supported this relationship, highlighting the importance of a well-developed technological foundation in facilitating e-GP processes.

H4: Political Factors significantly influence to adoption of E-Procurement in government organization in Sri Lanka

This hypothesis suggests that Political Factors highly affect the implementation of E-government Procurement. Previous studies have consistently supported this relationship, highlighting the importance of a well-developed political agenda that highly affect the implementation of E-government Procurement.
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H5: Environment Factors significantly influence to adoption of E-Procurement in government organization in Sri Lanka

This hypothesis suggests that Environment Factors highly effect to the implementation of E-government Procurement. Previous studies have consistently supported this relationship, highlighting the importance of a well-developed electronic government procurement implementation success depends on environmental factors.

V. OPERATIONALIZATION
Table 1 depicts the operationalization of variables.

Table 1. Operationalization

Variable	Variable	Dimension	Measuring Variables	Research References
Dependent Variable	Adoption of Electronic Government Procurement	Benefit Risk Awareness Readiness	• Users Benefit • Employee Knowledge • Assess the Risk and Benefit • Supplier Readiness	Rogers (2003), Premathilaka (2021)
Independent Variable	Organization Factors	Change Management	• The institute is willing to change • organizational structure required to adopt E-Procurement	Panda and Sahu (2011a), Veit et al. (2011), Bof and Previtali (2007), Khanapuri et at el., (2011), Lee et al., (2008), Parida and

	• Top Management is willing to change business • processes required to adopt e-procurement • Top Management is capable of formulating policies required to adopt e-Procurement	Parida (2005), Vaidya et al., (2006) ,Koggalage (2021)
Management Commitment	• Top management considers e-procurement adoption is important • Top management considers e-procurement adoption as a part of organization • Top Management is willing to take risks involved in the adoption of e-procurement • Top Management is committed to use E-procurement	(Croom et al. 2005), Gunasekaran and Ngai (2008), Parida & Parida (2005) Teo et al. (2009) William & Hardy (2007), Premathilaka (2021), Puschmann & Alt (2005), William & Hardy (2007), Vaidya et al., (2006).

		Skill Level of Staff	• Employees aware on process improvements • Employees have an overall knowledge on e-procurement • Employees have technical knowledge to start E-procurement	William & Hardy (2007), Vaidya et al., (2006), Somasundaram & Damsgaard (2005), Quayle (2005), Panayiotou et al.,(2003), Moon (2005), Engström et al (2009), Brof & Previtali (2007), (Koggalage, 2021)
	Legal Frame Works	Regulatory Framework	• Legal framework is sufficient to adopt E-procurement • Degree of awareness about the legal framework	Lee et al. (2008), Khanapuri et al. (2011), Engström et al, (2009), Cimander et al., (2009)
		E- government Procurement Operational policies	• Learning to operate e-procurement is easy • Interaction with e-procurement system is clear • e-Procurement is flexible to interact with process therein • Easy to become skilful at using e-procurement	Hanapuri et al., (2011).
		Signature and Authentication	• Sufficient of Infrastructure authentication and authorization,	Cimander et al. (2009), Koggala (2021), Vaidya et al. (2006)

		• Sufficient of confidentiality and integrity • Sufficient of Security requirements	
Technology Infrastructure	IT Infrastructure	• Availability of ICT equipment/facilities • Availability of highly qualified ICT personnel • Computerized functions in the procurement department • Use of technology is highly recognized by federal government • Availability of adequate funds by government for implementation of technology	Panda & Sahu (2011a), Bof & Previtali (2007), Koggala (2021)
	Technology, Standards and Controls, Expertise and Experience	• Employees have an overall knowledge on E-procurement using IT • Employees have technical knowledge to start e-procurement • Degree of knowledge of Standards and Controls	Koorn et al., (2001), Vaidya et al., (2006), Moon (2005), Puschmann & Alt (2005), Somasundaram & Damsgaard (2005)

	Security and Integrity of Data	• Risk perception • Availability of suitable security system	Vaidya et al., (2004), Moon (2005), Puschmann & Alt (2005)
Environmental Factors	Suppliers Influence	• Suppliers willing to automate supply process • Suppliers trust organization's system • Suppliers have automated systems	Croom et al., (2005), Dooley and Purchase (2006), Khanapuri, et al., (2011), Quayle (2005), Vaidya et al., (2004), Vaidya et al., (2006), Williams & Hardy (2007), Leipold et al., (2004)
	Industry acceptance	• Organization is forced to e-procurement to meet supplier's requirements. • Pressure to use e-procurement as a standard purchasing practice • The degree of E-Procurement acceptance among local providers	Kaliannan et al., (2009), Premathilaka & Fernando (n.d.)
Political Factors	Leadership	• clear vision for e -gp • The degree of ability to make informed and timely decisions • The degree of understanding	Quayle (2005), Kaliannan et al., (2009).

		of the risks associated with	
Government Support	•	Sufficient Resource Allocation	Premathilaka (2021), Kaliannan et al., (2009), Lee et al., (2008)
	•	Interagency Collaboration	
	•	Policy Framework	
	•	Monitoring and Evaluation Mechanisms	
Political Advocacy	•	Political Endorsements	Veit et al., (2011), Koggala (2021)
	•	Influence on Policy Development	
	•	Budgetary Allocation	
	•	Legislative Support	

Source: Authors' compilation.

VI. RESULTS

Sri Lankan government procurement entities, including ministries, departments, commissions, and public enterprises, follow a structured procurement process established by the Ministry of Finance to acquire goods and services. This process has been streamlined through thyme use of electronic government procurement facilitated by the promise website. The development and management of this platform are overseen by the Electronic Government Secretariat under the Ministry of Finance.

The researcher was able to access data from the Electronic Government Secretariat, revealing the number of public procuring entities utilizing the E- promise website and the volume of procurement activities conducted through this platform. The following table 2 assists in recognizing the E-government procurement initiatives in Sri Lanka.

Table 2. Procurements done with e-GP

Year	2020	2021	2022	2023.10.25
No Procurement Entities	09	36	28	88
No of E-Procurement	90	976	1009	2044

Source: Authors' compilation.

Between 2020 and 2021, the number of E-procurements in Sri Lanka experienced a significant surge, skyrocketing by an impressive 984%. This sharp increase showcased a substantial shift towards digital procurement methods within a single year, reflecting the

country's commitment to embracing electronic government initiatives. However, in the following year, from 2021 to 2022, the growth rate showed a slight deceleration, standing at 3.3%. Despite this minor slowdown, the momentum picked up once again after 2022, continuing into the present year. From 2022 to the current period in 2023, there has been a remarkable 100% increase, indicating a renewed and sustained acceleration in the adoption of E-procurement methods. This consistent upward trend highlights the enduring commitment of Sri Lanka to modernize its procurement processes through digital means, ensuring efficiency and transparency in government transactions.

The main hypothesis of this research developed to identify the positive relationship between the main variable and other hypothesis were developed main objective of this research study. Simple Leaner regression test was used to check the positive and negative relationship between the variables.

H1-Organization Factor significantly influence to adoption of E- Procurement in government organization in Sri Lanka

This hypothesis suggests that organization factors highly effect to the implementation of E government Procurement. Previous studies have consistently supported this relationship, highlighting the importance of a well-developed organization in facilitating implementation the electronic government procurement.

Figure 2. Scatter plot of Procurement Adoption
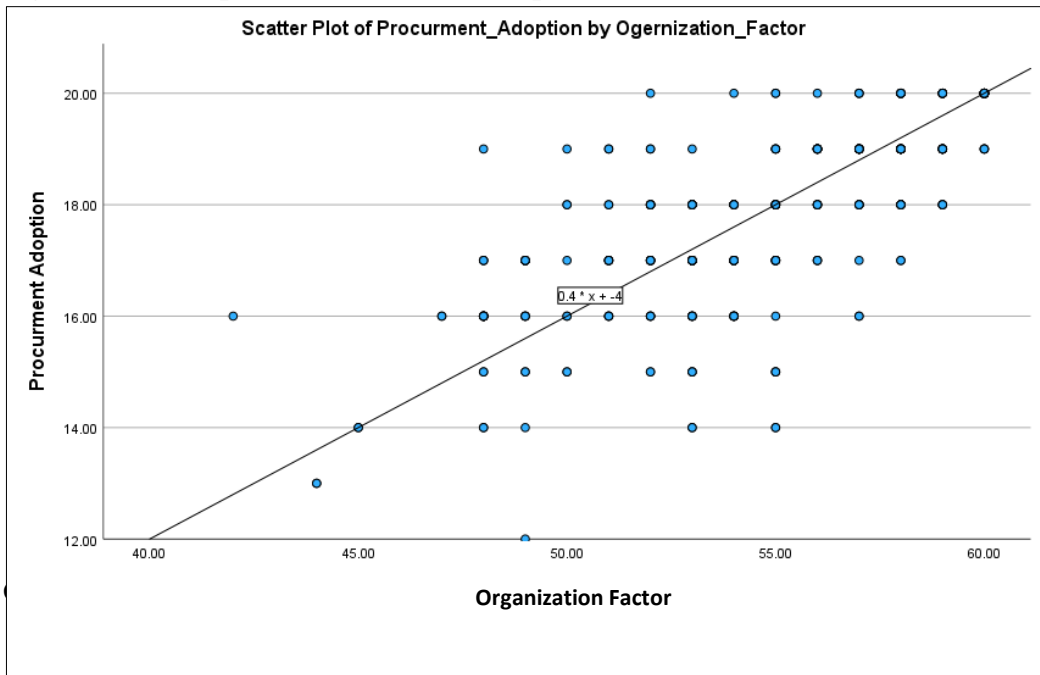
Source: Authors' compilation.

Table 3. Coefficients table for Procurement Adoption

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-	Partial	Part	Tolerance	VIF
1	(Constant)	.148	1.000		.148	.882					
	Management Commitment	.141	.054	.140	2.606	.010	.547	.156	.107	.585	1.711
	Skill level of Staff	.460	.082	.271	5.584	<.001	.566	.321	.229	.717	1.395
	Change Management	.399	.049	.458	8.129	<.001	.685	.443	.334	.532	1.880

Source: Authors' compilation.

In this comprehensive regression analysis, delved into the factors affecting E-Procurement Adoption, focusing on three crucial predictors: Management Commitment, Skill level of Staff, and Change Management. The results underscored the significance of these variables in shaping the adoption landscape within organizations.

Firstly, Management Commitment emerged as a noteworthy determinant, with a positive standardized coefficient (Beta = 0.140, p = 0.010). This suggests that when management exhibits a strong commitment to procurement initiatives, there is a corresponding increase in E-Procurement Adoption. This finding emphasizes the pivotal role top-level management plays in influencing organizational processes and decision-making. Secondly, the Skill level of Staff exhibited a robust positive influence on Electronic E-Procurement Adoption in the government sector, with a substantial standardized coefficient (Beta = 0.271, p < 0.001). This indicates that organizations benefit significantly when their staff members possess higher skill levels, translating to a more effective adoption of electronic procurement practices in the government sector. Skilled employees are better equipped to navigate complex procurement processes, leading to streamlined operations and improved efficiency. Most notably, Change Management emerged as the strongest predictor, with a highly substantial standardized coefficient (Beta = 0.458, p < 0.001). This finding underscores the critical importance of effectively managing organizational change in the context of procurement. When organizations implement change management strategies adeptly, they experience a substantial increase in the electronic the electronic Procurement Adoption in government

sector in government sector. Change Management initiatives, such as training programs and communication strategies, are pivotal in ensuring that organizational members adapt seamlessly to new procurement protocols and practices.

In conclusion, this analysis sheds light on the multifaceted nature of the electronic Procurement Adoption in the government sector, highlighting the integral roles of Management Commitment, Skill level of Staff, and Change Management. Organizations that prioritize these factors are poised to enhance their procurement processes significantly. By fostering a committed management team, investing in staff training and development, and implementing robust change management practices, businesses can optimize their procurement procedures, leading to improved operational efficiency, cost-effectiveness, and overall organizational success. These insights provide actionable strategies for organizations seeking to elevate their procurement practices and remain competitive in today's dynamic business landscape. Certainly, based on the observation, organizational factors play a significant and influential role in the adoption of electronic procurement implementation within government sector organizations in Sri Lanka. This suggests that specific aspects related to the organization, such as management commitment, staff expertise, and change management strategies, have a substantial impact on the successful integration of electronic procurement practices. These findings emphasize the critical importance of organizational readiness and strategic planning in driving the adoption and implementation of electronic procurement initiatives in the public sector organizations of Sri Lanka

H2-Legal Factor significantly influence to adoption of E- Procurement in government organization in Sri Lanka

The provided output presents the results of a regression analysis assessing the relationship between "Adoption of the Electronic Government Procurement" (dependent variable) and the "Legal Factor" (independent variable). Here is the interpretation of the output: Accordingly Scatter plot chart as follows,

Figure 3. Scatter plot of Legal Factor
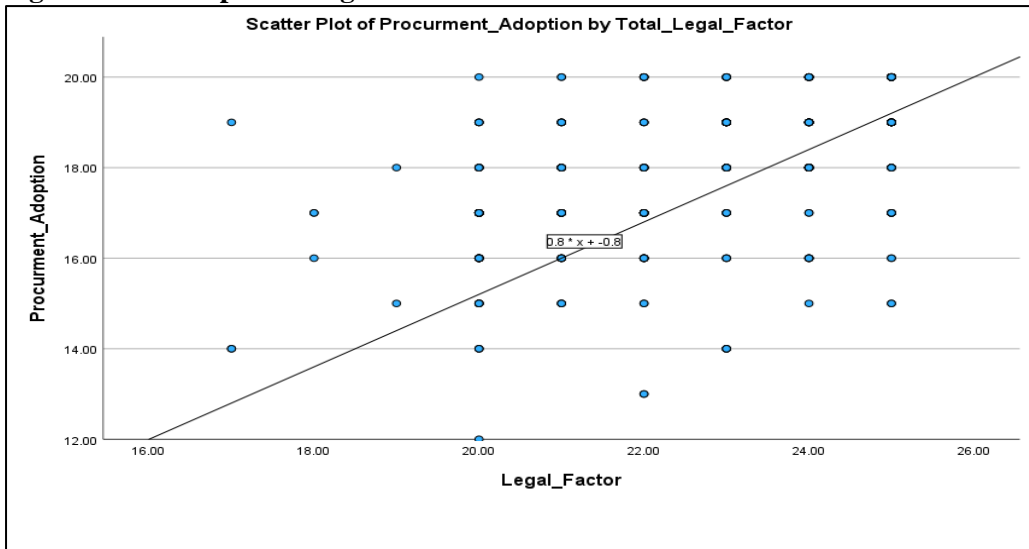
Source: Authors' compilation.

Table 4. Coefficients table for Legal Factor

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	8.692	1.053		8.255	<.001					
	Regulatory Framework	.424	.126	.224	3.369	<.001	.396	.200	.181	.653	1.531
	Signature and Authentication	.386	.088	.292	4.392	<.001	.424	.257	.236	.653	1.531

Source: Authors' compilation.

In this analysis, two critical legal factors, Regulatory Framework and Signature and Authentication, were examined for their impact on the electronic Procurement Adoption in government sector. The regression coefficients provide valuable insights into the relationship between these legal aspects and the adoption of procurement practices within organizations.

Firstly, the presence of a Regulatory Framework significantly influences the electronic Procurement Adoption in the government sector. The positive unstandardized coefficient of 0.424 suggests that for every unit increase in Regulatory Framework compliance, The electronic Procurement Adoption in the government sector is expected to increase by 0.424 units. This indicates that organizations operating within well-defined legal frameworks are more likely to adopt efficient procurement practices. The standardized coefficient (Beta = 0.224) emphasizes the importance of legal compliance in driving the electronic Procurement Adoption in the government sector, as organizations adhering to regulatory guidelines tend to have higher adoption rates. The t-statistic of 3.369 further confirms the statistical significance of the Regulatory Framework in shaping procurement strategies, providing a foundation for organizations to align their practices with legal requirements.

Secondly, the factor of Signature and Authentication also plays a substantial role in the electronic Procurement Adoption in the government sector. The unstandardized coefficient of 0.386 indicates that a one-unit increase in Signature and Authentication correlates with a 0.386 unit increase in the electronic Procurement Adoption in government sector. The standardized coefficient (Beta = 0.292) highlights the relative strength of this legal factor, underlining its significant influence on adoption rates. With

a t-statistic of 4.392, Signature and Authentication demonstrate strong statistical significance, suggesting that organizations employing robust authentication methods are more likely to have higher levels of the electronic Procurement Adoption in government sector.

In summary, this analysis underscores the pivotal role of legal factors, specifically Regulatory Framework and Signature and Authentication, in driving the electronic Procurement Adoption in the government sector. Organizations that prioritize compliance with legal regulations and invest in secure authentication methods are likely to experience higher adoption rates. This emphasizes the need for businesses to proactively address these legal aspects, ensuring that their procurement practices align with regulatory requirements and industry standards, ultimately fostering efficient and successful procurement processes.

H3-Technological Factor significantly influence to adoption of E- Procurement in government organization in Sri Lanka

The provided output showcases the results of a regression analysis examining the relationship between "Adopting Electronic Government Procurement" (dependent variable) and "Technological Factor" (independent variable). Below is the interpretation of the output: Accordingly Scatter plot chart as follows

Figure 4. Scatter plot of Technology Factor
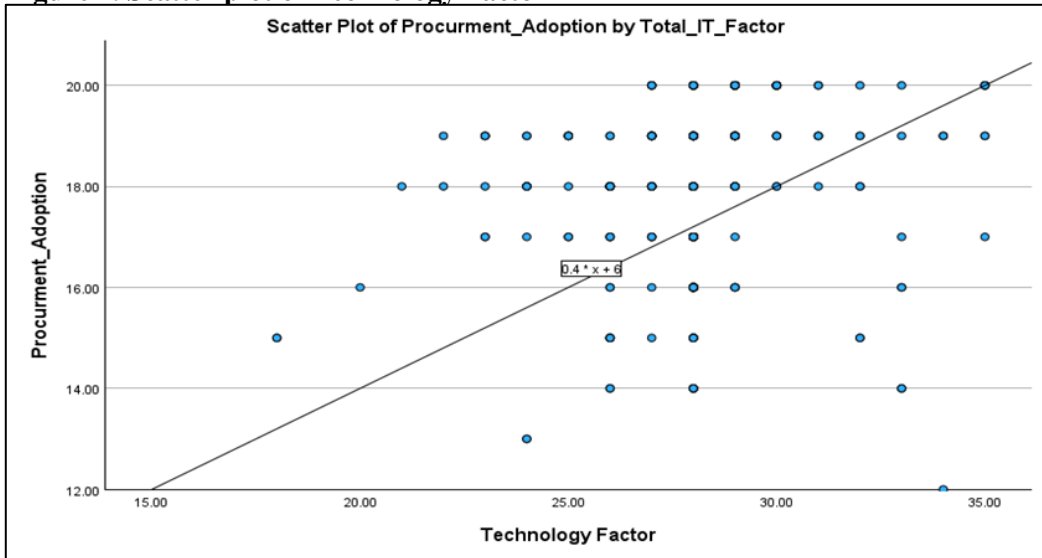
Source: Authors' compilation.

The coefficients table provides detailed insights into the relationship between the predictors—IT Infrastructure, Technology Knowledge, and Security and Integrity—and the electronic Procurement Adoption in the government sector, collectively representing the Technology factor.

Firstly, IT Infrastructure demonstrates a negative unstandardized coefficient of -0.371, indicating that for every unit decrease in IT Infrastructure, the electronic Procurement Adoption in the government sector decreases by 0.371 units. This emphasizes the critical role of a robust IT foundation; organizations with deficient IT resources are likely to experience challenges in adopting procurement practices

efficiently. The negative beta value (-0.351) signifies that IT Infrastructure has a moderate negative impact in standardized terms. This suggests that inadequate IT resources can hinder the adoption of technological procurement solutions, potentially leading to inefficiencies and process bottlenecks.

Secondly, Technology Knowledge shows a positive unstandardized coefficient of 0.456, suggesting that a one-unit increase in Technology Knowledge leads to a 0.456-unit rise in the electronic Procurement Adoption in government sector. The positive beta value (0.371) underlines the importance of a knowledgeable workforce. Employees well-versed in technology are better equipped to utilize advanced procurement systems, enhancing the adoption of efficient practices. This positive relationship emphasizes the significance of continuous training programs and skill development initiatives within organizations, enabling employees to adapt to technological advancements effectively.

Thirdly, Security and Integrity exhibit a positive unstandardized coefficient of 0.560, indicating that a one-unit increase in Security and Integrity correlates with a 0.560-unit increase in the electronic Procurement Adoption in government sector. The positive beta value (0.324) highlights the pivotal role of secure data handling and process integrity in driving the electronic Procurement Adoption in government sector. Organizations prioritizing data security measures are more likely to implement advanced procurement solutions confidently, fostering trust in their systems and encouraging widespread adoption.

In summary, the coefficients analysis underscores the intricate relationship between the Technology factor and the electronic Procurement Adoption in government sector, emphasizing the pivotal roles played by IT Infrastructure, Technology Knowledge, and Security and Integrity. Organizations investing in robust IT resources, fostering technological expertise among employees, and emphasizing secure data practices are well-positioned to enhance their procurement processes. These findings highlight the strategic importance of these elements, guiding businesses towards effective adoption of advanced procurement technologies and ensuring streamlined and secure operations.

Table 5. Coefficients table for Technology Factor

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	12.712	.968		13.132	<.001	10.806	14.618			12.712
	IT_infastructure	-.371	.050	-.351	-7.412	<.001	-.469	-.272	.987	1.013	-.371

Technology Knowledge	.456	.060	.371	7.589	<.001	.338	.574	.928	1.077	.456
Security and Integrity	.560	.084	.324	6.668	<.001	.395	.725	.939	1.065	.560

Source: Authors' compilation.

H4-Political Factors significantly Influence to adoption of E-Procurement in Government organization in Sri Lanka

The provided output represents the results of a regression analysis, focusing on the relationship between the "Adoption factors of Electronic government procurement" (dependent variable) and the " Political Factor" (independent variable). Here's the interpretation of the output: Accordingly Scatter plot diagram as follows.

Figure 5. Scatter plot of Political Factor
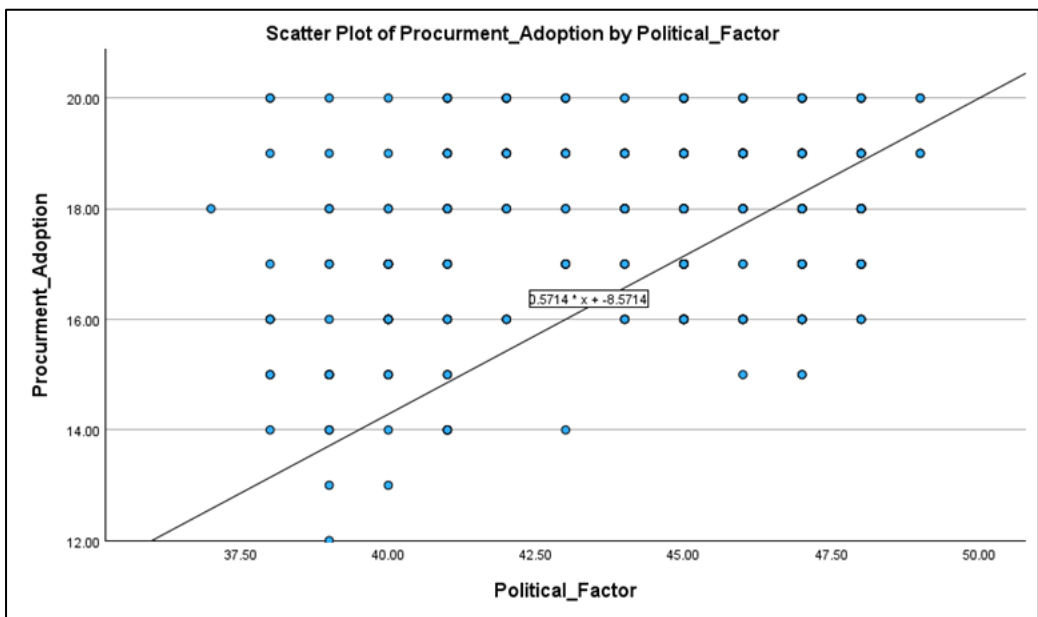
Source: Authors' compilation.

The coefficients table provides valuable insights into the relationship between the electronic Procurement Adoption in government sector and the political factors— Leadership, Government Support, and Political Advocacy. These coefficients are crucial in understanding the impact of these variables on the overall political factor influencing procurement practices.

Firstly, the Leadership coefficient of -0.034, while not statistically significant (p = 0.634), suggests a negligible negative influence on the electronic Procurement Adoption in government sector. This implies that variations in leadership qualities within an organization do not significantly affect the adoption of procurement practices. While this factor might not be prominent in this context, it's important to consider a broader range of leadership attributes or contexts for a more comprehensive analysis.

Secondly, the Government Support coefficient of 0.541 is highly significant (p < .001), indicating a strong positive impact on the electronic Procurement Adoption in government sector. Organizations receiving substantial support from governmental bodies are significantly more likely to adopt efficient procurement practices. This finding emphasizes the pivotal role of government backing in shaping procurement strategies and underlines the importance of fostering positive relationships with governmental entities to enhance adoption rates.

Thirdly, the Political Advocacy coefficient of 0.184, also statistically significant (p = 0.005), highlights a moderate positive influence on the electronic Procurement Adoption in government sector. This suggests that active political advocacy efforts positively contribute to the adoption of procurement practices. Organizations engaging in political advocacy activities are more likely to align their procurement strategies with political objectives, enhancing their overall adoption rates.

In summary, the analysis underscores the crucial role of Government Support and Political Advocacy in driving the electronic Procurement Adoption in government sector within the realm of the overall political factor. While Leadership qualities do not appear to have a significant impact in this specific context, organizations should prioritize building strong relationships with governmental bodies and engaging in effective political advocacy efforts to optimize their procurement practices successfully.

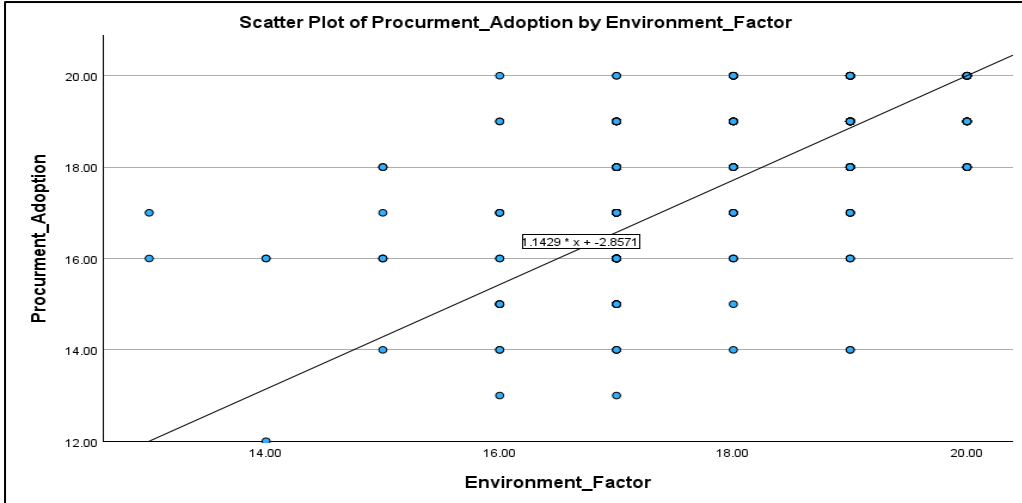**Table 6. Coefficients table for Political Factor**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	7.569	1.473		5.139	<.001	4.669	10.46			7.569
	Leadership	-.034	.072	-.030	-.477	.634	-.176	.107	.759	1.318	-.034
	Government Support	.541	.082	.378	6.600	<.001	.380	.703	.940	1.064	.541
	Political Advocacy	.184	.064	.177	2.85	.005	.057	.311	.799	1.25	.184

Source: Authors' compilation.

H5-Environment Factor significantly influence to adoption of E- Procurement in government organization in Sri Lanka

The provided output represents the results of a regression analysis, focusing on the relationship between the "Adoption factors of Electronic government procurement" (dependent variable) and the "Environment Factor" (independent variable). Here's the interpretation of the output: Accordingly scatter plot diagram as follows

Figure 6. Scatter plot of Environment Factor

Source: Authors' compilation.

Table 7. Coefficients table for Environment Factor

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	5.036	1.066		4.725	<.001	2.938	7.135			5.036
	Supplier Influence	.562	.094	.304	5.989	<.001	.378	.747	.936	1.069	.562
	Industry Acceptance	.854	.101	.429	8.455	<.001	.655	1.053	.936	1.069	.854

Source: Authors' compilation.

The coefficients table provides crucial insights into the relationship between the electronic Procurement Adoption in government sector and its predictors: Supplier Influence and Industry Acceptance. Both predictors play a significant role in shaping organizations' procurement practices, collectively representing the Environment Factor.

Firstly, the Supplier Influence coefficient of 0.562 is highly significant ($p < .001$), indicating a positive impact on the electronic Procurement Adoption in government sector. Organizations influenced positively by their suppliers are more likely to adopt efficient procurement practices. This suggests that strong supplier relationships and positive interactions significantly contribute to the adoption of streamlined procurement processes within organizations.

Secondly, the Industry Acceptance coefficient of 0.854 is also highly significant ($p < .001$), underscoring its substantial positive influence on the electronic Procurement Adoption in government sector. Organizations operating within industries widely accepting specific procurement strategies are more inclined to adopt similar practices. This implies that industry norms and acceptance standards strongly shape an organization's procurement decisions, leading to more cohesive and standardized procurement processes.

In summary, the analysis emphasizes the pivotal role of the Environment Factor, encompassing Supplier Influence and Industry Acceptance, in driving the electronic Procurement Adoption in government sector. Organizations operating within environments where suppliers positively influence their practices and industry-wide acceptance standards are high, are more likely to adopt efficient procurement strategies. These findings highlight the strategic importance of fostering strong supplier relationships and aligning procurement practices with industry standards, ultimately enhancing organizational efficiency and competitiveness in the procurement landscape.

Multiple regressions is an extended version of simple regression used to predict the value of a variable based on the values of two or more variables. The researcher performed multiple regression to examine the mathematical relationship functions regarding purchase intention concerning Organization Factors, Legal Factors, Political Factors, Technological Factors, and Environmental Factors.

Table 8. Coefficients table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-	Partial	Part	Tolerance	VIF
1	(Constant)	-	1.367		3.5	<.0	-7.609	-2.227			3.5

Organization Factor	.219	.022	.505	9.9	<.0	.176	.263	.58	1.6	9.9
Legal Factor	.100	.041	.115	2.4	.01	.020	.180	.69	1.4	2.4
Technology Factor	.015	.027	.023	.57	.56	-.037	.068	.92	1.0	.57
Political Factor	.065	.023	.116	2.8	.00	.020	.109	.90	1.1	2.8
Environment Factor	.290	.057	.240	5.1	<.0	.178	.401	.68	1.4	5.1

Source: Authors' compilation.

The coefficients table provides detailed information about the impact of various factors—Organization Factor, Legal Factor, Technology Factor, Political Factor, and Environment Factor— on electronic Procurement Adoption in the government sector.

Firstly, the Organization Factor demonstrates a strong positive influence with a standardized coefficient (Beta) of 0.505, indicating that for every one-unit increase in organizational factors, the electronic Procurement Adoption in the government sector increases by 0.505 units. This factor significantly affects adoption, emphasizing the pivotal role of internal organizational dynamics in shaping procurement practices.

Secondly, the Legal Factor, while less influential with a Beta of 0.115, still shows a positive impact, indicating that legal considerations influence procurement decisions. This factor suggests the importance of compliance and legal frameworks in guiding procurement practices, albeit to a lesser extent compared to organizational factors.

The Technology Factor, with a negligible Beta of 0.023, does not significantly influence electronic Procurement Adoption in the government sector. Similarly, the Political Factor, although statistically significant with a Beta of 0.116, has a relatively modest impact on adoption. These findings suggest that while technology and political considerations are present, they are not primary drivers of procurement decisions in the context of this analysis.

The environmental factor, represented by a Beta of 0.240, has a moderate positive influence. This indicates that external environmental factors, such as market conditions or industry standards, play a significant role in shaping procurement practices.

Organizational dynamics emerge as the most influential factor affecting electronic Procurement Adoption in the government sector, highlighting the importance of internal processes and structures. Legal considerations and external environmental factors also play notable roles, emphasizing the need for compliance and adaptability. While technology and political factors are present, their influence is relatively minor in the context of this analysis. Organizations should prioritize internal organization factors and be mindful of legal requirements and external market conditions to optimize their procurement practices effectively.

Electronic Procurement Adoption in government sector of Government Sector = −4.918 + (0.219×Organization Factor) + (0.100×Legal Factor) + (0.015×Technology Factor) + (0.065×Political Factor) + (0.290×Environment Factor) (1)

The critical success of electronic government procurement (e-GP) implementation in Sri Lanka is significantly influenced by several factors as evidenced by recent statistical analyses. Organization factors are paramount; with a high Beta value and strong statistical significance, aspects such as management support, employee readiness, and organizational structure are fundamental. These internal organizational elements are crucial for the seamless integration and effective operation of e-GP systems, underscoring their role as the most impactful contributors.

Legal frameworks also play a critical role, albeit moderately, in the success of e-GP. The presence of supportive legislation that ensures compliance, standardization, and fairness is essential. Although their influence is not as pronounced as organizational factors, legal frameworks facilitate e-GP practices by creating a conducive regulatory environment.

Contrary to expectations, technology infrastructure, while fundamental to e-GP, does not show a significant statistical influence on the adoption of e-GP in the current analysis. This might suggest that existing technological setups are adequate or that the impact of technology is overshadowed by other factors. However, the integral role of technology in supporting e-GP systems cannot be overlooked, and this finding might indicate a need for a deeper investigation into how technological readiness is assessed in relation to other influencing factors.

Political factors, demonstrating moderate statistical significance, highlight the importance of political will and stability. Political leadership and governmental support can significantly influence the implementation process of e-GP, indicating that alignment between political objectives and technological initiatives is necessary for progress.

Environmental factors, like organizational factors, show a strong influence on e-GP adoption. Factors such as economic conditions, cultural readiness, and external pressures are critical, suggesting that external environmental readiness plays a vital role in the successful deployment of e-GP systems.

The critical success of e-GP implementation in Sri Lanka is predominantly influenced by organizational and environmental factors, as these have the highest Beta values and significance levels. These aspects suggest that both internal readiness and external conditions are vital for successful implementation. Political and legal aspects also play important roles but are less impactful compared to organizational and environmental factors. Technology infrastructure, surprisingly, does not show significant direct influence, which may indicate either a baseline level of adequacy or a need to revisit how technological readiness is measured or valued within the current e-GP framework in Sri Lanka.

Based on the in-depth multiple regression analysis conducted, it is evident that the adoption of electronic government procurement (e-GP) in Sri Lanka is intricately linked to specific influencing factors. The study underscores a statistically significant positive correlation between e-GP adoption and the Organizational Factor, signifying that streamlined internal processes and organizational structures enhance the likelihood of e-GP system implementation. Additionally, the presence of legal environment emerged as a significant positive influencer, emphasizing the pivotal role of governmental policies and advocacy in driving e-GP adoption. Moreover, the research highlighted the

importance of environmental considerations, showcasing a positive correlation between industry acceptance and supplier readiness practices and e-GP implementation. Conversely, the study revealed significantly low correlations with both the Political Factor and the Technological Factor, indicating that Political complexities and technological challenges pose substantial obstacles to the widespread adoption of e-GP systems in Sri Lanka. These findings provide valuable insights for policymakers, organisations, and stakeholders, suggesting targeted strategies to strengthen the e-GP landscape in Sri Lanka while addressing legal and technological barriers.

VII. DISCUSSION

The research aims to identify the critical success factors for implementing electronic government procurement in Sri Lanka. Five hypotheses were developed to determine the significant level of adoption of electronic government procurement in Sri Lanka. Data were collected from government entities such as ministries, departments, public enterprises, and other government bodies. Past previous research regarding the electronic government procurement base developed the research model in this research.

When considering the Sri Lankan context of electronic government procurement in Sri Lanka, Bandara (n.d.) highlighted four key adaptation factors: people, technology, internal organization, and external environment, which potentially influence e-procurement implementation. Under the "People" category, indicators such as accountability, staff adoption to change, e-procurement knowledge, technical expertise, and ethical practices were identified. The "Technology" factor included indicators like network application, hardware application, software application, interoperability capacity of current IT infrastructure, and assurance for digital security. The "External Environment" factor encompassed indicators such as finance management ability, internal policies and procedures, organizational readiness for capacity development, institutional culture, and institutional structure. Additionally, Bandara emphasized the significant impact of the technology factor on the electronic Procurement Adoption in the government sector in Sri Lanka's public sector procurement methods, emphasizing the importance of advancements in software, hardware, and network applications to enhance value addition to the public sector procurement sector.

In the context of the pharmaceutical industry in Sri Lanka, there have been efforts to implement electronic procurement procedures. Studies conducted on the State Pharmaceuticals Corporation (SPC) of Sri Lanka identified various barriers and strategies for e-procurement implementation. Challenges included lack of supplier knowledge/motivation, insufficient support from existing policies, lack of political and top management support, poor staff attitudes, difficulties in change management, inadequate staff knowledge and skills, lack of funds, and scarcity of technical expertise and infrastructure facilities. Strategies to overcome these challenges included training top management and staff on e-procurement processes, implementing effective change management strategies, training suppliers, establishing e-procurement help centres, designing appropriate business models, and developing infrastructure facilities (Koggalage, 2021). To mitigate these challenges, recommendations included advocating for political leaders and top-level managers to understand the importance of e-procurement, establishing public-private partnerships for funding infrastructure and technology and conducting in-service training programs for staff (Premathilaka & Fernando, n.d.).

Another study focused on critical success factors affecting e-procurement adoption in public sector organizations in Sri Lanka. The research highlighted the significance of technology and organizational context variables in influencing e-procurement adoption. Employee IT knowledge and experience, as well as IT infrastructure, were found to be crucial within the organizational context. However, supplier readiness from the external environment had a negative impact on e-procurement adoption, indicating the importance of supplier participation in the system. The study emphasized the importance of considering both internal and external factors when implementing e-procurement systems in public sector organizations in Sri Lanka, providing practical insights for policymakers and managers (Weerasinghe et al., n.d.).

However, this research finds the following as results of this research. The comprehensive multiple regression analysis conducted in this study illuminates the intricate web of factors critical success factors in the implementation of electronic government procurement (e-GP) in Sri Lanka. The results underscore the critical role played by specific elements.

Firstly, the study emphasizes the substantial impact of organizational factors. It demonstrates a robust positive correlation between e-GP adoption and streamlined internal processes and organizational structures. This correlation highlights that well-organized institutions are more likely to implement e-GP systems effectively. The researcher measures the organization factor using change management, Management commitment and Skill Level of Staff. Past researchers such as Panda & Sahu (2011a), Veit, Parasie & Huntgeburth (2011), Bof & Previtali (2007), Khanapuri, Nayak et al., (2011), Lee et al., (2008), Parida & Parida (2005), Vaidya et al., (2004), Koggala (2021), Vaidya et al (2006) demonstrate above said representing different country context.

Furthermore, the study reveals the significance of the Legal Framework. The presence of strong backing from the Legal Framework sphere emerged as a crucial positive influencer, underscoring the role of governmental policies and advocacy in promoting e-GP adoption across the country. The researcher measures the Legal factor using a regulatory framework and Signature and Authentication. When considering the following research demonstrate the political factor influencing the adoption of electronic government procurement.

Additionally, the research underscores the importance of environmental considerations. It establishes a positive correlation between supplier readiness and industry acceptance with the implementation of e-GP. This finding emphasizes the growing importance of sustainability and environmentally conscious practices in the realm of digital procurement. Croom & Brandon-Jones, (2005), Dooley & Purchase (2006), Khanapuri et al., (2011), Quayle (2005), Vaidya et al., (2004), Vaidya et al,(2006), Premathilaka & Fernando (n.d.) demonstrate previously supplier influence and Industrial acceptance is an influence for the adoption of electronic government procurement.

However, the study also reveals noteworthy challenges. It finds limited associations with both the Political Factor and the Technological Factor. This suggests that the intricate political landscape and technological barriers present significant hurdles to the widespread implementation of e-Government Procurement (e-GP) systems in Sri Lanka. Panda & Sahu (2011a), Bof & Previtali (2007), Koggala (2021), Koorn et al., (2001), Vaidya et al., (2006) demonstrate the legal factor influence to the adoption of electronic government procurement.

The data presented offers a comprehensive glimpse into Sri Lanka's journey in embracing Electronic Government Procurement (EGP). The substantial surge in E-

procurements from 2020 to 2021, marked by a staggering 984% increase, signifies a pivotal turning point. This surge reflects the government's dedication to modernising its procurement practices rapidly. However, the subsequent years show a nuanced trajectory. The growth rate slowed down marginally from 2021 to 2022, indicating potential challenges or adjustments during this period. Despite this, the year 2023 displays a renewed visor, showcasing a 100% increase in E-procurements, indicating resilience and adaptability within Sri Lanka's procurement landscape.

Further the researcher observed that despite their positive trends, Sri Lanka's current EGP adoption rate of 8% leaves room for substantial improvement. This figure places Sri Lanka behind its South Asian counterparts, revealing a critical need for focused interventions. It is evident that while there is progress, the pace needs to accelerate. Efforts to enhance awareness and understanding of EGP benefits should be intensified. Offering targeted training programs to procurement entities could bridge the knowledge gap, empowering them to effectively utilize electronic platforms. Additionally, identifying and addressing barriers, such as technological constraints or bureaucratic hurdles, is crucial. By learning from the experiences of neighbouring countries, Sri Lanka can strategically navigate these challenges.

IX. CONCLUSION

This study constitutes a substantial contribution towards identifying the critical factors influencing the implementation of e-procurement in government procurement. The survey aimed to enhance the adoption rate of Electronic Government Procurement in Sri Lanka. The researcher discerned that organizational context variables, Legal variables, and environmental variables significantly impact e-procurement adoption in public sector organizations in Sri Lanka. Furthermore, the study recognizes the presence of technological and Political variables, albeit with minor influence, in the adopting of electronic government procurement. While these factors might not be the primary drivers, their presence underscores their relevance within the broader e-procurement landscape. The nuanced understanding of these variables can guide policymakers and organizations in Sri Lanka toward more targeted and effective strategies for e-procurement implementation, ultimately leading to enhanced efficiency, transparency, and effectiveness in government procurement processes.

The researcher's diligent work pinpointed pivotal success factors crucial for augmenting electronic government adoption in Sri Lanka, a nation currently operating at a minimal level in electronic government procurement within the South Asian region. This research focused solely on government procurement entities. However, e-Procurement activities involve not only procurement entities but also vendors, who are essential for the successful implementation of e-Procurement. Therefore, I suggest that future research should collect information from the suppliers' perspective as well. By doing so, the objectives can be demonstrated with higher reliability and comprehensiveness.

The critical success factors for the successful implementation of e-procurement in the government sector centre around a careful balance of internal and external considerations. Organizational dynamics, representing internal processes and structures, emerge as the foremost influencer, underscoring the pivotal role of internal readiness in electronic procurement adoption. Legal considerations and adaptability to external environmental factors are deemed crucial, emphasizing the need for compliance with regulations and responsiveness to market conditions.

While technology and political factors are acknowledged, their impact is considered minor, suggesting that while technological advancements can enhance the procurement process, and political considerations are present, they do not overshadow the primacy of internal organizational dynamics. In practical terms, this analysis implies that government organizations should prioritize strengthening their internal processes and structures. Simultaneously, adherence to legal requirements and vigilance regarding external market conditions should be integral to the strategic approach, ensuring a well-rounded and effective implementation of e-procurement practices. By recognizing and acting upon these critical success factors, government entities can optimize their procurement practices, fostering a successful integration of electronic procurement systems. Research into the critical success factors (CSFs) of electronic government procurement (e-GP) yields insights that significantly impact both the theoretical framework and practical implementation in public administration and e-government services.

The theoretical implications of this research involve broadening the scope of existing e-government theories. Investigations into the CSFs of e-GP deepen our understanding of the conditions necessary for the success of technology-led innovations in public sector operations. This might expand existing theories concerning technology adoption, organisational change, and institutional governance. Moreover, such research aids in developing normative models of best practices for e-GP, which refine the theoretical frameworks explaining digital transformations within government services.

Practical implications of CSF research directly influence policymaking by identifying essential areas needing attention, such as legal adjustments, stakeholder engagement, and targeted training and capacity building. These insights are crucial for policymakers crafting more effective e-GP policies and implementation strategies. Furthermore, understanding the CSFs helps developers and IT professionals design e-GP systems that are user-friendly and, secure and capable of accommodating diverse stakeholders' complex needs. The research also supports the development of strategies to ensure the sustainability and scalability of e-GP systems, which is vital for adapting to ongoing technological and market changes.

The researcher has underscored the importance of expanding future research to explore the most advanced critical success factors for electronic government procurement (e-GP) systems, emphasizing the need to gather insights from all involved parties, notably both vendors and procuring entities. The current research primarily focuses on the perspective of procuring entities, thus limiting the breadth of understanding to one side of the procurement equation. This approach may overlook key insights and variables that vendors, as critical stakeholders in these transactions, might contribute.

To address this gap, future studies are recommended to include a dual-perspective analysis that incorporates feedback, experiences, and challenges faced by both vendors and the government agencies involved in e-GP. By adopting this more holistic approach, research can capture a comprehensive range of critical success factors, enhancing the depth and applicability of findings. This inclusivity is crucial for developing a balanced e-GP system that efficiently meets the needs of all stakeholders involved.

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