

The nexus between socio-demographic factors and participation of special groups in public procurement of works in local government authorities

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Abstract

Examining the nexus between socio-demographic factors and the participation of special groups in the public procurement of work is essential to inform policymakers and stakeholders in the Local Government Authorities (LGAs) in Tanzania about the need for targeted initiatives to promote and enhance the participation of youths, women, the elderly and people with disabilities who are considered as special groups in public procurement. In this study, a cross-sectional research design was used, and a simple random sampling technique was applied to select 164 respondents. A questionnaire survey was conducted among employees in LGAs, drawing insights from Dodoma, a city in Tanzania. The data were analyzed using descriptive and binary logistic regression analysis. The findings revealed a low level of participation of special groups in the public procurement of works. Further analysis showed that sex and age are significantly associated with the participation of special groups in the public procurement of works. The study recommends that LGAs provide targeted support to special groups to help them participate in public procurement of works. This can include training and capacity-building programs and financial support to help them meet the procurement requirements of works. In addition, it is recommended that policymakers take a leading role in reviewing and strengthening the existing legal framework and policies related to participation in public procurement in Tanzania. This includes ensuring that the laws and regulations explicitly promote the participation of special groups.

Keywords: *socio-demographic factors, participation, special groups, public procurement, local government authorities*

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1. Introduction

Public procurement plays a crucial role in the development and functioning of societies. It involves the acquisition of goods, services, and works by public entities, such as governments and public institutions. Thus, procurement policies and laws must promote transparency, fairness, equity, and efficiency in allocating work (Huka et al., 2018). However, when it comes to the participation of special groups in the public procurement of works, there are debates among scholars regarding its usefulness. The idea of special groups, which is articulated in the Sustainable Development Goals, includes women, youth, children, elderly, and individuals with disabilities (United Nations, 2015). Research asserts that promoting the involvement of special groups leads to increased economic opportunities, job creation, and social inclusion (Longo & Samson, 2023; Malanga, 2020; Mohamed, 2020). Scholars add that by providing equal access to procurement contracts, governments can address these groups' historical disadvantages and promote a more equitable society (Lyimo & Mrema, 2022).

Some critics (Nduta et al., 2015; Karani & Moronge, 2017) see potential negative consequences of preferential treatment for special groups in public procurement, particularly in policy action. It is argued that preferential policies for special groups may lead to inefficiencies, reduced competition, and compromised value for money (Oluka et al., 2021). Critics also question the effectiveness of these policies in achieving their intended goals. The critics add that instead of focusing on preferential treatment, efforts should be directed toward capacity building and creating an enabling environment for all businesses to compete fairly (Nduta et al., 2015). Despite these debates, it is widely recognized that special groups have had limited access to procurement opportunities such as works (Mohamed, 2020; Leticia, 2018). Thus, efforts to promote their inclusion have been implemented in many countries, including Tanzania, by enacting various preferential policies and programs. The policies and program initiatives aim to level the playing field and create equal business opportunities. Furthermore, studies (Lagat et al., 2016; Mamiro, 2017; Leticia, 2018; Malanga, 2021) have shown that effective preferential policies, such as those promoting the participation of special groups in the procurement of works, can lead to positive outcomes. Research has highlighted success stories where increased participation has resulted in economic growth, job creation, and

improved social well-being (Longo & Samson, 2023; Tesha & Nsimbila, 2022). These findings provide evidence for the potential benefits of inclusive procurement.

Given the relevance of special groups in procurement, Tanzania revised the Public Procurement Act of 2011 to emphasize the participation of special groups in procurement (Tesha & Nsimbila, 2022). In addition, Tanzania Procurement Regulations 2013 were amended in 2016 to allow the allocation of 30% of government funds to businesses owned by special groups (Changalima et al., 2023). Thus, the amended Public Procurement Act of 2016 emphasizes that every procuring entity should save 30% of its budget for the special groups. The amendment law encouraged participation in public procurement by youth, women, and people with disabilities. Thus, amended regulations promote inclusive economic growth by ensuring these groups have better access to government contracts. Furthermore, Tanzania established the Public Procurement Regulatory Authority in 2005 to regulate and oversee procurement compliance (Namusonge, 2017). Despite such milestones, special groups are still not given adequate opportunities to participate in public procurement activities (Tesha & Nsimbila, 2022; Malanga, 2021; Leticia, 2018). The inadequate opportunities of the special group from public procurement opportunities limit their access to government contracts, which can hinder their ability to grow their businesses and create jobs. Thus, it can perpetuate poverty and inequality, as the special group may not have the same opportunities as other groups to participate in the economy.

Studies noted that the procurement of works in Tanzania faces several challenges that include limited adherence to the established regulations by the procuring entities, lack of access to information about procurement opportunities, lack of financial capacity, and inadequate awareness creation on preference schemes given to special groups (Nkunda, 2022; Malanga, 2021; Leticia, 2018). Most reviewed studies in the Tanzanian context focused on challenges facing public procurement in general (Changalima et al., 2023; Kiula & Kinisa, 2022; Mamiro, 2017). Similarly, few other studies have focused on the determinants of special group participation, such as financial, technical, ethical, regulation, and information (Tesha & Nsimbila, 2022; Leticia, 2018). Thus, there is scant knowledge on the nexus between socio-demographic factors such as gender, education, age, and income and the participation of special groups in the procurement of work. A study on the procurement of work among special groups in Tanzania is vital to promoting fairness, equal opportunities, and socio-economic

development. Also, a study focusing on special groups must align with diversity, inclusion, and responsible governance principles. Similarly, the survey among special groups can inform policymakers and stakeholders at Local Government Authorities (LGAs) such as Dodoma City Council about the need for targeted initiatives to promote and enhance the participation of these special groups in public procurement processes based on socio-demographic information. Therefore, this study sought to examine the nexus between socio-demographic factors and the participation of special groups in public procurement of works in LGAs in Tanzania, with reference to the case of Dodoma City Council.

2. Literature Review

2.1. Procurement works

Procurement within LGAs is a multifaceted process that goes beyond mere acquisition of goods, services, or works. It involves a strategic approach to meet organizational needs, ensure value for money, and promote efficiency and transparency (Basheka, 2018). In the context of LGAs, procurement is not only about satisfying operational requirements but also about fostering socio-economic development by including marginalized groups such as women, youth, and persons with disabilities.

The procurement process in LGAs typically follows a defined lifecycle: requirement identification, sourcing and evaluation of suppliers, contract negotiation, and contract management (Lagat et al., 2016). However, the complexity of this process increases with the introduction of legal requirements and policies aimed at promoting inclusivity. The inclusion of special groups in procurement processes, as mandated by the Tanzania Public Procurement Act, poses both opportunities and challenges in implementation, particularly in ensuring that these groups are adequately represented and that their involvement leads to tangible benefits for the community.

2.2. Special group

The 2016 amendment to the Tanzania Public Procurement Act introduced a progressive approach by designating women, youth, and persons with disabilities as special groups, ensuring their involvement in public procurement. This legislation reflects a broader

commitment to inclusivity and social equity, recognizing the historical disadvantages these groups face (Basheka, 2018). However, the implementation of this act raises several critical issues. One such issue is the selection process: How are members of these special groups identified and chosen for participation in procurement activities? The law mandates their inclusion, but there is a need for a transparent and fair process to ensure that the most deserving and capable members of these groups are selected. Furthermore, representation within procurement processes requires more than just tokenistic involvement; it necessitates meaningful participation that empowers these groups economically and socially.

The types of services provided by these special groups can vary widely, ranging from construction and maintenance works to the supply of goods and administrative services. Yet, the compensation mechanisms for these groups need careful consideration. Are these groups being fairly compensated compared to other contractors? Are they given the necessary support and capacity-building to compete effectively? These questions are critical to evaluating the success of the policy in practice. In examining the implementation of the Act, one must consider both the legal frameworks and the practical challenges faced by LGAs. The Act's principles are clear: promote inclusivity, ensure fair competition, and enhance social equity. But the actual implementation often falls short due to challenges such as lack of awareness among the special groups, bureaucratic inefficiencies, and potential biases in the selection process (Lagat et al., 2016). Thus, there is a need for ongoing monitoring and evaluation to ensure that the goals of the Act are fully realized in practice.

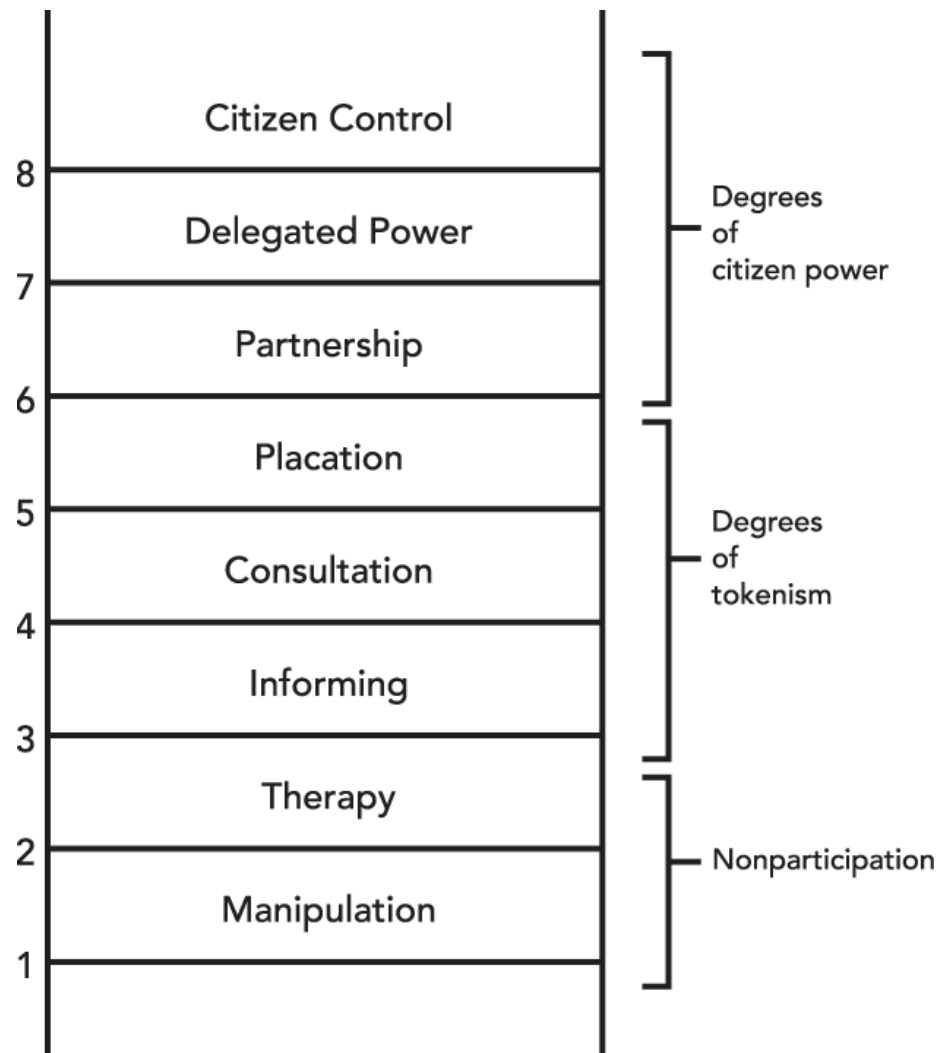
2.3. Theoretical framework

This study was guided by a ladder of citizen participation model. The model was developed by Sherry R. Arnstein in 1969 to explain the extent of participation of individuals in various issues (Arnstein, 1969), such as the procurement of works in society. Individuals participate in societal matters in eight rungs. Systematically, the rungs are manipulation, therapy, informing, consultation, placation, partnership, delegated power, and citizens' control. Also, the eight rungs are grouped into three categories, namely non-participation (manipulation, therapy), degree of tokenism (informing, consultation, placation), and degree of citizen participation (partnership, delegated power, and citizens' control). The third category is the level of participation, where citizens can decide to partner, delegate power, or take

control of their entitlements (Gaber, 2019). The model aligns with the global mission stipulated in the Sustainable Development Goals 2030 and African Development Agenda 2063 of promoting inclusive growth among less voiced groups such as special groups (African Union, 2015; United Nations, 2015). In this model, the target groups must have genuine possibilities for participation in decision-making, and those decisions must primarily affect their future growth (Sadiullah, 2006). However, the ladder of citizen participation has significant limitations, such as the uniform distribution of citizen power, as the categories utilized would imply. The racism, paternalism, and resistance of some power brokers, as well as the ignorance and disarray of many low-income communities, are some significant roadblocks that are left out (Gaber, 2019). In the real world of people and programs, there may be a need for as many as necessary to cover the variety of actual citizen involvement levels. Each group contains a variety of opposing viewpoints, deep divisions, conflicting vested interests, and fragmented subgroups (Sadiullah, 2006).

Figure 1

*Adopted ladder of
citizen participation
(Arnstein, 1969)*



This model is essential in this study as it better explains the level of participation of special groups in the procurement of work. In public procurement, certain groups may be given special consideration or advantages to promote participation and address historical barriers. This could include minority-owned, women-owned, small, or businesses owned by people with disabilities. At the bottom, they may be informed about contract opportunities but have no real say (tokenism). At higher rungs, they may be actively consulted and provide input on procurement policies and practices (citizen power). The higher up the ladder special groups can participate, the more it empowers them and addresses systematic inequities in public opportunities.

Studies applied the ladder of citizen participation model; for example, Gaber (2019), Callahan (2017 and Sadiullah (2006) believe that individuals should be given a greater voice in their pursuit of development and equitable growth, as echoed by the United Nations and African Union agenda. While there appears to be universal agreement that the participation of citizens exceptional groups in the development is a good idea, there is little agreement as to the best way to achieve meaningful participation. Thus, this study is an attempt to examine participation in the LGAs in relation to socio demographic factors.

2.4. Participation of special groups on procurement in Local Government Authorities

The execution of public procurement possibilities for special groups in Kenyan national government ministries was the subject of research by Mohamed (2020). The study used a cross-sectional survey approach that combined quantitative and qualitative techniques. An examination of the technical readiness for the execution of public procurement possibilities for special groups in Kenya's public sector served as the study's direction. The study found that because special groups cannot fulfill the prerequisites for registration, they rarely take advantage of procurement opportunities. The study also found that enterprises representing special groups have experience with public tendering procedures and that training in public procurement increases the involvement of special groups in public procurement. Although this study focused on special groups, in terms of location, it was done in Kenya, where laws and policies guiding procurement between Kenya and Tanzania might differ significantly. Similarly, the study in Kenya focused on the technical readiness of the special groups; thus, the influence of demographic factors on the participation of special groups in the procurement of works remains a niche of research in the Tanzanian environment.

Leticia (2018) carried out research to identify the barriers to the implementation of special group reservations in Tanzania. According to the report, special groups' and procurement officers' lack of expertise makes it challenging to implement particular reservation policies and participate in the government procurement market. Identifying these barriers might be very fruitful in the discussions of this study titled the nexus between the demographic factors and participation of special groups in the procurement of works.

Mamiro (2017) examined the barriers to women's involvement with government procurement in Tanzania. The study found that ineffective information dissemination on available procurement opportunities, insufficient financial support, and a lack of understanding of the procurement process all significantly negatively impact the participation of women-owned businesses in the Tanzanian procurement market. This study dealt only with women, leaving aside other special groups as cited in the Tanzanian Public Procurement Act of 2016. Thus, this study dealt with both members of special groups for comprehensive findings and policy improvement.

Based on the existing literature, it is apparent that there is a considerable focus on the challenges and barriers faced by special groups, especially women, in participating in public procurement processes. However, studies attempting to comprehensively understand individual factors' combined effects on the participation of special groups in public procurement are missing. The existing studies, such as Mamiro (2017), primarily emphasize obstacles and barriers, such as insufficient financial support and a lack of understanding of the procurement process. Thus, studies focusing on special groups are essential to align with diversity, inclusion, and responsible governance principles. Similarly, the survey among special groups can inform policymakers and stakeholders at LGAs such as Dodoma City Council about the need for targeted initiatives to promote and enhance the participation of these special groups in public procurement processes.

3. Material and methods

The research design for this study was a cross-sectional design. Cross-sectional studies provide a snapshot of a population at a particular point in time (Oso & Onen, 2005). This study was conducted at the Dodoma City Council in Tanzania. Dodoma City Council was purposively selected from among the councils in Dodoma region because it is one of the LGAs

in Tanzania that has been implementing various initiatives, including a preference scheme under the PPRA guidelines to promote the participation of special groups in public procurement of works (URT, 2023). The scheme requires 30% of the procurement budget allocated to business-owned special groups, including women, youth, and people with disabilities. The preference scheme empowers special groups economically to access government works (Tesha & Nsimbila, 2022). Also, Dodoma City has been selected due to the availability of various construction projects, including Chamwino State House and Magufuli City, as the result of government shifts from Dar Es Salaam City to Dodoma City (Msacky et al., 2017).

The data gathering process began with obtaining necessary permissions and approvals to conduct the study. The researcher first sought authorization from the Dodoma City Council by submitting a formal request, outlining the study's objectives, methodology, and significance. This request was reviewed by the council's management, and permission was granted to access the relevant staff and conduct the survey. Additionally, ethical clearance was obtained from a recognized institutional review board to ensure that the research adhered to ethical standards. Following approval, the researcher coordinated with department heads at the Dodoma City Council to schedule the distribution of questionnaires. The process involved briefing potential respondents about the study's purpose and ensuring their voluntary participation. The questionnaires were distributed to the selected sample of 164 staff members, who were given sufficient time to complete them. The researcher ensured that the collection process was systematic, maintaining the confidentiality of the respondents' identities and responses throughout the data collection phase.

The study population involved 280 staff working at Dodoma City Council (URT, 2023). The study used the Yamane (1967) formula to calculate the sample size because it is a widely accepted and commonly used formula for determining the appropriate sample size in survey research. The formula was developed by Yamane in 1969 and has since been widely cited and utilized in various fields of study. Previous studies (Nkunda, 2022; Malanga 2021; Mwangi, 2017) used Yamane (1967) formula to calculate the sample size of their studies. Since the population of staff working at Dodoma City Council is 280, Yamane's (1967) formula is described with a confidence level of 95% and a margin of error of 5%. Then, the sample was proportionated into two strata, namely senior staff and operational staff, as shown in table 1.

Table 1*Sample size distribution*

S/N	Respondents	Stratum size (N _h)	Sample size ($(n_o \times N_h)/N$)	Percentage
1	Senior staff	11	6	3.7
2	Operational staff	269	157	96.3
Total		280	164	100

Source: Field Data, 2023**Table 2***Demographic features of respondents*

Background information	Frequency	Percentages
Gender		
Female	78	47.6
Male	86	52.4
Age		
21-45	119	72.6
45+	45	27.4
Education level		
Bachelor	44	26.8
Diploma	48	29.3
Certificate	39	23.8
Secondary	33	20.1
Experience level		
Less than 15 Years	96	58.5
More than 15 years	68	41.5

Source: Field data, 2023

Understanding the demographic information of the sample is crucial for generalizing the findings to the target population. The demographic information is presented as frequencies and percentages for gender, age, education, and experience. Specifically, profiles show that in the gender category, 78 (47.6%) female respondents and 86 (52.4%) male respondents participated in the study, suggesting a relatively balanced gender distribution among the respondents. A previous report from the National Bureau of Statistics in Tanzania shows that males and females in the public sector vary significantly. The report shows that there are 373822 (63.1%) male employees and 218069 (36.9%) female employees in the public sector (URT, 2022). Thus, the male and female variations may trigger employees' perception of the

participation of special groups in the procurement of work. On the other hand, majority of respondents, 119 (72.6%), were aged between 21 and 45, consisting predominantly of younger to middle-aged individuals. This is the active age group in the public office who might greatly understand what impedes special groups such as youth from participating in the procurement of works. Meanwhile, the largest group of respondents, 48 (29.3%), had a bachelor's level of education, 44 (26.8%) respondents had a diploma education, 39 (23.8%) had a certificate level of education, and 33(20.1%) had secondary-level education. Thus, LGAs in Tanzania are served and administered by employees with adequate levels of education who can understand and interpret the laws, including the Public Procurement Act of 2011 and the amendment of the Public Procurement Regulation of 2016. In terms of working experience, 96 (58.5%) of respondents have less than 15 years of experience while 68 (41.5%) of respondents have more than 15 years of experience. It is assumed that people with long working experience have a high level of knowledge, understanding, and awareness of demographic factors influencing the participation of special groups in the procurement of works in the LGAs.

The study employed a simple random sampling technique to select 164 respondents. Simple random sampling ensured every respondent from each stratum had an equal chance of being selected. This helped to create a sample that was likely to represent the entire staff population. The strata of senior staff was made up mainly of heads of departments and city director's from Dodoma. The senior staff takes part in decision-making related to procurement and monitors compliance with the established procedures in procurement. The operational staff strata includes all employees not part of the management. Thus, this study used a questionnaire to collect data from all the sampled respondents. The questionnaire collected information related to gender, age, education, and experience. Also, the questionnaire collected data from respondents concerning the participation of special groups in the procurement of works. The question was designed in a closed-ended format. To capture the participation of special groups, this part of the questionnaire was set on a five-point Likert scale, ranging from strongly disagree to agree strongly. The aspects of participation captured in the five Likert scale include accessibility of training, procurement information, engagement in decision-making, opportunities awareness and availability, participation in bidding, and collaborative bidding and partnerships. The participation of special groups aspects in the questionnaire was developed based on the comprehensive literature review and refined through pretesting by the

expert opinion from the management and procurement departments. A total of 164 questionnaires were distributed to the selected employees of Dodoma City. The questionnaire was used because it allowed for quick data collection and was more convenient (Taherdoost, 2022).

The data obtained through the questionnaire were descriptively and inferentially analyzed. The data analyzed descriptively were presented using frequency, percentage, and mean scores. The variables analyzed include the demographic features of the respondents and the participation of special groups. Also, using the mean score, the indicators of participation among special groups were split into two categories of responses. The categories were participated and not participated. Thereafter, the study used a chi-square test to examine the association between individual factors and the participation of a special group. Similarly, binary logistic regression was employed to examine the influence of individual factors on the participation of special groups. Binary logistic regression is a statistical model commonly used when the dependent variable is binary or categorical. The binary response was possible after transforming the five Likert scale aspects of participation of special groups using the overall mean score into two responses: high and low participation. Thus, binary regression allowed researchers to examine the relationship between a set of independent variables and the probability of an event occurring. The binary logistic regression model is specified as follows;

$$\text{logit} \left(\frac{p}{1-p} \right) = \frac{e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4}}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4}}$$

Where:

Logit = logistic link function

p = probability that there is the influence of individual factors on the participation of special groups in public procurement of works

$1-p$ = probability that there is no influence of individual factors on the participation of special groups in public procurement of works.

β_0 = intercept

$\beta_1 - \beta_4$ = parameter estimates or logit coefficients

y = participation of special group

X_1 - X_4 = Independent variables mentioned as X_1 = Educational level X_2 = experience of individuals, X_3 = Sex of special group, X_4 = Age of special group.

Likewise, the study used Cronbach's alpha (α) test to measure reliability. Cronbach's alpha (α) is a statistical test for measuring the internal consistency of a set of test items. Thus, considering the participation of special groups in table 3, this study was reliable if a Cronbach's alpha value was equal or greater than 0.7 ($\alpha \geq 0.7$).

Table 3

Reliability test

Variable	No. of Items	Cronbach's Alpha
Participation	6	.792

Source: Field data, 2023

Research ethics were rigorously adhered to throughout the study to protect the rights and well-being of all participants. First and foremost, informed consent was obtained from all respondents before they participated in the study. This was done by providing each respondent with a consent form that explained the study's objectives, the nature of their participation, and their right to withdraw from the study at any time without penalty. Additionally, the anonymity and confidentiality of all respondents were guaranteed. Data collected were anonymized, with no personal identifiers used in the analysis or reporting. The researcher also ensured that the data were securely stored, with access limited to the research team. Furthermore, the study complied with all relevant legal and institutional guidelines regarding research involving human subjects, including obtaining ethical approval from the appropriate review board. Finally, the findings were reported truthfully and transparently, with no manipulation or misrepresentation of data, ensuring that the study's conclusions are based on accurate and reliable data.

4. Findings and Discussion

This part provides a descriptive and inferential analysis of the nexus between demographic factors and the participation of special groups in the procurement of works. Also, this part shows several tests performed before embarking on binary logistic regression, including Chi-square and Lemashow.

4.1 Participation of special groups in public procurement of works in Dodoma City

The participants were asked to rate their level of agreement on the aspects that measured the participation of special groups. The elements of participation rated entail attending skill development, access to procurement information, engaging in decision-making, opportunities awareness, participation in bidding, and collaborative bidding. The findings are presented in table 4 using a mean score. The five Likert scale questionnaire was used to collect responses, with 1 indicating strong disagreement and 5 showing strong agreement. The findings reveal that most aspects were close to 1 and far from 5. The findings suggest that there is low participation of participation of special groups in the procurement of works.

Table 4

Descriptive statistics for participation of special groups

Aspects of participation	N	Min	Max	Mean	Std. Deviation
Attending skill development	164	1	5	1.26	0.690
Access to procurement information	164	1	5	2.78	0.758
Engagement in decision-making	164	1	5	2.56	0.424
Opportunities awareness	164	1	5	1.73	0.829
Participation in bidding	164	1	5	1.15	0.711
Collaborative bidding	164	1	5	1.07	0.510

Source: Field data, 2023

Using the mean scores, the findings on participation of special groups were grouped into high and low involvement. The findings are presented in table 5 as frequency and percentage. The findings revealed that 90 (54.9%) respondents perceive low participation of special groups in public procurement of works. Also, the findings show that 74 (45.1%) of respondents observe a high level of participation of special groups in procuring works in Dodoma City. These findings suggest that a significant portion of the population is not engaged in public procurement of works. Thus, there is a low level of special groups in public procurement of works. The revealed level of participation of special groups may serve as the precursor to examining factors such as demographics influencing participation in the procurement of works. Understanding the participation rates of special groups in public procurement is vital for identifying potential gaps and barriers that might hinder their involvement. This information can inform policymakers and stakeholders in the LGAs about

the need for targeted initiatives to promote and enhance the participation of special groups in the public procurement of works. Nevertheless, participation of special groups in public procurement of works is a way to promote fairness, equal opportunities, and socio-economic development as stipulated in the Sustainable Development Goals (SDGs) number 1 and 10 that call for ending poverty and inequality respectively within countries (United Nations, 2015). The emphasis on participation in procuring works among special groups aligns with principles of diversity, inclusion, and responsible governance while yielding economic and social benefits. Special groups often face social and economic barriers that limit their access to business opportunities. Enacting laws and policies promoting their participation in public procurement can allow them to compete on a level playing field, gain experience, build capacity, and generate income. This can contribute to their economic empowerment and help reduce inequalities.

Several scholars provide their views regarding special group participation in public procurement. For example, Leticia (2018) stipulated that encouraging special groups to participate in public procurement can boost local economies. When these groups are awarded contracts, it helps to create jobs, generate tax revenue, and stimulate economic growth within their communities. This, in turn, can contribute to poverty reduction and overall development. Engaging special groups in public procurement can have broader societal benefits. It can help reduce social exclusion, address historical disadvantages, and promote social cohesion. Through the process of creating opportunities for underrepresented groups, public procurement can contribute to a more inclusive and harmonious society.

Table 5

Level of participation of special groups in public procurement of works

Participation	Frequency	Percentage
Low	90	54.9
High	74	45.1
Total	164	100

Source: Field data, 2023

4.2 Association between individual factors and special groups

Table 6

Chi-square test for individual factors and participation of special groups

Individual factors	Chi-square	P-value
Education level	3.527	0.474
Experience	7.630	0.106
Sex	33.077	.000*
Age	45.163	.000*

Source: Field data, 2023

Table 6 presents the results of a Chi-square test of association between individual factors and the participation of special groups in public procurement of works at Dodoma City Council. The findings reveal that the education level factor yielded a chi-square value of 3.527 with a p-value of 0.474. This result suggests no significant association between education level and the participation of special groups in public procurement. Regarding the experience factor, the chi-square test yielded a chi-square value of 7.630 with a p-value of 0.106. This indicates no significant association between experience and the participation of special groups in public procurement. Also, the findings show that the sex factor yielded a chi-square value of 33.077 with a p-value of 0.000. This indicates a significant association between sex and the participation of special groups in public procurement. The p-value of 0.000 suggests that the association is statistically significant at a predetermined significance level. Similarly, the chi-square test for the age factor yielded a chi-square value of 45.163 with a p-value of 0.000. This indicates a significant association between age and the participation of special groups in public procurement. Overall, the chi-square test results suggest that while education level and experience may not have a significant association with participation in public procurement, there are significant associations between sex, age, and the participation of special groups. These findings highlight the importance of considering these factors when addressing and promoting the inclusion of special groups in public procurement processes at Dodoma City Council.

4.3 Influence of individual factors on the participation of special groups

Table 7

Logistic regression results

High (Base)	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)		
							Lower	Upper	
Male	Reference category								
Sex	Female	0.682	0.175	15.221	1	0.000	1.977	1.404	2.785
45+	Reference category								
Age	21-45	0.624	0.179	12.096	1	0.001	1.866	1.313	2.652
Constant	-2.307	0.821	7.893	1	0.005	0.100			

a. variable (s) entered: Sex, Age.

Model Chi-square test= 39.856, df=4 and P-value=0.000

Model summary: -2 log likelihood=185.933, Cox&Snell R²=0.616 and Nagelkerke R²=0.789

Hosmer and Lemeshow test: Chi-square test=8.653, df=8 and P-value=0.372

Classification table: model classification percentages is 70.1

Source: Field data, 2023

Table 7 presents the binary logistic regression results for the influence of individual factors on the participation of special groups in the public procurement of works at Dodoma City Council. The significant variables (sex and age) are included in the logistic regression. For each variable, table 7 provides the coefficient (B), standard error (S.E.), Wald statistic, degrees of freedom (df), significance (Sig.), and the corresponding odds ratio (Exp(B)) with its 95% confidence interval (C.I.).

The logistic regression results show that the coefficient (B) for sex is 0.682 with a significant p-value of 0.000. The odds ratio (Exp(B)) of 1.977 indicates that individuals categorized as female are almost two times more likely to perceive low participation among special groups than those classified as male. Similarly, the coefficient (B) for age is 0.624, with a significant p-value of 0.001. The odds ratio (Exp(B)) of 1.866 suggests individuals who are categorized as 21-45 are almost two times to perceive low participation among special groups compared to those classified as 45+. The constant term in the model has a coefficient (B) of -2.307 and a significant p-value of 0.005. This constant term represents the estimated log odds of participation when all other variables are held constant. The model summary statistics indicate that the logistic regression model explains a significant proportion of the variance in

the data. The -2 log-likelihood is 185.933, the Cox & Snell R² is 0.616, and the Nagelkerke R² is 0.789. Furthermore, the Hosmer and Lemeshow test assesses the model's goodness-of-fit and yields a non-significant p-value of 0.372, suggesting that the model fits the data well. The classification table shows that the model correctly classifies 70.1% of the cases, indicating a moderate level of accuracy in predicting the participation of special groups in public procurement based on the individual factors considered.

Overall, the logistic regression results suggest that sex and age are significant predictors of the participation of special groups in public procurement at Dodoma City Council, while education level and experience do not significantly influence. These findings can inform efforts to promote inclusivity and targeted interventions to increase the participation of special groups in public procurement processes. Various scholars have their views regarding the situation at hand; for example, according to Mamiro (2017), the sex of special groups can affect their participation in procurement opportunities due to various social, economic, and cultural factors. Societal stereotypes and biases can limit the opportunities available to individuals based on their gender. In many societies, women have historically faced discrimination and unequal treatment, which can manifest in various forms, including limited access to procurement opportunities. Some cultures have traditional gender roles and expectations that assign specific tasks and responsibilities to men and women. These norms can influence the types of businesses women and men participate in and create barriers for individuals who do not conform to these expectations. On the other hand, Makena (2016) indicated that women and other special groups may have limited access to resources necessary for participating in procurement opportunities, such as education, training, financial capital, networks, and mentorship. This lack of access can hinder their ability to compete equally with other groups. Discriminatory practices can disadvantage certain groups in the procurement process. Women and other special groups may face biased evaluations, prejudice, and stereotyping, which can undermine their chances of securing contracts or opportunities. Limited representation of women and other special groups in decision-making roles within procurement organizations can lead to policies and practices that inadvertently exclude these groups. Without diverse perspectives and voices at the table, procurement processes may not adequately address the needs and concerns of these groups.

Mwangi (2017) argues that economic disparities and unequal distribution of resources can disproportionately affect special groups, making it harder for them to participate in procurement opportunities. Factors such as lower income levels, lack of access to credit, and limited business networks can all contribute to these disparities. Addressing challenges requires a multifaceted approach that includes policies promoting gender equality, creating supportive environments, providing equal access to resources and opportunities, and challenging discriminatory practices. Through the process of actively working towards inclusive procurement practices, societies can help overcome these barriers and promote equal participation for all special groups.

The findings are backed up by the ladder participation theory that if people are involved and empowered, they can participate in decision-making. Giving citizens the ability to participate in decision-making is one of the Sustainable Development Goals and Africa Development Agenda 2063. The target groups must have genuine possibilities for participation in decision-making, and those decisions must primarily affect their future growth (Sadiullah, 2006). However, the ladder of citizen participation has significant limitations, such as the uniform distribution of citizen power, as the categories utilized would imply. The racism, paternalism, and resistance of some power brokers, as well as the ignorance and disarray of many low-income communities, are some significant roadblocks that are left out. In the real world of people and programs, there may be a need for as many as necessary to cover the variety of actual citizen involvement levels. Each group contains a variety of opposing viewpoints, deep divisions, conflicting vested interests, and fragmented subgroups.

5. Conclusion and Recommendations

It is concluded that the participation of special groups in the public procurement of works is low. This low participation limits the economic opportunities available to women, youth, and persons with disabilities, making it harder for them to benefit from government projects. If not addressed, this could continue to widen economic inequalities and prevent these groups from gaining the support they need to improve their livelihoods. Therefore, it's important to take steps to increase their involvement in public procurement to promote fairness and economic empowerment. Also, the study concluded that sex and age are significant predictors of the participation of particular groups in public procurement at Dodoma City

Council, while education level and experience do not significantly influence. Despite the conclusion, this study has only focused on one LGA in Tanzania. Thus, this conclusion may not be generalized to other LGAs in the United Republic of Tanzania. Similarly, this study mainly used a quantitative approach to reach this conclusion. Hence, it has left out other qualitative and mixed approaches that might have strengthened the conclusion.

Considering the findings, the study recommends that the government provide targeted support to special groups, particularly females and youth, to help them participate in public procurement. This can include training and capacity-building programs and financial support to help them meet the procurement requirements of works. Concerning the LGAs, the study recommends that LGAs in Tanzania collaborate with relevant stakeholders, such as non-governmental organizations (NGOs) and training institutions, to provide specialized training programs and workshops. These initiatives can focus on business management, financial literacy, procurement regulations, and tendering processes. Equipping special groups with the necessary skills and knowledge allows them to compete on an equal footing with other bidders. Also, the study recommends that policymakers take a leading role in reviewing and strengthening the existing legal framework and policies related to public procurement in Tanzania. This includes ensuring that the laws and regulations explicitly promote the participation of special groups, considering their age and gender. The policy should clearly define special groups and provide specific provisions for their inclusion in public procurement processes. It should also establish targets or quotas for the participation of these groups and set up mechanisms for monitoring and enforcement.

Future research can consider conducting a comparative analysis of the participation of special groups in the public procurement of works across different regions and sectors in Tanzania. This may offer insights for policy reform and help to identify the best practices and difficulties faced by particular populations in various circumstances. Also, research can be conducted to explore the role of institutional factors, such as procurement policies, regulations, and practices, in influencing the participation of special groups in the public procurement of works. This could help assess the effectiveness and impact of existing initiatives and programs that aim to promote the inclusion of these groups in public procurement, especially in work. Similarly, future research can examine the potential benefits and costs of involving special

groups in the public procurement of works for both the procuring entities and the special groups themselves. This could help to evaluate the value for money, efficiency, and quality of the procurement outcomes, as well as the economic and social empowerment of the special groups.

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References

- African Union. (2015). *Agenda 2063: The Africa we want*. African Union: Addis Ababa.
- Alvi, M. (2016). *A manual for selecting sampling techniques in research*. Boston: Cengage Learning.
- Arnstein, S. (1969). A ladder of citizens' participation. *Journal of the American Institute of Planners*, 35(4), 216–224. <https://doi.org/10.1080/01944366908977225>
- Basheka, B. C. (2018). Inclusive public procurement opportunities, barriers, and strategies (OBS) to women entrepreneurs' participation in Uganda's public procurement. *Public Journal Review*, 2(4), 1-38.
- Bolton, P. (2016). Public procurement as a tool to drive innovation in South Africa. *Potchefstroom Electronic Law Journal*, 19(1). <https://doi.org/10.17159/1727-3781/2016/v19i0a1283>
- Callahan, K. (2017). Citizen participation: Models and methods. *International Journal of Public Administration*, 3(11), 45-70. <https://doi.org/10.1080/01900692.2017.1280813>
- Changalima, I. A., Mwiseje, S., Mchopa, A. D., & Panga, F. P. (2023). Challenges facing procurement and supply professions in Tanzania: Higher education students' perceptions. *Journal of Applied Research in Higher Education*, 15(5), 1407-1419. <https://doi.org/10.1108/JARHE-05-2022-0126>

- Gaber, J. (2019). Building a ladder of citizen participation: Sherry Arnstein, citizen participation, and model cities. *Journal of the American Planning Association*, 85(3), 188-201. <https://doi.org/10.1080/01944363.2019.1616319>
- Huka, H. A., Mchopa, A. D., & Kimambo, J. J. (2018). Analysis of procurement procedures in Local Government Authorities: Experience after procurement reforms and case analysis from selected councils in Kilimanjaro, Tanzania. *European Journal of Business and Management*, 6(18), 16-22.
- Karani, K., & Moronge, M. (2017). Determinants of youth access to procurement opportunities in the public sector in Kenya: A Case of National Treasury. *Strategic Journal of Business & Change Management*, 4(2), 1089-1107.
- Knack, S., Biletska, N., & Kacker, K. (2019). Deterring kickbacks and encouraging entry in public procurement markets: Evidence from firm surveys in 90 developing countries. *World Bank Economic Review*. <https://doi.org/10.1093/wber/lhz010>
- Kiula, A., & Kinisa, G. (2022). Challenges facing procurement processes digitalization: A case of Tanzania Electric Supply Company Limited - Dar es Salaam. *American Journal of Supply Chain Management*, 7(1), 68-78.
- Lagat, M. K., Namusonge, G., & Berut, Z. (2016). Factors affecting youths, women, and persons with disabilities accessing procurement opportunities in Transzoia County Government. *International Journal of Recent Research in Commerce Economics and Management*, 3(2), 42-66.
- Larsson, L. (2018). *Lean administration*. Malmö: Liber.
- Leticia, M. L. (2018). Women participation in public procurement: The role of international fora and transnational networks. In *Crossing Borders: Re-mapping Women's Movements at the Turn of the 21st Century* (pp. 205-220). <https://doi.org/10.4324/9781315149873-10>
- Longo, A., & Samson, N. (2023). Determinants of implementation of special groups' procurement contracts in public universities in Kenya. *International Journal of Social Science and Humanities Research*, 1(1), 75-83.
- Lyimo, B., & Mrema, I. (2022). Factors affecting procurement practices in public procuring entities-Tanzania. *School of Researchers*, 4(1), 96-106.

- Maheshwari, P., Gokhale, A., Seth, P., Agarwal, N., & Makena, A. (2020). *Mainstreaming GLI: An assessment of women-owned enterprises in developing countries*. Intellectcap.
- Makena, S. M. (2016). *Factors influencing women participation in government procurement: A case of Nyeri Central Sub- County, Kenya*. Doctoral dissertation, University of Nairobi.
- Malanga, D. (2021). *Factors impacting young involvement in public procurement opportunities: A case of Tanzania Electric Supply Company Limited*. Master's Thesis, Mzumbe University.
- Mamiro, R. G. (2017). Value for money: The limping pillar in public procurement experience from Tanzania. In *4th International Public Procurement Conference*.
- Mohamed, H. (2020). Influence of technical readiness on implementing special groups' procurement opportunities in the public sector in Kenya. *International Journal of Social Sciences and Information Technology*, 5(10), 1-30.
- Msacky, R., Bwana, K., Mpuya, G., Ringo, L., Benaya, R., Sikato, L., & Rayas, G. (2017). Need assessment and available investment opportunities in the health sector; A Case of Dodoma Region Tanzania. *Business Education Journal*, 1(3), 2.
- Mwangi, P. (2017). *Determinants of compliance with access to government procurement opportunities and regulations for special groups by public universities in Kenya*. Master's Thesis, Jomo Kenyatta University of Agriculture and Technology.
- Nduta, C., Ayuma, C., & Yego, S. (2015). Factors affecting youth participation in public procurement in Kenya: A Survey of Youth Enterprises in Mombasa County. *The International Journal of Business & Management*, 3(9), 2321-8916.
- Ngure, J. G., & Simba, F. T. (2017). Factors affecting access to government procurement opportunities for disadvantaged groups in public entities. *International Journal of Science and Research*, 4(10), 745–755.
- Nkunda, R. M., & Mchopa, A. D. (2022). The influence of awareness creation campaigns on special groups' participation in public procurement opportunities in Tabora region, Tanzania. *East Africa Journal of Social and Applied Sciences*, 4(1), 19-29.
- Oluka, N. P., Okoche, M., & Mugurusi, G. (2021). Public procurement and competitiveness of women-owned business: Structural equation model for gender responsiveness

- procurement in Uganda. *World Journal of Entrepreneurship, Management*, 17(2), 1-34. <https://doi.org/10.1108/WJEMSD-05-2020-0046>
- Oso, W. Y., & Onen, D. (2005). *A general guide to writing research proposals and reports. A handbook for beginning Researchers* (2nd ed.). Kampala: Makerere University Press.
- Rauniyar, G., & Kanbur, R. (2015). Inclusive development: Two papers on conceptualization, application, and the ADB perspective. *Journal of Development Research*, 27(4), 174-198. <https://doi.org/10.1080/07900627.2015.1091545>
- Sadiullah, K. (2006). *Local government and participatory rural development*. Master's Thesis, Gomal University.
- Taherdoost, H. (2022). Designing a questionnaire for a research paper: A comprehensive guide to design and develop an effective questionnaire. *Asian Journal of Managerial Science*, 11, 8-16. <https://doi.org/10.51983/ajms-2022.11.1.3087>
- Tesha, A., & Nsimbila, P. (2022). Determinants of the special groups' participation in government procurement opportunity in Tanzania. *African Journal of Applied Research*, 8(1), 213-227. <https://doi.org/10.26437.ajar.03.2022.15>
- URT (2023). *Dodoma City Council Strategic Plan II for 2018/2023*. Dodoma: Dodoma City Council.
- URT (2022). *Tanzania integrated labour force survey 2020/21*. Dodoma: National Bureau of Statistics.
- United Nations (2015). *Transforming our world: The 2030 Agenda for Sustainable Development Goals*. New York: United Nations.
- Yamane, T. (1967). *Statistics: An introductory analysis*. New York: Harper and Row.