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Effects of gender mainstreaming efforts on rural transport institutions in Kenya

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This paper reports on an investigation into the effects of gender mainstreaming efforts on the institutions that deliver and support rural transport infrastructure and services in Kenya. It comes at a time when the nation is implementing robust policies, supported by enabling legislative and institutional frameworks for gender mainstreaming as required by the Constitution of Kenya 2010. A multi-level case study was conducted at national and county levels where many institutions were surveyed. Qualitative and quantitative data were collected, covering gender analysis in staffing, decision-making and procurement for a sample of rural transport institutions. Results show that gender mainstreaming efforts have transformed rural transport institutions towards gender-responsive staffing, human-resource practices, budgeting, procurement and implementation of transport-related works. However, achieving the constitutional two-thirds affirmative action policy in staffing remains a challenge, more so in technical and decision-making bodies. The study found that the meaning and purpose of gender mainstreaming is not sufficiently understood by the majority of transport sector institutions. Additionally, gender-disaggregated data are neither readily available nor applied to rural transport programming and implementation. A change of strategy and long-term progressive efforts are required to realise gender equity in rural transport institutions in Kenya and beyond.

1. Introduction

Gender mainstreaming efforts in Kenya have undergone transformative change through affirmative action in access to public sector employment and procurement opportunities as articulated in the Constitution of Kenya 2010 (ROK, 2010). Article 27 (8) provides that the ‘State shall take legislative and other measures to implement the principle that not more than two-thirds of the members of elective or appointive bodies shall be of the same gender’. Similarly, Article 201 of the constitution provides that the public finance system shall promote an equitable society, including making special provision for marginalised groups and areas. As the supreme law of the land, implementation of the constitution has delivered enabling legislation, regulations, policies and institutions towards gender equity. Among these are the creation of the National Gender and Equality Commission (NGEC). Revisions of procurement law and human resources policies for public service, as well as enacting a diversity policy for public service in 2016, are some of the others.

The NGEC mandate is to ensure gender mainstreaming is embedded into all public and private sectors in Kenya (ROK, 2011). The Commission therefore plays an important overseeing role in ensuring that national institutions, including rural transport institutions, prioritise gender mainstreaming as a key policy and constitutional requirement. Article 157 (5) and (10) of the Public Procurement and Asset Disposal Act of 2015 compels public procuring entities to ensure that at least 30% of their procurement value in every financial year is allocated to women, youths and persons with disabilities (PWDs) (ROK, 2015). The *Human Resource Policies and Procedures*

Manual for public service has provided conducive and gender-sensitive working environments for ministries, departments and agencies (MDAs) (PSC, 2016a). The diversity policy, published in May 2016, aims to build a public service that is inclusive and representative of the diversity of the Kenyan people for efficient and effective service delivery (PSC, 2016b). Its key focus is to provide mechanisms for institutionalisation and mainstreaming of diversity management in the public service for efficient and effective service delivery.

Seven years after the constitution was enacted, this research sought to find out the extent to which gender mainstreaming has been embedded in the public service and transformed public institutions, with focus on the transport institutions of Kenya. The key research question is: what is the evidence of gender mainstreaming efforts transforming the institutions that deliver and support rural transport infrastructure and services? In particular, this paper seeks to explore whether the Kenyan gender mainstreaming agenda has resulted in changes in: staffing, decision-making, budgeting and expenditure in rural transport institutions; constraining factors to the changes; and recommendations for sustainability of the changes.

2. Research methodology and study area

The research applied a multi-level case study, at national and county levels, where geographically representative study areas, within which relevant rural transport institutions are hosted, were surveyed. The selected cases included national-, county- and communal-level rural transport institutions, both public and private, as units of assessment, in line with case study

research design (Creswell, 2013; Graham, 2012; Kothari, 2004).

2.1 Gender mainstreaming assessment framework adopted

The study approach re-asserted that gender-responsive transport institutions ought to have structures, policies, culture and practices that should result in gender-responsive programme/project design and the implementation of gender equity-related outcomes and impacts (ADB, 2013; Murison, 2004). Gender mainstreaming was taken as the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels (ECOSOC, 1997). It was emphasised that institutional structures, policies, procedures and culture should be gender responsive, so as to have gender mainstreamed programmes/projects and realise gender equity outcomes and impacts (Figure 1). According to Murison (2004), gender-responsive institutions should have: a clear policy on their commitment to gender equality; time-bound strategies to implement the policy; human resource practices that are sensitive to gender needs and interests; internal tracking and monitoring capability to ensure that strategic milestones are being reached; a central gender mainstreaming unit with policy responsibility and a mandate to guide the overall gender mainstreaming process; and a recognised network of staff responsible for gender equality issues in their respective work units.

2.2 Study area

The study was carried out in Nairobi, the capital city, where all the key rural transport sector and financing institutions are

headquartered; and in three selected counties in Kenya – the agriculture-rich county of Murang'a, the county of Machakos, which is about 50 km from Nairobi, and the county of Homa Bay, which is located on the shores of Lake Victoria (Figure 2). All three counties have different socio-economic and livelihood activities, and comprise different ethnic groups with varied transport infrastructure and service needs for women and men. Each county has its own elected government, exercising executive and legislative authority, including the accompanying mandates and powers to raise revenue, establish policies, plan and budget, and implement and oversee their programmes and projects.

2.3 Institutional stakeholders

Different institutions that deliver or actively support delivery of rural transport infrastructure and services at the national, county and community levels were sampled (Table 1). The aim was to determine how gender mainstreaming efforts have transformed them, especially in areas of staff composition, budget and expenditure allocations, and decision-making processes, and the constraints met, with a view to recommend sustainability measures. The institutions selected for survey and analysis fall under the category of implementation, financing, regulatory and training, as they were considered to be directly involved in rural transport delivery.

2.4 Data sources and data collection

Secondary data were collected mainly from gender mainstreaming reports, the Constitution of Kenya 2010, and including enabling legislations, policies, plans, regulations and guidelines. The research team applied a mixed-methods approach for the

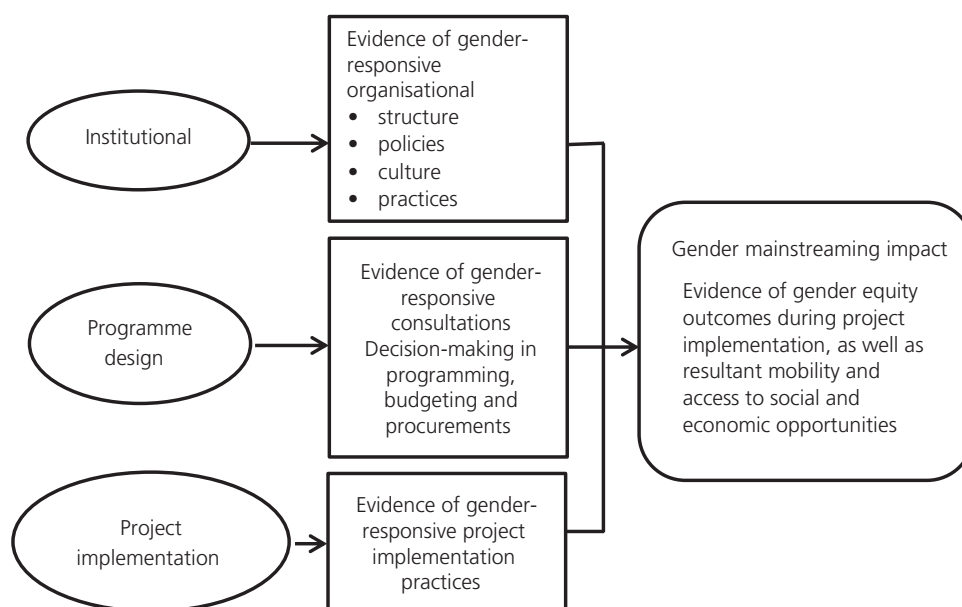


Figure 1. Institutional gender mainstreaming assessments. Source: adapted from ADB (2013: p. 73), Murison (2004: p. 2)

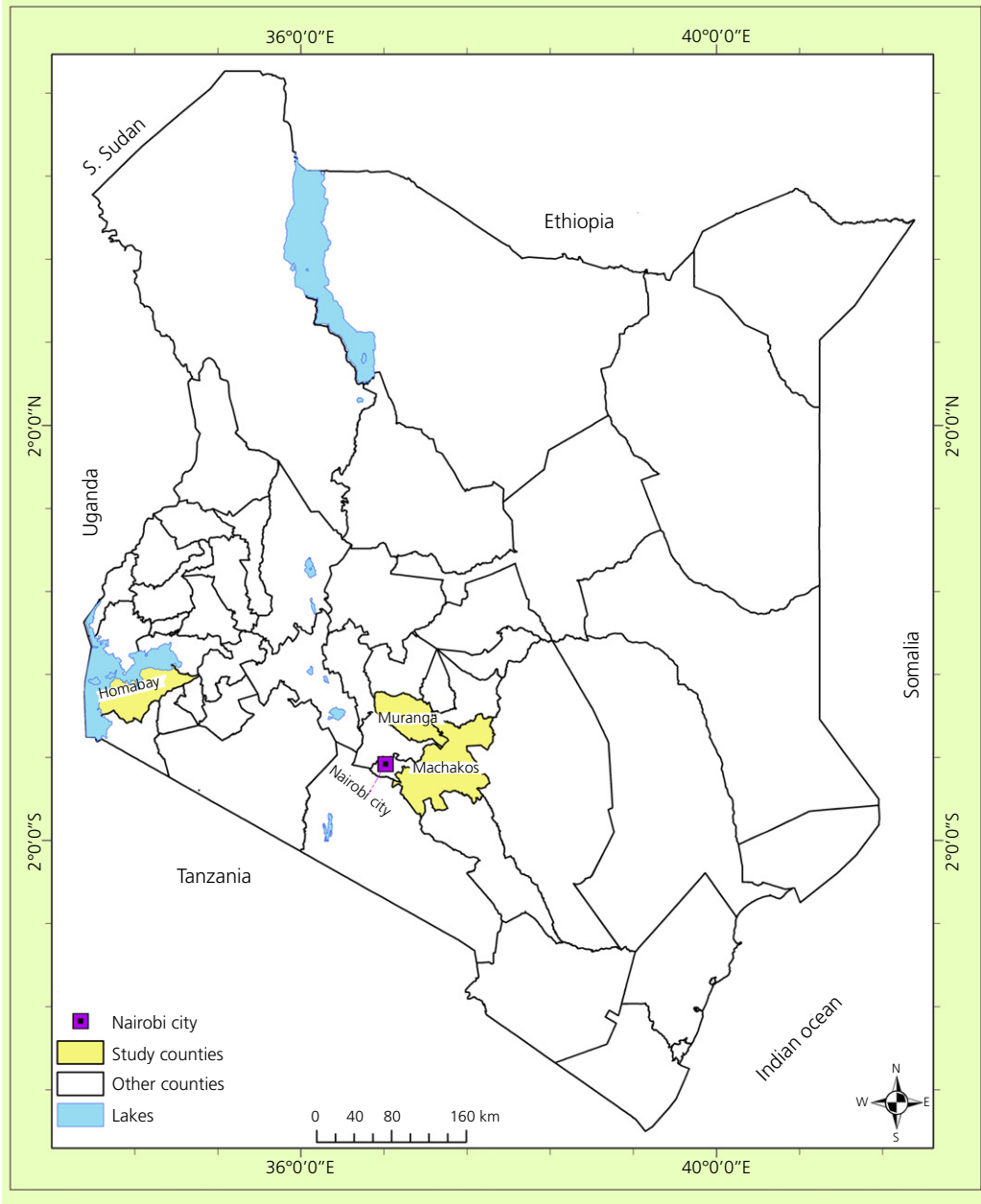


Figure 2. Study areas in Kenya

collection of primary data from transport institutions at both national and county levels. Qualitative methods were used to gain an understanding of underlying reasons, opinions and motivations for gender mainstreaming in rural transport institutions. Qualitative data were collected from 16 key informant interviews with staff from key institutions; 24 focus group discussions; four validation workshops; and case studies. Most significant change stories were solicited from individual members of the Murang’a and Machakos women’s Savings And Credit Co-operative (SACCO), to understand how their membership of the SACCO had impacted their access to project

finances, transport services, procurement opportunities, businesses and livelihoods. These methods provided an insight into the issues and helped the researchers to develop ideas or hypotheses for confirmation by quantitative analysis, where appropriate.

Quantitative research targeted collection of numerical data on staffing, decision-making structures, budgeting and procurements through structured questionnaires that were administered to six rural transport institutions, comprising KeRRA, KRB, KIHBT, NCA, NTSA and county transport institutions.

Table 1. Sampled rural transport institutions

Institutions	Category	Mandate
Ministry of Transport, Infrastructure, Housing and Urban Development (MTIHUD)	Implementation and funding policy and overseeing role	Development of transport infrastructure and services policies and regulations, overseeing role, including gender mainstreaming policies
Kenya Rural Roads Authority (KeRRA)	Implementation and supervision	Construction, rehabilitation and maintenance of classified rural roads
Kenya Roads Board (KRB)	Financing	Managing fuel levy and financing roads maintenance
National Construction Authority (NCA)	Regulation, registration and capacity building	Regulation of construction industry, registration and capacity building of construction works and contractors
National Transport and Safety Authority (NTSA)	Regulation and registrations	Regulations of road transport services and operations, registering motor vehicles/motorcycles and drivers/riders
Kenya Institute of Highway and Building Technology (KIHBT)	Training and capacity building	Training engineering and construction programmes at certificate and diploma levels as well as short-term contractors' courses
County governments, Ministry of Transport and Infrastructure	Financing and implementations	Finance, supervise or implement opening, construction and maintenance of rural unclassified roads and other road infrastructure (bridges, street lights, etc.)
National Gender and Equality Commission (NGEC)	Overseeing role and monitoring	Oversee and monitor implementations of gender and equality policies
Department of Gender Affairs (DoGA)	Coordination of gender affairs in public service	Development of gender mainstreaming policies and regulations, as well as guidance
Public Service Commission (PSC)	Staffing	Employment of staff in national government
County Public Service Board (CPSB)	Staffing	Employment of staff in county government
The French Development Agency (AFD)	Financing	Finances the construction of rural roads among other infrastructure development financing
University of Nairobi	Training/capacity building	Training of engineers at degree level

The quantitative data were processed to quantify and unravel changes as direct consequences of the gender mainstreaming efforts. While there were common questions across the institutions, each questionnaire was tailored according to each institution's mandate.

County-level stakeholder workshops were held at venues within the county headquarters, and each was used as a forum for feedback, verification and validation of information collected from the various stakeholders. The county stakeholder workshops culminated in a national stakeholders' workshop, in Nairobi, for national-level information dissemination and feedback attended by 30 representatives of national-, county- and community-level institutions. The rural transport institutions that participated included KeRRA, KRB, NCA, KIHBT, NGEC, DoGA, the Kenya Law Reform Commission, the International Development Law Organization (IDLO), CPSBs, county departments responsible for transport and infrastructure, Members of County Assembly (MCAs), Murang'a women's SACCO, constituency road committees, representatives of public transport SACCOS and ward administrators.

2.5 Gender mainstreaming assessment indications and analysis

Analysis was undertaken by descriptive gender analysis to establish gender composition in: staffing and decision-making structures; enrolments for engineering programmes; participation in capacity building; and procurement budget quota for the marginalised groups. Cross-sectional analysis was conducted to examine compliance with the two-thirds gender policy in

staffing, and trend analysis was conducted to trace the changes in gender compositions in staffing for selected institutions. Content analysis was applied to assess: non-numeric responses and data such as compliance with the 30% procurement policy; existence of gender mainstreaming policy; gender-responsive human resource practices; strategies, approaches, constraints, challenges and successes to gender mainstreaming policy; and practices within rural transport institutions.

3. Research findings

3.1 Gender mainstreaming instigated changes in staff composition and human resources practices in rural transport institutions

3.1.1 Gender composition in staffing

Out of seven sampled rural transport institutions, both from national and county levels, women constituted 23% of 1658 permanent and contracted staff. The majority of the rural transport institutions were yet to comply with the two-thirds constitutional requirements in employment, where no more than two-thirds of appointive and elective staff should be from the same gender. Only two out of the seven institutions, the KRB and the NCA, had complied with the requirement (Table 2).

Given that technical staff constitute the core implementing staff in transport institutions, their analysis by gender was imperative. The technical staff in rural transport institutions comprised civil engineers, quantity surveyors and engineering surveyors at professional, technical and artisan levels, as per

the KeRRA staff establishment and progression guidelines (KeRRA, 2012). It was found that, in aggregate, the composition of women in technical staff in the public rural transport institutions sampled in Kenya stood at 16% of 485 technical staff in 2016. This therefore implied that women staff predominantly served as support staff. A case in point is the NCA corporate department, where women comprise six out of seven staff (Table 3).

Table 2. Gender composition of permanent and contracted staff in 2016

Rural transport institutions	Permanent and contracted staff			% Women
	Men	Women	Total	
KeRRA	503	161	664	24
KRB	38	31	69	45
NCA	148	87	235	37
KIHBT ^a	148	37	185	20
County of Machakos	362	51	413	12
County of Murang'a	28	7	35	20
County of Homa Bay	46	11	57	19
Total	1273	385	1658	23

^aThe data were only for instructors

Table 3. Gender composition of technical staff in 2016

Rural transport institutions	Technical staff (engineers and technicians)			% Women
	Men	Women	Total	
KeRRA	143	19	162	12
KRB	9	3	12	25
NCA	59	13	72	18
KIHBT	148	37	185	20
County of Machakos	33	5	38	13
County of Murang'a	9	0	9	0
County of Homabay	6	1	7	14
Total	407	78	485	16

3.1.2 Changing trends in gender composition between 2011 and 2016

Owing to lack of disaggregated data over time, only four out of seven of the institutions presented data that were used for trends analysis in gender composition temporally. The analysis revealed zero or negligible positive changes in female staff composition in most rural transport institutions since 2011, and a decline in some cases (Figure 3). Only one out of the four institutions, KRB, had shown a marginal increase and compliance with the two-thirds principle, whereas KeRRA and KIHBT had declined from 26% to 24%, and from 25% to 20%, respectively, within the same period. The county of Machakos, the only county that provided requisite data for trend analysis, had a marginal increase from 8% in 2013 to 12% in 2016, with a declining trend within the last 2 years. It should be noted that counties became operational in 2013 in Kenya, after the first election, under the Constitution of Kenya 2010. Thus the county of Machakos lacked data for 2011 and 2012. Although counties have been recruiting new staff, national institutions have faced an embargo on new recruitment since 2008.

3.1.3 Gender-responsive human resource policy and practices

In addition to constitutional, legal and human resources policies for the public service, each government MDA is required to develop and implement the institutional gender mainstreaming policy that seeks to ensure that gender concerns are factored into the core business of the institution. This includes issues such as: recruitment, promotion and remuneration; equal treatment of both sexes; equal opportunities for advancement; equal pay for equal work; and the adoption of other measures to ensure working conditions are conducive for all (NGEC, 2016). Sampled national transport institutions, such as KeRRA, KRB, NCA and the Ministry of Transport and Infrastructure were at various stages of developing and implementing the institutional gender mainstreaming policy. Counties, however, were yet to have such a policy.

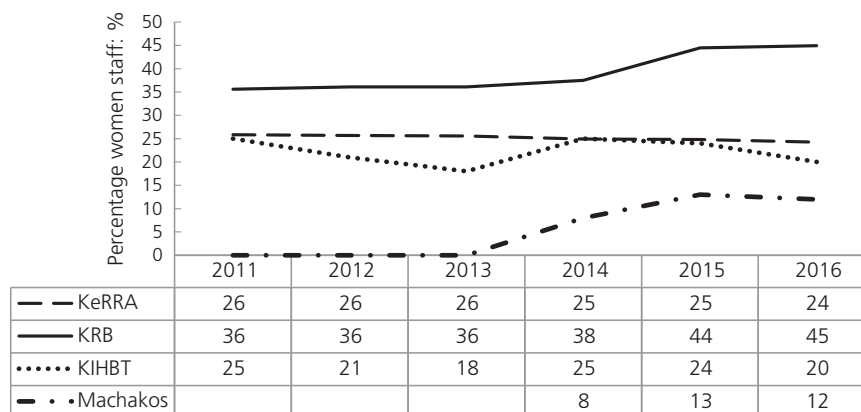


Figure 3. Trend analysis in women composition in staffing of selected rural transport institutions in Kenya from 2011 to 2016

Staff of rural transport institutions were entitled to enhanced maternity and paternity leave. Women were entitled to paid maternity leave privileges. Article E.5 (1) of the *Human Resource Policies and Procedures Manual for the Public Service* of 2016 (PSC, 2016a: p. 84), states that 'A female officer who is required to be absent from duty on account of confinement shall be granted maternity leave with full salary for a maximum period of ninety calendar days exclusive of the annual leave due for the year'. Similarly, Article E.7(1) makes male public officers eligible for paternity leave for a maximum period of ten working days. Some institutions such as KeRRA intend to institutionalise flexible working hours for mothers.

All national transport institutions have a gender mainstreaming committee and focal persons who promote and report on gender mainstreaming activities and compliance. Where the committee does not exist, such as at KIHBT, they nominate a gender committee representative at the ministry level. Gender mainstreaming reporting was found to be a performance contract issue for all MDAs in Kenya. Quarterly reports on gender mainstreaming, diversity and affirmative action in staffing and procurement were submitted to NGECC and the Public Procurement Oversight Authority (PPOA) from all the MDAs, both at national and county level. NGECC has mainstreamed the reporting format by circulating two reporting tools to all MDAs. These comprised a performance contracting reporting toolkit and a progress reporting format on mainstreaming actions in the government of Kenya (NGECC, 2014a).

3.1.4 Gender mainstreaming in capacity development

Capacity development on gender mainstreaming is a requirement of each of the MDAs in Kenya, to create awareness about gender equality, its rationale and how its attainment will contribute to the individual and general institutional wellbeing (NGECC, 2016). Out of the seven institutions sampled, only two provided gender disaggregated data on their staff who have participated in gender mainstreaming training since 2011. Of a total of 448 staff, 180 women (40%) had undertaken gender mainstreaming training between 2010 and 2016 at

KeRRA and KRB (Table 4). One striking observation is that a higher proportion of women attended the gender mainstreaming training than their staff composition. For instance, women comprise 24% of all staff at KeRRA, but gender mainstreaming participants stood at 43% and increased up to 62% in 2016.

Every member of staff in all MDAs was required to participate regularly in gender mainstreaming sensitisation workshops. All four national rural transport institutions that were sampled reportedly carry out sensitisation workshops annually, with outsourced expertise from the NGECC. For instance, 355 staff at KeRRA, comprising 223 men and 132 women, participated in a one-day gender mainstreaming sensitisation workshop in the 2015/2016 financial year. However, none of the sampled counties has ever conducted gender sensitisation workshops or capacity building for its staff.

3.1.5 Gender mainstreaming initiatives in private road contractors and labourers

The rural transport institutions deliver rural transport infrastructure through outsourced private sector contractors under their supervision. Although the private sector institutions are not bound by the two-thirds policy in employment, the public procurement entities may administratively influence such affirmative action on roadwork labourers, driven by developing gender mainstreaming culture rather than policy. From contract employment data at KeRRA's regional office in Murang'a, women comprised 28.87% of 5833 road contractor employees in the 2015/2016 financial year. In addition, women were given preferential treatment to encourage them to take up such opportunities in road construction works, which has traditionally been viewed as men's work.

3.2 Gender mainstreaming changes in decision-making structure

The research focused on decision-making at policy, executive and management level in rural transport institutions. Policy and oversight regarding decision-making in Kenya's national

Table 4. KeRRA and KRB gender mainstreaming training

Year	Gender mainstreaming trainees											
	KeRRA				KRB				Total			
	M	W	T	%W	M	W	T	%W	M	W	T	%W
2010/2011	12	7	19	37	38	21	59	36	50	28	78	36
2011/2012	7	4	11	36	39	22	61	36	36	26	72	36
2012/2013	8	5	13	38	39	22	61	36	47	27	74	36
2013/2014	6	7	13	54	40	24	64	38	46	31	77	40
2014/2015	3	4	7	57	35	28	63	44	38	32	70	46
2015/2016	3	5	8	62	38	31	69	45	41	36	77	47
Total	36	27	63	43	229	148	377	39	258	180	448	40

Note: M, men; W, women; T, total

Table 5. Gender composition in decision-making in rural transport institutions

Rural transport institutions	Men	Women	Total	%Women
KeRRA	85	9	94	10
KRB	30	9	39	23
NCA	21	8	29	28
KIHBT	25	5	30	17
Machakos County	18	6	24	25
Murang'a County	76	18	94	19
Homa Bay County	40	16	56	29
Total	295	71	366	19

transport institutions is the function of the board of directors (BoDs), who are political appointees of the president through the Ministry of Transport and Infrastructure. The executive-related decision-making is made at director level by director generals, general managers or directors at the national transport institutions. The executive, together with heads of support sections, form the management teams (Table 5).

In training institutions such as KIHBT, the decision-making structures comprise BoDs, an executive (director, principal and deputy principals) and management board. At county level, the executive and management team at the ministry in charge of transport would comprise the executive committee member and chief officer in charge of roads and infrastructure, in addition to all departmental directors. Equivalent to the board of directors is the county assembly in charge of transport at the county level, which carries out the role of overseeing and monitoring, as well as considering and defending transport-related policies. For KeRRA regional offices, constituency roads committees (CRCs) decentralise board-level decisions at the county and the constituency level, respectively, for county- and KeRRA-funded road projects.

3.2.1 Gender composition in decision-making levels in public transport institutions

Out of 366 decision-making positions in the seven rural transport institutions, men occupied 81% of the roles and women 19% (Table 5, see also Figure 4). The board of directors or equivalent demonstrated the best gender ratio, with women at 27%; followed by the management team at 14% and the executive at 11%. Almost all rural transport implementation institutions (KeRRA, Murang'a and Machakos counties) had 0% women representation at the executive- or director-level decision-making positions, apart from the county of Machakos with 20% women representations. Arguably, KRB and NCA had better representation of women, at 35% and 25%, respectively, due to their financing and regulatory mandates in the transport sector. The low proportion of female representation at executive and management level is most likely due to the requirements for engineering qualifications that fewer women possess. Improved female ratios among the BoDs are partly

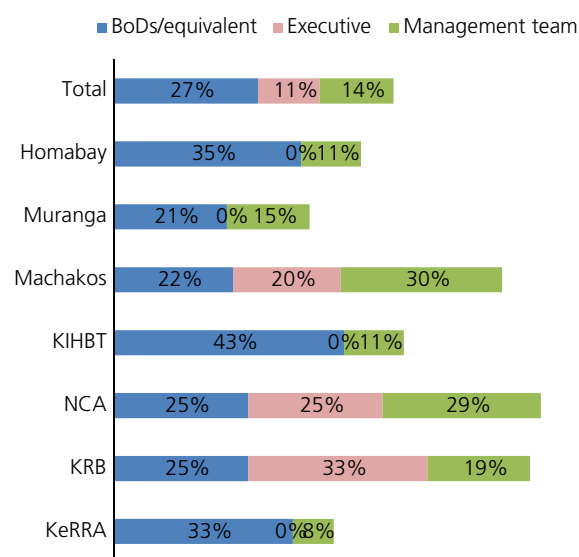


Figure 4. Variations in female composition in decision-making cadres by institution

due to their mode of contractual employment being political, where engineering qualifications not a necessity.

3.2.2 Composition of directorships in the private sector transport institutions

The numbers of women participating, alongside men, in rural infrastructure projects as directors of private contracting firms were on the increase in Kenya. The composition of women directors among contractors awarded road contracts by KeRRA Murang'a region was estimated at 35%. Other institutions also gave similar reports, with more and more women applying for construction opportunities. The survey of the KeRRA regional office found that most contractors had two directors, a man and a woman, most likely spouses. This could have been to take advantage of the 30% procurement policy.

3.3 Changes in budgeting and procurement practices

3.3.1 Compliance with 30% procurement quota

All of the rural public transport institutions sampled reported 100% compliance with the 30% procurement budget policy for the public sector. All government MDAs at national and county levels were legally required to adhere to this policy. KeRRA and NCA, for instance, allocated 1.6 billion Kenyan Shillings (KSh; US\$16 million) and KSh 540 million (US\$5.4 million), respectively, for the 30% procurement quota in the 2016/2017 financial year. The 30% procurement budget quota is normally rationally distributed by the institutions for women, youths and PWDs. For instance, KIHBT allocates 14% for women, 14% for youths and 2% for PWD. Despite the distribution, it was observed that women constitute the largest proportion of beneficiaries in most cases, since other marginalised groups rarely apply for the opportunities. Out of the 30%

procurement budget quota implementations at KIHBT, women, youth and PWDs shared 66%, 28% and 6%, respectively. Tendering advertisements in newspapers normally indicate whether the tender is open or restricted to marginalised groups to encourage disadvantaged groups to participate.

3.3.2 Improving access to procurement opportunities in the transport institutions

The study found that various rural transport institutions have taken initiatives to promote and encourage women's access to procurement opportunities in the rural transport sub-sector. Stringent procurement processes such as prequalification and requirement for security do not apply to the disadvantaged groups once they are registered by the Ministry of Finance. A woman contractor or supplier, for instance, only needs to own a minimum of 70% share of the contracting company to qualify for the preservation and preference scheme as a woman. Awareness training on public tendering and requirements was being conducted by the institutions, although in an uncoordinated manner. Additional initiatives showed NCA implementing annual prize awards for women contractors, as well as awarding international training sponsorships for selected private women contractors, with a recent case of four women contractors being sponsored in South Africa in 2016.

Furthermore, women were increasingly being represented in procurement committees constituted from time to time by procurement entities. In the county of Homa Bay, a tender committee at the Ministry of Transport and Infrastructure comprises five men and four women. In KeRRA Murang'a region, 20% of the constituency roads tender committee members in the majority of the seven constituencies were women, while in two cases a woman served as the chairperson (Table 6). This signifies a gradual improvement in the ratio of women's involvement in decision-making within critical procurement committees. On the other hand, towards improving access by women to procurement opportunities in transport, KIHBT has been conducting contractor's courses that have reported 27% female participation during the period 2013 to 2016. Out of 679 trainees, 183 were women. The Association

of Kenya Women in Construction has emerged to promote, lobby and expand women contractors' interests and opportunities.

3.4 Budgeting for gender mainstreaming capacity development at institutional level

Gender-responsive budgeting is integral in institutional gender mainstreaming efforts. The budget implements either institutional gender management systems and/or institutional service delivery activities. Institutional gender management systems target integration of gender aspects in all institutional systems, such as policies and guidelines, establishing mechanisms for ensuring equity, disaggregating data and training of all staff. The study found that some national rural transport institutions have undertaken gender-responsive budgeting by allocating funds annually under institutional gender management systems. For instance, KeRRA, NCA and KRB allocated KSh 4.2 million (US\$42000), KSh 500 000 (US\$5000) and KSh 500 000 (US\$5000), respectively, for gender mainstreaming capacity building-related activities in the financial years of 2015/2016 and 2016/2017. Through such budgets, gender focal persons and/or offices and committees have been operational in some of the public report institutions.

Institutional service delivery targets creation of enabling opportunity for citizens, irrespective of economic status, gender, ethnicity, race or political affiliation to access services and opportunities offered by each institution. This includes: taking gender considerations into account when planning for affordable and safe access and mobility; providing opportunities for men, women, youths and PWDs in supplies and roadworks; and adhering to gender affirmative regulations. Under institutional service delivery, KeRRA and NCA, for instance, allocated KSh 1.6 billion and KSh 540 million, respectively, of their 30% procurement quotas to women, youths and PWDs in 2016/2017, affording equitable opportunity of procurement and supplies of works, goods and services. Additionally, counties have been improving the safety of their roads through street lighting, establishing bumps and grading of rural access road and tracks, thus affording women the opportunity to use

Table 6. KeRRA Murang'a region constituency roads committees (CRCs) and constituency roads tender committees (CRTC's)

Constituency	CRCs				CRTC's			
	M	W	T	% Women	M	W	T	% Women
Gatanga	9	1	10	10	5	0	5	0
Kandara	4	4	8	50	4	1	5	20
Kangema	7	3	10	30	3	2	5	40
Kigumo	6	2	8	25	2	0	2	0
Kiharu	9	1	10	10	4	1	5	20
Maragua	9	2	11	18	4	1	5	20
Mathioya	9	1	10	10	4	1	5	20
Total	53	14	67	21	26	6	32	19

Note: M, men; W, women; T, total

them even at night. However, much remains to be done to afford equal opportunities in service delivery.

4. Discussion of the results

Gender mainstreaming efforts, mostly through constitutional affirmative action in Kenya, have not achieved the expected changes in staffing and decision-making structures in most rural transport institutions. The target is that no more than two-thirds in appointed and elected positions are of the same gender. The research found that, in aggregate, female staff composition comprised 23% of all staff within all the sampled transport institutions, with even lower composition in technical, top executive and management levels at 16%, 11% and 14%, respectively. It is only within the boards of directors that the female composition was nearing the target. The slow progress in meeting the gender composition target is in part due to the government freeze on new recruitment (PSC, 2016c) and fewer women in engineering disciplines (UNESCO, 2017). Additional strategies and approaches will be required to progressively and gradually improve women's representation in technical, management and executive staff, and at decision-making levels.

The results are consistent with the NGEC 2014/2015 annual report findings, indicating a failure in 100% compliance with the two-thirds policy in employment in 210 sampled public sector institutions (NGEC, 2015a). The report by NGEC in ten counties found that the minorities, marginalised groups and communities were similarly under-represented in the upper and middle employment levels. Another survey by NGEC in 2016 revealed that compliance according to the two-thirds gender principle in employment had a 41% score for ministries/departments, a 68% score for technical training institutes and a 66% score for public universities (NGEC, 2016).

The transport sector, with its core workforce of technical staff, mainly engineers and technicians, poses challenges in meeting the two-thirds policy in employment, partly because few women enrol for engineering studies. A survey in the University of Nairobi, department of civil and structural engineering, revealed that out of 749 registered for the BSc in civil engineering in the 2016/2017 academic year, only 19.5% were female. A similar survey at KIHBT on enrolment at various engineering-related diploma-level programmes in 2016, showed that out of 379 students, only 12% are female. Course attendance by gender from 2013 to 2016 at Kisii Training Centre reveals that, out of 679 trainees, only 27% were women. Indeed, data from the Engineers Board of Kenya showed a similar trend, whereby, as on 13 April 2017, registered female engineers represented only 8.6% of 10 024 registered engineers in Kenya. According to Unesco (2017), young women represent only 7 to 12% of engineering students in Africa, and only 10% of the engineering workforce is female in South Africa and 8% in Kenya.

A radical gender mainstreaming transformational change has been found in budgeting and procurements for works, goods and services, courtesy of the legislation of affirmative action. All surveyed rural public transport institutions complied with the 30% procurement policy (ROK, 2015). The procurement entities report on the implementation of this policy every 6 months to the PPOA. A survey by NGEC, however, found about 60% compliance with the procurement policy by 2014 (NGEC, 2016). This was expected at the beginning of the policy implementation, which was initially implemented as a regulation on preservation and preference scheme in 2010 before being legislated in 2015.

Whereas national rural transport institutions were making good progress in gender mainstreaming policy, capacity building and other human resources practices, the county-based institutions were lagging behind. Efforts to mainstream gender in staffing, budgeting, procurements and implementation in rural transport institutions were remarkable. However, the research found that there exist significant challenges faced by rural transport institutions in Kenya. Over-emphasis on the girl child and women in gender mainstreaming discourse has left an enduring perception that it is a women's agenda rather than being gender equitable (NGEC, 2015b). Rural women are unable to compete with enlightened and empowered urbanite women on 30% procurement opportunities meant for marginalised groups, which potentially introduces another layer of marginalisation and is counterproductive to the intentions of the affirmative policy. In some cases, women win transport construction contracts but sub-contract or act as proxies for established male contractors (NGEC, 2016), potentially attributable to their technical, managerial and financial limitations. Restrictions on fresh recruitment by all national institutions since 2008 have further constrained gender mainstreaming impacts in staffing. The research reaffirmed key findings on challenges facing implementation of gender mainstreaming in government ministries (Muyomi, 2014; NGEC, 2016; Njeru *et al.*, 2013).

5. Conclusions and recommendations

The research revealed that gender mainstreaming efforts had transformed rural transport institutions towards gender-responsive staffing, human resource practices, budgeting/procurements and implementations of transport-related works in compliance provisions in the Constitution of Kenya 2010, enabling legislations and policies. This has seen 100% compliance with a 30% procurement budget quota for women, youths and PWDs in all rural public transport institutions, as well as an increase in women's participation in rural transport infrastructure projects implementation and income opportunities in the rural transport sub-sector. Progress in gender composition in staffing is, however, constrained within the technical, executive and managerial levels due to: a systemically lower number of women in the engineering professions; their financial limitations and doubts regarding their technical and

managerial capacities; and an embargo on new employment opportunities in the public sector.

The most effective gender mainstreaming initiative in Kenya was the promulgation of the Constitution of Kenya 2010, heralding a spiral effect towards gender equality and equity in all political, economic and social spheres. It led to enactment and review of several gender-responsive laws, policies and guidelines for implementation. The existence of women's SACCOs, success stories, the Association of Kenya Women in Construction and champions of the empowerment of women, including in the transport sub-sector, are steadily entrenching institutional cultural change and improving gender equity.

Gender mainstreaming transformations in rural transport institutions are evidently work in progress, which should be attained gradually in Kenya. Thus key research recommendations for sustainable change can be listed as follows.

- Gradual but progressive compliance with the constitutional provisions on two-thirds gender provisions in permanent/contracted, technical and executive staffing.
- Prompt contract payments, because delays and general uncertainty about contract payments are exacerbating financial constraints in delivering the capital-intensive transport contracts and making them unattractive to women contractors. The prompt payment bill, which was proposed in 2016 by the Kenyan opposition (Olick, 2016), should be explored.
- Implementation of the diversity policy (2016) is imperative in order to build a public service that is inclusive and representative of the diversity of the Kenyan people.
- Expansion of capacity building and education on public tendering, access to project finance and implementation.
- Counties should implement and operationalise the *Roads 2000 Strategic Plan 2013–2017* strategy in Kenya (KRB, 2013).
- Institutionalising gender-responsive budgeting as recommended by the NGEC (2014b).
- Embrace cultural, religious and political leaders, as well as men, as champions of gender mainstreaming initiatives to counteract cultural stereotypes, attitudes and beliefs that hinder women's empowerment.
- Sensitise, mentor and induct the girls into science, technology, engineering and mathematics from family, community and basic education levels.
- Consider introduction and implementation of cross-cutting issues in transport, which are gender mainstreaming inclusive, in the engineering curriculum as part of training content at professional, technical and artisan levels.
- Explore community-focused projects, such as improving rural access in Tanzania (IRAT) (Cardno, 2017), which emphasise labour-based technologies by county governments.

- Study final report on gender mainstreaming in rural transport sector institutions in Kenya (Orwa *et al.*, 2017)

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REFERENCES

- ADB (Asian Development Bank) (2013) *Tool Kit on Gender Equality Results and Indicators*. Asian Development Bank, Mandaluyong City, Philippines.
- Cardno (2017) *Improving Rural Access in Tanzania (IRAT)*. Cardno, London, UK. See [http://www.cardno.com/en-us/projects/Pages/Improving-Rural-Access-in-Tanzania-\(IRAT\).aspx](http://www.cardno.com/en-us/projects/Pages/Improving-Rural-Access-in-Tanzania-(IRAT).aspx) (accessed 30/08/2018).
- Creswell JW (2013) *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 3rd edn. Sage, Thousand Oaks, CA, USA.
- ECOSOC (Economic and Social Council) (1997) *Mainstreaming the Gender Perspective into All Policies and Programmes in the United Nations System*. ECOSOC, Beijing, China.
- Graham JW (2012) *Missing Data: Analysis and Design-Statistics for Social and Behavioral Sciences*. Springer Science and Business Media, New York, NY, USA.
- KeRRA (Kenya Rural Roads Authority) (2012) *Career Progression Guidelines for the Staff of Kenya Rural Roads Authority (KeRRA)*. Kenya Rural Roads Authority, Nairobi, Kenya.
- Kothari C (2004) *Research Methodology: Methods & Techniques*, 2nd edn. New Age International (P) Limited, New Delhi, India.
- KRB (Kenya Roads Board) (2013) *Roads 2000 Strategic Plan 2013–2017*. Kenya Roads Board, Nairobi, Kenya.
- Murison S (2004) Elements of a gender mainstreaming strategy: a 14-point framework. *Development Bulletin* 64: 95–99. See <https://crawford.anu.edu.au/rmap/devnet/devnet/db-64.pdf> (accessed 11/04/2019).
- Muyomi JN (2014) *Challenges Facing Implementation of Gender Mainstreaming in Selected Government Ministries in Nairobi County, Kenya*. University of Nairobi Digital Repository, Nairobi, Kenya.
- NGEC (National Gender and Equality Commission) (2014a) *Performance Contracting Reporting Tool Kit: Equality and Inclusion Reporting Tools in the Public Sector*. National Gender and Equality Commission, Nairobi, Kenya.
- NGEC (2014b) *Guidelines for Gender Responsive Budgeting (GRB) in Kenya*. National Gender and Equality Commission.
- National Gender and Equality Commission, Nairobi, Kenya.
- NGEC (2015a) *Annual Report 2014–2015*. National Gender and Equality Commission, Nairobi, Kenya.
- NGEC (2015b) *The Status of the Boy Child in Kenya: A Report of Emerging Perception on the Exclusion of the Boy Child in the*

- Gender Equality Agenda*. National Gender and Equality Commission, Nairobi, Kenya.
- NGEC (2016) *Gains and Gaps: Gender Mainstreaming in Public Sector in Kenya Status Report 2013–2015*. National Gender and Equality Commission, Nairobi, Kenya.
- Njeru CK, Ndungo CM and Wamau-Ngare GN (2013) *Challenges of Mainstreaming Gender in National Planning & Budgeting Process*. Kenyatta University Institutional Repository, Nairobi, Kenya.
- Olick F (2016) Raila Odinga proposes Bill to cut out graft cartels [electronic version]. *The Star*, 25 November.
- Orwa S, Ombai M, Nyangueso S and Sheba S (2017) *Gender Mainstreaming in Rural Transport Sector Institutions in Kenya*. ReCAP for DFID, London, UK, Final Report.
- PSC (Public Service Commission) (2016a) *Human Resource Policies and Procedures Manual for the Public Service*. Public Service Commission, Nairobi, Kenya.
- PSC (2016b) *Diversity Policy for the Public Service, May 2016*. Public Service Commission, Nairobi, Kenya.
- PSC (2016c) *Evaluation Report for the Year 2015/2016 on Public Service Compliance with the Values and Principles in Articles 10 and 232 of the Constitution*. Public Service Commission, Nairobi, Kenya.
- ROK (Republic of Kenya) (2010) *Constitution of Kenya 2010 [Electronic Version]*. National Council for Law Reporting, Nairobi, Kenya.
- ROK (2011) *The National Gender and Equality Commission Act, 2011*. National Council for Law Reporting, Nairobi, Kenya.
- ROK (2015) *The Public Procurement and Asset Disposal Act, 2015*. Government Printer, Nairobi, Kenya.
- Unesco (United Nations Educational, Scientific and Cultural Organisation) (2017) *Women in Engineering*. Unesco, Paris, France. See <http://www.unesco.org/new/en/natural-sciences/science-technology/engineering/women-in-engineering/> (accessed 15/07/2018).

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