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ASSESSMENT OF THE REGULATORY FRAMEWORK FOR GREEN PROCUREMENT ADOPTION: A CASE OF PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) DODOMA, TANZANIA

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Abstract:
Generally, the study assesses the regulatory framework for green procurement adoption in Tanzania. The study had three Independent variables which are public procurement laws support, understanding public procurement regulations, enforcement mechanisms and one dependent variable green procurement adoption. The study was conducted at PPRA Dodoma. The study employed a causal research design with a quantitative research approach. Data was collected through a closed ended questionnaire and analyzed through multiple regressions analysis. Findings of the study revealed that, the Public Procurement Laws Support variable has an unstandardized coefficient (β) of 0.302 and a standardized coefficient (Beta) of 0.316 with a significant t-value of 5.250 (p = 0.000), highlighting its positive and significant influence on green procurement adoption. The GP Knowledge variable also shows a significant positive effect, with an unstandardized coefficient (β) of 0.213 and a standardized Beta of 0.202. The t-value of 3.579 (p = 0.001) indicates a statistically significant relationship. The GP Enforcement Mechanism variable has the strongest positive effect on green procurement adoption, with an unstandardized coefficient (β) of 0.503 and a standardized Beta of 0.498. The t-value of 7.688 (p = 0.000) further emphasizes its high level of significance. The study recommends that to enhance green procurement adoption, policymakers should strengthen public procurement laws to include sustainability principles, while organizations prioritize knowledge-building initiatives and establish enforcement mechanisms. This combined approach fosters a supportive legal environment, empowers procurement professionals with the necessary skills, and ensures adherence to green standards, contributing to broader environmental goals.

Keywords:
Green procurement, enforcement mechanism, public procurement regulation

1. Introduction
The global evolution of green procurement has been significantly influenced by the regulatory environment, which has shaped the adoption of sustainable practices across various sectors. Initially driven by voluntary corporate social responsibility (CSR) initiatives, green procurement has increasingly become a regulated activity, especially in developed regions such as the European Union (EU) and the United States. The EU, through its Green Public Procurement (GPP) policies, has set stringent guidelines to ensure that public sector purchases consider environmental sustainability (Testa et al., 2016). In the U.S., the Federal Acquisition Regulation (FAR) incorporates environmental sustainability into procurement processes, compelling federal agencies to prioritize eco-friendly products (Sustainable Procurement Task Force, 2020). Internationally, frameworks like the United Nations Sustainable Development Goals (SDGs) and the Paris Agreement have encouraged governments to enforce policies that promote green procurement practices (United Nations, 2020). These regulations not only incentivize businesses to adopt green procurement but also create legal obligations, pushing industries toward more sustainable supply chains (Geng et al., 2022). As a result, regulatory frameworks play a pivotal role in advancing green procurement globally by embedding environmental considerations into purchasing decisions.
The evolution of green procurement in Africa has been gradual but increasingly prominent in recent years, driven by growing awareness of sustainability and environmental protection. Early adoption was slow due to limited regulatory frameworks and economic constraints. However, in the past decade, many African countries have started integrating green procurement into public and private sector practices, largely influenced by international environmental standards and pressure from global markets (Ameyaw et al., 2021). South Africa has led the continent in establishing

policies that promote sustainable procurement, with initiatives such as the National Framework for Sustainable Development (Nhamo &Mjimba, 2020). The regulatory environment has played a pivotal role in accelerating green procurement across Africa. For instance, the African Union has promoted regional environmental agreements that encourage member states to adopt green procurement practices (Odede, 2022). Moreover, international organizations like the United Nations and the World Bank have influenced national policies through sustainability-linked funding requirements, pushing governments to align procurement regulations with environmental goals (Agyemang et al., 2023). As a result, green procurement is emerging as a critical tool for achieving the continent's sustainability targets, though challenges remain in harmonizing regulatory frameworks across diverse African economies.

According to Nkya (2021), green procurement in Tanzania has evolved gradually, influenced by global sustainability initiatives and the growing awareness of environmental conservation. Initially, there was limited focus on green procurement practices in both public and private sectors; however, recent years have seen a shift driven by regulatory frameworks and international commitments to sustainable development. The Tanzanian government has introduced policies like the Public Procurement Act (Amendments) of 2016, which, while not exclusively focused on green procurement, encourages environmentally responsible purchasing by including provisions for sustainable sourcing (Public Procurement Regulatory Authority [PPRA], 2021). International donors and organizations, such as the United Nations Development Programme (UNDP), have also played a significant role by supporting green procurement projects in Tanzania (UNDP, 2020). The regulatory environment is gradually adapting to prioritize sustainability, with environmental impact assessments (EIA) becoming a requirement in many procurement processes (National Environmental Management Council [NEMC], 2022). This evolving regulatory framework is crucial in fostering a shift towards more sustainable procurement practices in Tanzania, aligning the country with global environmental goals (Nkya, 2021).

Adopting green procurement globally, in Africa, and specifically in Tanzania, faces several challenges despite existing government regulations. On a global scale, the primary barriers include high initial costs of eco-friendly products, lack of supplier readiness, and insufficient stakeholder awareness (Walker & Brammer, 2019). In Africa, these challenges are compounded by limited technical expertise, inadequate infrastructure, and weak enforcement of environmental regulations (Ameyaw, 2021). Additionally, many African countries struggle with limited access to green technologies and financial constraints, which hinder the shift towards sustainable procurement. Although regulatory frameworks like the Public Procurement Act provide guidelines in Tanzania, challenges persist, such as a lack of institutional capacity to monitor compliance, limited environmental awareness among procurement officers, and a weak green supply chain (Nkya, 2021). Moreover, the informal nature of many industries and limited access to green products make implementing green procurement difficult. These barriers demonstrate that while regulations are in place, practical and systemic challenges hinder the widespread adoption of sustainable procurement practices.

2. Literature Review

2.1 Theoretical Literature Review

The regulatory focus theory will guide the study. Regulatory Focus Theory, developed by E. Tory Higgins in 1997, provides a framework for understanding how different motivational orientations influence behaviour and decision-making. The theory posits those two distinct types of regulatory focus guide individuals: promotion focus and prevention focus. A promotion focus is driven by pursuing aspirations and achieving positive outcomes, motivating individuals to seek growth, rewards, and advancements. Conversely, prevention focuses on avoiding adverse outcomes and fulfilling obligations, leading individuals to emphasize safety and security and avoiding losses. This theoretical framework helps explain how people and organizations respond to various regulatory stimuli, such as incentives or penalties (Higgins, 1997).

The theory is relevant to this study since it differentiates between promotion-focused and prevention-focused motivations, which can illuminate why organizations may adopt green procurement practices under varying regulatory conditions (Higgins, 1997). In Tanzania, government regulations on green procurement may be designed to appeal to both motivational orientations. For instance, regulations that offer incentives, such as tax benefits or awards, could appeal to organizations with a promotion focus, driving them to adopt green practices to achieve competitive advantages and enhance their corporate reputation (Kivetz& Simonson, 2002). Conversely, regulations imposing strict penalties or compliance requirements may target organizations with a prevention focus, compelling

them to adopt green procurement practices primarily to avoid legal repercussions and adverse outcomes (Higgins et al., 2017). By applying Regulatory Focus Theory, researchers can better understand how Tanzanian organizations respond to regulatory incentives and constraints and why some may more readily embrace green procurement than others. This theoretical lens thus helps explain the varied impacts of regulatory frameworks on sustainable procurement practices in Tanzania.

2.2 Empirical Literature Review

2.2.1 Foreign studies

A study by Msimang and Ambe (2022) examined how regulatory awareness affects the adoption of green procurement in South Africa's public sector. The study employed a mixed-methods approach, combining surveys and interviews with procurement officers in government institutions. Quantitative data were collected using structured questionnaires to assess awareness and understanding of green procurement regulations. The qualitative aspect involved interviews with key procurement officers to explore the challenges in adhering to green procurement practices. The findings revealed that many officers lacked comprehensive knowledge of the specific green procurement regulations, hindering implementation. Furthermore, the study highlighted that proper training and education on regulatory frameworks could positively influence adopting green procurement practices.

Similarly, a study by Nyakundi et al. (2021) in Kenya focused on how understanding green procurement regulations impacts compliance among public sector officials. The study used a descriptive research design, with a sample of 150 procurement officers drawn from various government agencies. Data collection involved questionnaires measuring officers' familiarity with national green procurement guidelines. The analysis was performed using regression models to determine the relationship between regulatory understanding and procurement practices. The results indicated that officers who had a better grasp of the regulations were more likely to integrate sustainability into their procurement processes. However, the study also found that despite green procurement policies, gaps in understanding the specific legal requirements slowed the adoption rate in the public sector.

Olaniyi and Oke (2022) explored the role of regulatory enforcement mechanisms in promoting green procurement adoption across developing countries, with a specific focus on Nigeria. The researchers employed a mixed-methods approach, combining quantitative surveys and qualitative interviews with 150 procurement officers from public sector organizations. The study found that strong regulatory enforcement significantly influenced the adoption of green procurement practices. Specifically, organizations that were regularly audited for compliance with environmental procurement regulations showed a higher likelihood of adopting green procurement measures. The methodology included a regression analysis that identified enforcement intensity as a key predictor of green procurement adoption, with a standardized beta value of 0.58, indicating a positive and significant influence. The study concluded that effective enforcement mechanisms, such as regular audits and penalties for non-compliance, were essential in encouraging organizations to adopt sustainable procurement practices.

A study conducted by Kamau and Mwangi (2021) in Kenya examined the influence of government incentives on green procurement adoption among private sector organizations. Using a cross-sectional survey design, the researchers collected data from 120 procurement managers from manufacturing companies through structured questionnaires. The study employed a descriptive statistical analysis and found that government incentives, such as tax breaks, grants, and subsidies for green technologies, positively influenced green procurement adoption. The regression analysis revealed that organizations receiving government incentives were 2.5 times more likely to adopt green procurement than those without incentives. Kamau and Mwangi recommended that the government introduce more robust financial incentives to further encourage the adoption of sustainable procurement practices. The study's methodology included a chi-square test to determine the association between incentives and green procurement adoption, showing a significant relationship ($p < 0.05$).

2.2.2 Local Studies

In Tanzania, a study by Nkya (2023) explored the influence of government regulations on adopting green procurement practices in public institutions. This study used a cross-sectional survey of 200 procurement officers across different ministries. Data were collected through questionnaires and analyzed using structural equation modeling (SEM) to assess the correlation between regulatory understanding and procurement behavior. The study found that while most procurement officers knew the Public Procurement Act's provisions, many did not understand its implications for green procurement. This gap in regulatory comprehension was identified as a major

obstacle to the widespread adoption of sustainable procurement practices. The study recommended enhanced training programs and workshops to bridge this knowledge gap and promote better compliance with green procurement policies.

Another study by Nkya (2021) assessed the effectiveness of the PPA (Amendments) 2016 in promoting green procurement within Tanzanian public institutions. The research used a mixed-method approach, combining qualitative interviews with procurement officials and quantitative surveys distributed to 150 public sector procurement officers. The findings indicated that while the PPA includes provisions encouraging sustainable procurement, its implementation remains inconsistent due to a lack of capacity and knowledge among officers. Additionally, the study highlighted that while some organizations have integrated green procurement practices, the absence of strict enforcement mechanisms has led to minimal adherence in many sectors. The study concluded that while the PPA is a step towards sustainability, more robust regulatory measures and training are needed to increase compliance.

Another empirical study by Ameyaw et al. (2021) examined the influence of environmental regulations across several African countries, including Tanzania, on green procurement adoption. The researchers employed a survey methodology, targeting procurement professionals in both the public and private sectors, with a sample size of 300 respondents. The study found that although environmental regulations exist, they are often poorly enforced, and many organizations view compliance as a financial burden rather than an opportunity for sustainable growth. The study used regression analysis to show a statistically significant but weak relationship between environmental regulations' strength and green procurement practices' adoption. The authors concluded that more vigorous policy enforcement and incentives could drive higher adoption rates of sustainable procurement practices in Tanzania and other African countries.

In a more recent study, Mwakibinga (2023) investigated the role of environmental impact assessments (EIAs) in promoting green procurement among Tanzanian businesses. Using a case study approach, the research focused on 20 large companies across different industries. Data was collected through semi-structured interviews with procurement managers and supplemented by documentary analysis of procurement records. The study found that companies subjected to mandatory EIAs were likelier to adopt green procurement practices, as the assessments often included recommendations for sourcing eco-friendly products. However, smaller companies not subjected to EIAs or environmental regulations were less likely to engage in green procurement, indicating a gap in regulatory coverage. The study recommended extending the scope of environmental regulations to include more sectors and organizations, particularly small and medium-sized enterprises (SMEs).

3. Research Methodology

To determine whether or not there is a causal relationship between the variables, the study used a causal/explanatory research design. The study utilizes a quantitative research approach. According to Allen (2017), a quantitative approach makes use of statistics to perform an analysis of the numerical data that researchers have gathered in order to provide answers to the questions that they have posed. The study adopted a questionnaire to collect quantitative data from the selected respondents.

The study's population comprised the PPRA Dodoma HQ staff members. Therefore, all the staff directly related to enforcing green procurement regulations was involved. According to PPRA (2023), this group has 123 staff at PPRA. Therefore, the study's target population was 123 staff at PPRA HQ. Sample size obtained based on the Yamane (1967) was 95 staff. Descriptive statistics such as frequency and percentage were utilized to analyze the demographic data.

A multiple regression model was utilized to determine the nature of the relationship between the variables. In order to carry out the analysis, SPSS version 26 was utilized. However, before the multiple regression analysis is conducted, four diagnostic tests such as the model fitness test through ANOVA, the Multicollinearity through Variance Inflation Factor and the Heteroscedasticity test through scatter plots, will be examined

4. Findings and Discussion

4.1 Multiple Regressions Analysis

4.1.1 Goodness of Fit Test

The findings of the regression analysis point to a significant model that accounts for a sizable amount of the variance in the dependent variable. When compared to the Total Sum of Squares of 75.872, the regression model's Sum of Squares value of 68.094 indicates that the independent variables in the model account for roughly 89.7% of the variance in the outcome variable. This high percentage of explained variance shows how well the model predicts the dependent variable.

With a significance level (Sig.) of.000, the regression component's Mean Square is 22.698 and its corresponding F statistic is 265.548. This p-value confirms that the regression model fits the data well overall and shows that the model is statistically significant at the 1% level. Practically speaking, this significance implies that at least one of the predictors is probably going to significantly affect the dependent variable, which makes the model useful for comprehending the variables affecting the result.

Across 91 degrees of freedom, the Mean Square is 0.085 and the Residual Sum of Squares is 7.778. The model's robustness is further supported by the comparatively low residual value, which suggests that the variation left unexplained by the model is negligible. Overall, these results show that the chosen predictors are very good at explaining the dependent variable, and there is a high degree of confidence that the model could be used for explanatory or predictive purposes. Results are shown in Table 1 below;

Table 1: ANOVA Goodness of Fit Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.094	3	22.698	265.548	.000[b]
	Residual	7.778	91	.085		
	Total	75.872	94			

Source: Research Findings (2024)

4.1.2 Multicollinearity Test

The collinearity statistics, which include the tolerance and variance inflation factor (VIF), indicate that there may be a degree of multicollinearity among the variables that are considered independent. The phenomenon known as multicollinearity occurs in regression analysis when two or more predictor variables are highly correlated with one another. This can potentially lead to the results being distorted, and it can also make it difficult to evaluate the individual effect that each predictor has on the dependent variable (Field, 2018).

According to Hair et al. (2019), a tolerance value that is lower than 0.4 is frequently regarded as a warning sign for multicollinearity. This is because it indicates that a significant portion of the variable's variance is shared with other predictors in the model. All three variables in this scenario have tolerance levels that are lower than 0.4: the Public Procurement Laws Support variable has a tolerance of 0.311, the GP Knowledge variable has a tolerance of 0.353, and the GP Enforcement Mechanism variable has the lowest tolerance rating of 0.268. According to Cohen et al. (2003), the low tolerance values indicate that each of these variables shares a significant portion of the variance with other variables, which indicates the possibility of multicollinearity on the part of the variables.

Additional insight into multicollinearity can be gained through the utilisation of the Variance Inflation Factor (VIF). A value of the variance inflation factor (VIF) that is greater than three is considered to indicate a moderate level of multicollinearity. On the other hand, a VIF that is greater than five or ten is frequently regarded as high multicollinearity, depending on the field and the context (O'Brien, 2007). Both the Public Procurement Laws Support and the GP Enforcement Mechanism have VIFs that are greater than 3, specifically 3.217 and 3.726, respectively. The VIF for GP Knowledge is 2.836, which shows that it is relatively close to the threshold but does not go beyond it. Despite the fact that these VIF values do not go beyond 5, they are close enough to indicate that multicollinearity may still have an impact on the results of the regression. The GP Enforcement Mechanism, in particular, has a relatively higher VIF of 3.726, which indicates that it may have a stronger collinearity with other variables than either the GP Knowledge or the Public Procurement Laws Support variables.

When these statistics are taken into consideration, researchers may take into consideration various methods for addressing multicollinearity. These methods may include the elimination of highly correlated predictors, the combination of variables into composite scores, or the utilisation of alternative statistical approaches such as

principal component analysis (Aiken & West 1971). Reducing multicollinearity is essential for ensuring that regression coefficients are reliable. This is because excessive multicollinearity can cause standard errors to increase, which can make it more difficult to interpret the effects of individual predictors and could potentially undermine the accuracy of the model as a whole (Tabachnick & Fidell, 2019).The findings are shown in Table 2 below;

Table 2: Multicollinearity Test Results

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Public Procurement Laws Support	0.311	3.217
GP Knowledge	0.353	2.836
GP Enforcement Mechanism	0.268	3.726

Source: Research Findings (2024)

4.1.3 Heteroscedasticity Test

A heteroscedasticity test using scattered plots was conducted to see if there is a heteroscedasticity problem before running a multiple regression. The heteroscedasticity results indicate that the scattered plots do not have any pattern. This indicates no heteroscedasticity problem, so the multiple regression analysis can be conducted. Figure 1 below indicates the heteroscedasticity test results;

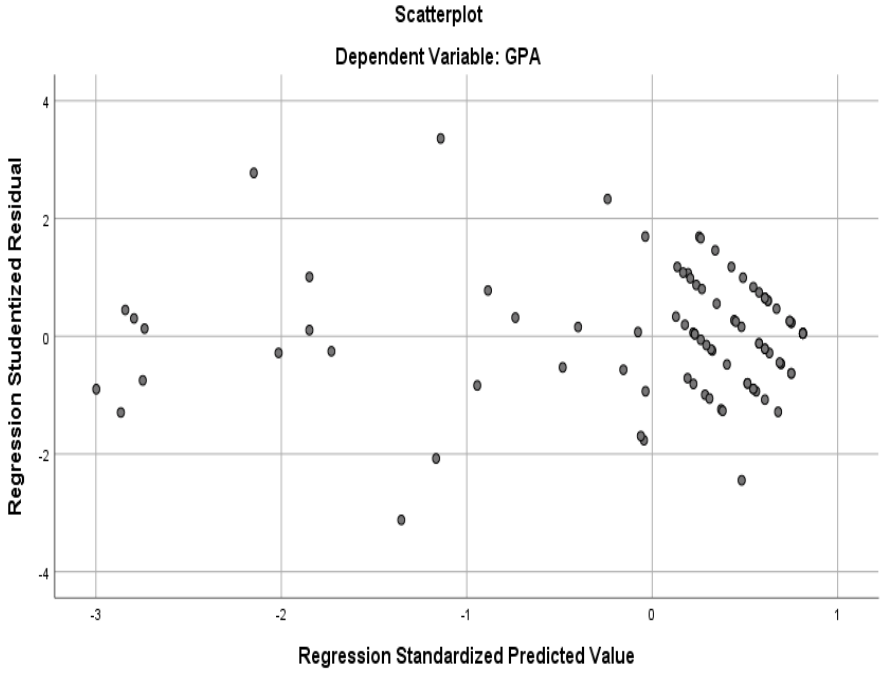

Figure 1: Heteroscedasticity Test

4.1.4 Multiple Regression Model Summaries

The results of the regression model indicate that there is a high level of reliability and accuracy in the explanation. There is a strong positive correlation between the independent variables and the dependent variable, as indicated by the R-value of 0.947, which indicates that the predictors collectively have a substantial association with the outcome

measure. In the context of this discussion, an R-value that is close to 1 indicates a strong relationship, which, according to Cohen (1988), substantiates the notion that the predictors selected for the model are closely associated with the variable that is being studied.

The fact that the value of R Square (R2) is 0.897 indicates that the independent variables are able to explain approximately 89.7% of the variance in the variable that is being studied (the dependent variable). According to Hair et al. (2019), a high R2 value indicates that the model is able to effectively capture the variability in the outcome, which is a characteristic that is frequently considered to be the most important in terms of model robustness. The fact that the model is able to adequately explain the data is supported by the fact that it has a high R2 value, which indicates that the model is a good fit for the data (Field, 2018).

The adjusted R square value of 0.894, which takes into account the total number of predictors in the model and offers a more precise measurement of the model's ability to explain phenomena, lends even more credence to the conclusion that has been drawn. As opposed to R2, the adjusted R2 takes into account the possibility of overfitting, which is especially important when multiple predictors are included in the analysis. According to Tabachnick and Fidell (2013), the fact that there is only a slight margin of difference between R2 and adjusted R2 indicates that the addition of additional variables would only result in a limited improvement to the model, thereby confirming its efficiency and parsimony.

The average distance that the observed values fall from the regression line is represented by the Standard Error of the Estimate, which is 0.37481. According to Kline (2015), a smaller standard error indicates that the observed data points are relatively close to the values that the model predicted which suggests that the model has a high level of predictive accuracy. Overall, these indicators strong R, high R2, adjusted R2, and low standard error point to a robust model that reliably explains and predicts the dependent variable. As a result, this model is suitable for applications that involve both analytical and predictive processes. Findings are presented in Table 3 below;

Table 3: Multiple Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.947[a]	0.897	0.894	0.37481

Source: Research Findings (2024)

4.2.5 Multiple Regression Coefficients

The findings of the regression analysis shed light on the factors that have an impact on the adoption of general practitioners within the context of public procurement. Public Procurement Laws Support, GP Knowledge, and GP Enforcement Mechanism are the three predictors that are included in the model. Each of these predictors demonstrates a statistically significant relationship with green procurement practices, as indicated by low p-values (all of which are at or below 0.01). This aligns with the existing body of literature that emphasises the importance of a supportive legal framework, sufficient knowledge, and strong enforcement mechanisms as critical drivers for sustainable procurement practices in public sectors (Testa et al., 2016).

A significant t-value of 5.250 ($p = 0.000$) indicates that the Public Procurement Laws Support variable has a positive and significant influence on green procurement adoption. Its unstandardised coefficient (β) is 0.302, and its standardised coefficient (Beta) is 0.316. This indicates that the variable has a significant influence on green procurement adoption. This finding suggests that there is a greater likelihood of adopting environmentally friendly procurement practices when public procurement laws actively support sustainability. According to Brammer and Walker (2011), the literature suggests that procurement laws that provide clear mandates for sustainable practices enhance compliance and organisational commitment to green initiatives.

An additional variable that demonstrates a noteworthy positive impact is the General Practitioner Knowledge variable, which has an unstandardised coefficient (β) of 0.213 and a standardised Beta of 0.202. It can be concluded that there is a statistically significant relationship based on the t-value of 3.579 ($p = 0.001$). Based on this finding, it can be deduced that procurement professionals who have knowledge of green procurement principles are more likely to implement sustainable practices more effectively. Previous research has shown that knowledgeable personnel are better equipped to navigate complex sustainability criteria and integrate them into procurement

processes. This is supported by the fact that procurement knowledge is associated with improved green procurement outcomes (Cheng et al., 2018).

With an unstandardised coefficient (β) of 0.503 and a standardised Beta of 0.498, the GP Enforcement Mechanism variable exhibits the most significant positive impact on an individual's adoption of environmentally responsible procurement practices. In addition, the fact that the t-value is 7.688 (p = 0.000) highlights the high level of significance that it possesses. This finding lends credence to the notion that robust enforcement mechanisms are indispensable for the successful implementation of environmentally responsible procurement practices. This finding is in line with research that demonstrates compliance mechanisms as an essential component of sustainability initiatives (Preuss, 2009). The implementation of enforcement measures guarantees that the guidelines are adhered to, thereby fostering accountability and ensuring compliance with green procurement standards;

Table 4: Multiple Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
(Constant)	-0.106	0.162		-0.657	0.513
Public Procurement Laws Support	0.302	0.058	0.316	5.250	0.000
GP Knowledge	0.213	0.060	0.202	3.579	0.001
GP Enforcement Mechanism	0.503	0.065	0.498	7.688	0.000
Dependent: Green Procurement Adoption					

Source: Research Findings (2024)

4.3 Discussion of Findings

4.3.1 The Extent to Which Existing Public Procurement Laws Support Green Procurement Adoption

When it comes to driving sustainable procurement practices, particularly in the public sector, the literature that is currently available places a strong emphasis on the critical role that supportive legal frameworks play. This body of research is in agreement with the positive and significant impact that the support of public procurement laws has on the adoption of environmentally responsible procurement practices. As a result of the unstandardised coefficient (β = 0.302) and the standardised coefficient (Beta = 0.316), it is possible to draw the conclusion that organisations are more likely to engage in green procurement. This is because public procurement laws are increasingly incorporating sustainability principles. The fact that this relationship is statistically robust, as indicated by a significant t-value of 5.250 (p = 0.000), brings to light the significance of legal frameworks in facilitating green procurement initiatives. This relationship is highlighted by the fact that it is statistically robust.

Through the use of research, it has been demonstrated that laws pertaining to public procurement play a significant role in the establishment of the regulatory environment that is necessary for the development of sustainable practices. For example, Brammer and Walker (2011) found that organisations located in countries or regions that have procurement policies that are focused on sustainability report higher levels of green procurement adoption. This was because these organisations are more likely to be environmentally conscious. The incorporation of sustainability criteria into procurement regulations not only establishes a mandate for public organisations to prioritise environmentally friendly practises, but it also establishes an expectation that they will do so. These legal frameworks contribute to the operational standardisation of environmentally responsible procurement, which in turn promotes long-term commitment and standardisation of sustainable practices throughout the organisation. In other words, they help to normalise environmentally responsible procurement.

Furthermore, Testa et al. (2016) argue that procurement laws that include sustainability mandates encourage compliance by reducing ambiguity and providing clear guidelines. This makes it easier to incorporate environmentally

friendly criteria into procurement decisions, which is a significant benefit. If organisations do not receive support from regulatory bodies, it may be challenging for them to prioritise environmentally friendly practises. There could be a number of reasons for this, including cost considerations, a lack of awareness, or competing expectations within the organisation. On the other hand, legislation that expressly supports sustainability provides the legitimacy and support that is necessary to strike a balance between these concerns, thereby fostering greater alignment between the goals of organisations and the objectives of the environment. This is because legislation that expressly supports sustainability provides the legitimacy and support that is required.

Furthermore, Cheng et al. (2018) propose that public procurement laws not only guide organisations towards sustainability but also generate a ripple effect that encourages suppliers to adapt to green standards. This is a significant contribution to the field of sustainability. A significant contribution has been made to the field of sustainability by this development. Laws that place an emphasis on sustainability in procurement provide suppliers with an incentive to innovate and comply with green standards in order to meet the requirements of the public sector. This is because these laws provide an incentive for suppliers to innovate. Regulatory support at the public procurement level can drive green adoption across a variety of industries, and this relationship provides support for a more comprehensive transformation of supply chains towards sustainable practices. This relationship demonstrates how regulatory support can be used to drive green adoption.

Furthermore, Preuss (2009) highlights the fact that legal mandates for environmentally responsible procurement serve not only as a mechanism for carrying out accountability but also as a tool for monitoring compliance. This is because legal mandates serve this dual purpose. Legal provisions pertaining to public procurement offer a framework that can be utilised to assess whether or not organisations are in compliance with environmental standards. Through the use of this framework, it is much simpler to identify gaps and make certain that the objectives of green procurement are being pursued. As a result of this, organisations that are operating under procurement laws that are supportive have a structural advantage when it comes to maintaining their efforts to purchase environmentally friendly products. The reason for this is that they are directed and evaluated according to predetermined legal standards.

4.3.2 The Influence of Understanding Public Procurement Regulations on Green Procurement Adoption among Public Sector Procurement Officers

The fact that the General Practitioner Knowledge variable exhibits a noteworthy positive impact, with an unstandardised coefficient (β) of 0.213 and a standardised Beta of 0.202, serves to emphasise the significant role that knowledge plays in the implementation of environmentally responsible procurement practices. In addition to demonstrating statistical significance, the t-value of 3.579 ($p = 0.001$) suggests that as procurement professionals increase their knowledge of green procurement principles, they are more likely to effectively implement sustainable practices. This is supported by the fact that the significant level of statistical significance was demonstrated. In spite of the fact that the t-value achieves statistical significance, this remains the case.

This assertion is supported by the body of literature that is currently available, which highlights the significance of knowledge in lowering the barriers that are associated with the implementation of environmentally responsible procurement practices. According to the findings of Testa et al. (2016), businesses that make investments in training and education pertaining to green procurement principles experience an increase in the number of employees who comply with these principles and effectively implement sustainable procurement strategies. This is the case particularly for businesses that invest in green procurement principles. In line with the concept that knowledgeable personnel are better equipped to navigate the complexities associated with sustainability criteria in procurement processes, this is consistent with the idea that this ultimately results in an increase in the overall effectiveness of green initiatives.

In addition, Cheng et al. (2018) highlight the fact that the level of comprehension that procurement professionals have regarding green procurement standards has a significant impact on their ability to implement these principles in their day-to-day operations. This is something that is emphasised by the authors. Their study demonstrates that a lack of knowledge can lead to confusion and the incorrect application of sustainable practices, which in turn leads to missed opportunities for organisations to improve their sustainability outcomes. This results in missed opportunities for organisations to improve their sustainability outcomes. On the other hand, companies that provide their employees with extensive training and resource materials regarding environmentally responsible purchasing give their

employees the ability to make well-informed decisions that are in line with the sustainability goals that the company has set for itself.

In addition, the findings of the research that was carried out by Walker and Brammer (2009) indicate that the dissemination of information among procurement professionals is essential for the development of an organisational culture that places an emphasis on sustainability. This is an additional point of interest. When procurement teams are well-informed about the environmental impacts of green procurement and the benefits of green procurement, respectively, there is a greater likelihood that they will advocate for and implement sustainable purchasing practices. This is because green procurement has a positive impact on the environment. The result of this is the creation of a positive feedback loop, in which increased knowledge leads to improved practices, which in turn generates more awareness and understanding within the organisation. Overall, this results in a positive feedback loop.

4.5.3 The Influence of Enforcement Mechanisms and Government Incentives in Promoting Green Procurement Adoption in Tanzania

The significant positive impact of the GP Enforcement Mechanism variable on the adoption of green procurement practices, as demonstrated by an unstandardised coefficient (β) of 0.503 and a standardised Beta of 0.498, highlights the significant role it plays in promoting sustainable procurement practices. It is clear from the high t-value of 7.688 and the significance level of $p = 0.000$ that the influence of enforcement mechanisms is not only substantial but also statistically significant. This conclusion lends credence to the idea that efficient regulatory frameworks are necessary in order to encourage compliance with green procurement policies.

The existing body of research lends credence to the notion that robust enforcement mechanisms can contribute to increased adherence to environmentally responsible procurement practices. For example, Preuss (2009) emphasises that the presence of stringent enforcement strategies significantly increases compliance rates among procurement officials. This helps to ensure that environmentally friendly criteria are prioritised during the process of purchasing goods and services. Furthermore, this is consistent with the theory that regulatory enforcement provides a framework within which organisations are required to operate, thereby generating a powerful incentive for the adoption of environmentally responsible procurement practices.

Furthermore, the research conducted by Testa et al. (2016) highlights the fact that enforcement mechanisms act as a catalyst for the implementation of sustainability initiatives within organisations. According to the findings of their research, businesses that have established enforcement protocols not only adhere to green procurement standards with greater adherence but also report higher overall performance in sustainability initiatives. This suggests that when enforcement mechanisms are in place, organisations are more likely to view green procurement not merely as a regulatory obligation but rather as an integral component of their operational strategy. This is because green procurement is derived from sustainable practices.

Furthermore, the findings of Walker and Brammer (2009) lend credence to the idea that the implementation of policies and guidelines is a significant factor in significantly enhancing the efficiency of green procurement initiatives. The findings of their research indicate that organisations in the public sector that actively monitor and enforce compliance with green procurement standards experience improved outcomes in terms of resource efficiency and sustainability. In light of this, it appears that the potential advantages of environmentally responsible purchasing might not be fully realised if robust enforcement mechanisms are not implemented.

5. Conclusion and Recommendation

5.1 Conclusion

Taking into consideration the findings concerning the positive and significant influence that Public Procurement Laws Support has on Green Procurement Adoption, it is clear that legal frameworks play an essential role in promoting sustainability within procurement practices. It is more likely that organisations will successfully implement green procurement strategies if they align their procurement processes with the principles of sustainability that are outlined in public procurement laws. This alignment not only improves compliance with regulations but also helps organisations cultivate a culture of sustainability within their ranks. The substantial statistical evidence further emphasises the importance of having strong legal support in order to move forward with the implementation of environmentally friendly initiatives. Therefore, in order to encourage widespread adoption of environmentally responsible procurement practices throughout the public sector, policymakers and other stakeholders need to make

the development and enforcement of comprehensive public procurement laws a priority. These laws should incorporate sustainability considerations. Such efforts will, in the long run, contribute to the achievement of more sustainable development goals and to the stewardship of the environment.

The fact that the GP Knowledge variable had a significant positive effect has brought to light the crucial part that knowledge plays in encouraging the implementation of environmentally responsible purchasing procedures. It is easier for procurement professionals to effectively implement sustainable practices as they increase their knowledge of green procurement principles and become more knowledgeable about these principles. This highlights the significance of continuous education and training for the purpose of enhancing the staff's understanding of environmentally responsible purchasing practices. Through the prioritisation of knowledge development, organisations have the ability to facilitate a more robust integration of sustainability into their procurement processes, which will ultimately result in green procurement outcomes that are more effective and impactful.

As a result of these findings, the importance of GP Enforcement Mechanisms in facilitating the adoption of environmentally responsible procurement practices has been brought to light. The significant positive effect that was observed highlights the importance of putting into place efficient regulatory frameworks that encourage compliance and accountability. It is possible for organisations to significantly strengthen their commitment to sustainability by placing an emphasis on enforcement, which will ultimately result in more responsible decisions regarding procurement. As a result, this highlights the importance of policymakers and procurement officials developing and maintaining robust enforcement strategies as a means of achieving environmental goals and driving sustainable development.

5.2 Recommendations

For the purpose of increasing the adoption of environmentally friendly procurement practices, it is essential for policymakers to strengthen and clarify public procurement laws in order to explicitly include sustainability principles. Also it is essential for businesses to place a high priority on knowledge-building initiatives among procurement professionals in order to increase the number of customers who adopt environmentally responsible purchasing practices. It is possible to accomplish this through the implementation of specialised training programs that concentrate on the principles of green procurement, sustainability criteria, and best practices.

In order for organisations to increase the adoption of environmentally friendly procurement practices, they should make the establishment and strengthening of enforcement mechanisms within their procurement frameworks a priority. In order to ensure that these standards are adhered to, it is necessary to develop clear guidelines and regulations that define green procurement standards. Additionally, it is necessary to implement regular monitoring and compliance checks within the organisation.

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