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Effect of Policy Network Individual Actors' Characteristics on Policy Process Outcomes in the Road Transport Sector in Nairobi City County, Kenya

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Abstract

Purpose: Public policy making process in the transport sector in Nairobi City County, Kenya faces a myriad of challenges as reflected in the high failure rate of most of the policies. Often ignored are the characteristics of individual actors within a policy network which can have a major impact on the public policy process by shaping how the policy is framed, negotiated, and implemented. Considering the increasing challenges in the policy making process and considering the importance of individual actor's characteristics in this process, this study sought to establish the effect of policy network individual actors' characteristics on policy process outcomes in the road transport sector in Nairobi City County, Kenya.

Methodology: The study adopted a descriptive research design. The target population of the study was 470 policy actors in the road transport sector within Nairobi City County out of which 407 were purposefully sampled to respond to the questionnaire and 45 were sampled to participate in focused group discussions as well as key informant interviews. A mixed methodology was adopted whereby both quantitative and qualitative data was collected through structured questionnaires, key informant interviews and focused group discussions. The quantitative data was analyzed through descriptive statistics that is mean, frequencies and percentages as well as regression analysis. On the other hand, qualitative data was analysed through thematic analysis and reported in a narrative format.

Findings: The study established that characteristics of individual actors within a policy network can significantly influence public policy processes outcomes by shaping how the policy is framed, how it is negotiated, and how it is implemented.

Recommendations: The study recommends a need to increase the influence of individual actors within the policy network by providing them with more opportunities, resources and necessary support to engage in decision-making processes. There is also a need for involved stakeholders in the policy making process in the transport sector in Nairobi City County to create a platform for individual actors to share their opinions, experiences, and perspectives on relevant policy issues. The study further recommends the involved stakeholders in the policy making process in the

transport sector in Nairobi City County to provide resources and support to individual actors in order to strengthen their capacity and knowledge in policy making processes.

Keywords: *Network collaboration, policy process, policy outcomes, road transport sector, Kenya*

BACKGROUND OF THE STUDY

Road transport policies serve a variety of key sectors of the society and a multiplicity of actors seek to influence policy outcomes (Veneeman, 2018; Docherty, Marsden & Anable, 2018). However, increasing fragmentation and complexity of road transport sectors policy issues remain a challenge. Yet, realization of sustainable transportation goals is not possible without an integrated approach for policy problem identification, agenda setting, formulation, implementation, monitoring, evaluation, review and change (United Nations, 2020; World Bank, 2014; World Bank, 2017). Globally, majority of cities and metropolitan regions face challenges associated with a number of policy domains addressed collectively as cross cutting polices issues. Many metropolitan regions suffer from lack of meaningful public participation in policy process, inadequate road infrastructure, inclusion, equality, equity, climate change, safety, affordable and accessible road passenger transport services (UN-Habitat, 2020). Yet, integration of informal and formal mechanisms in policy process remains a challenge despite the reality of informality in public policy processes (Marsden & Reardon, 2017; Poku-Boansi & Marsden, 2018).

Since 1973, several policy reforms have been undertaken in road transport sector in various parts of the world. These reforms have contributed to transport policy innovation and transfer from Latin America to other parts of the world. In the East African region, the five-member state countries have developed strategies and policies in road sector using participatory approaches (World Bank (WB), 2020). However, these countries mainly focus on development of road network infrastructures strategies and policies with very little on the role of self-organized networks in road sectors on realization of policy objectives (UN-Habitat, 2020). Arnold (2020) established that individual policy network actors have a strong networking and support for mobilization capability to influence policy process outcomes. These actors are usually very ambitious, committed, motivated, energetic, goal oriented and visionary. Chatfield and Reddick (2018) further posit that individual policy network actors tend to be great timers of knowledge context and relevance to policy issues and have capability to influence policy process outcomes.

In addition, Anderson, Deleo and Taylor (2019) documented the importance of policy network individual actors' characteristics in shaping the policy making process and improving outcomes. The authors document that poor policy actors' characteristics is associated with lack of effective coordination between actors. This can lead to inefficient use of resources and a lack of collaboration among stakeholders. It can also lead to a lack of transparency and accountability, resulting in a lack of trust between actors and stakeholders. Cairney (2018) further stated that failure to consider policy network individual actors' characteristics in policy making process can lead to a lack of strategic direction and results in ineffective implementations of policy initiatives. In some cases, it can also lead to a lack of public input, resulting in policies that do not adequately reflect the needs and interests of the community. This is supported by Budd and Ison (2020) who

revealed that undefined actor's characteristics can lead to a lack of collaboration between the public and private sectors. This can lead to a lack of trust, communication, and information-sharing between the two sectors, resulting in ineffective policy outcomes. It can also result to a lack of expertise and experience in policy-making. This can result in ineffective policies that are not based on evidence and that do not adequately address the needs of the community (Budd & Ison, 2020).

Problem Statement

Network governance and public policy implementation in the transport sector in Nairobi, Kenya present many challenges (Uberti & Salsano, 2020). Despite informal road transport sub-sector centrality in meeting public demand for urban transportation services in Nairobi City County, there is a growing consensus that the paratransit system lacks efficacy (McCormick et al., 2013; Behrens et al., 2015; Behrens et al., 2017; Mutongi, 2017). Nairobi City County Metropolitan Area in Kenya hosts a multiplicity of road transport sector policy networks in a multilevel governance arrangement. However, the role policy networks play in road transport sector in shaping policy process outcomes remains unclear (International Labour Organization (ILO), 2019; Kloop, 2015; Klopp & Cavoli, 2019; Mitullah & Opiyo, 2017). The Kenya Integrated Transport Policy (ITP) of 2009, emphasized on involvement policy actors at multilevel policy governance with cross cutting linkages to other subsector policies. Yet, it is not clear how policy network actors influence public policy process outcomes.

The characteristics of individual actors within a policy network has less been considered in most of the policy making processes in this sector. This is despite an argument by Almeida and Gomes (2019) that the characteristics of individual actors within a policy network can significantly influence public policy processes by shaping how the policy is framed, how it is negotiated, and how it is implemented. Additionally, the effect of policy network individual actors' characteristics on policy process outcomes has received less empirical focus (Almeida & Gomes, 2019), which motivated this study in unearthing some of the effects of policy network individual actors' characteristics on policy process outcomes considering the poor performance of policies in the transport sector in Nairobi City County, Kenya.

Objective of the Study

The study aim was to establish the effect of policy network individual actors' characteristics on policy process outcomes in the road transport sector in Nairobi City County, Kenya

LITERATURE REVIEW Empirical Review

Network actor characteristics are described based the dimensions of actor "goals and roles, actor sectors, geographic and social scale, role centrality, and the types of resources that they bring to the network" (Kapucu et al. 2017). Individual characteristics shape policy network coalition formation and are institutionalized through policy games. In such policy games, the individual actors seek to maximize their pay off while minimizing loses which may arise from the interaction exchanges (Leifeld & Schneider, 2012; Shrestha, 2013; Lubell, Robins & Wang, 2014; Fischer, 2017). The nature and extent of horizontal interactions and exchanges between and across different policy network actors at the micro level depends on individual actors' characteristics. Upstream

support to policy agenda setting is determined by nature and extent of horizontal interactions and exchanges between and across different policy network actors at the micro level (Fischer, 2017; Kapucu et al., 2017). The nature of interactions, exchange of resources and information depend on level of trust among various actors.

Interactions and resource exchanges with street-level bureaucrats motivate their perceived complexity and uncertainty of public policy process. Consequently, policy networks actors at the micro level mitigate on the complexity and uncertainty by seeking information and resources horizontally (Kapucu et al., 2014). The implication of this is that the networks feature of actor diversity, level of integration, sufficient stability, and trust are important. The attitudes, skills and knowledge gained from the interactions and interdependencies leads to emergent coping behaviors affecting policy process outcomes. However, existing literature is not clear on effect of policy network manager's role on policy process outcomes in road transport sector. There need to examine the role and strategies employed by the individual network actor in the frontline from multilevel governance perspective (Cairney, 2018).

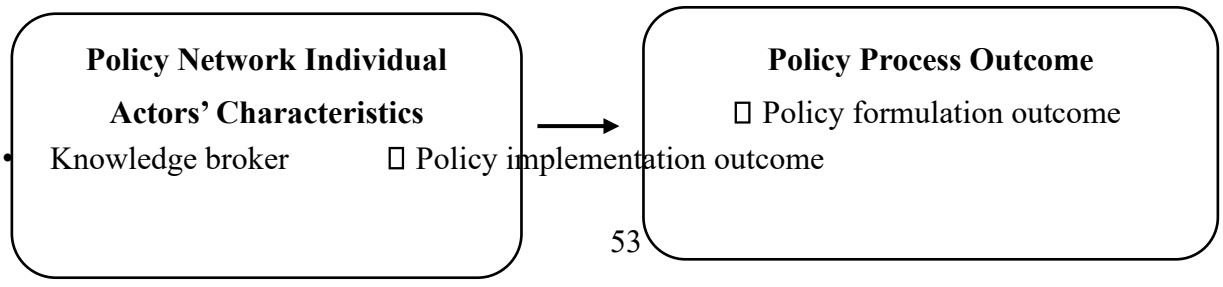
Aviram, Cohen and Beeri (2019) established that individual actors who influence policy agenda setting and formulation have entrepreneurial characteristics and capability to deploy various strategies and tactics to influence policy process. These findings are consistent with those by (Anderson, DeLeo & Taylor, 2020). However, other scholars (Botterill, 2013; Minstrom et al., 2014) contend that several contextual factors act as barriers to individual actors influence on policy process outputs and outcomes. DeLeo (2018) argue that policy process outcomes are influenced by individual actors in the policy arena who are powerful and effective communicators.

On the contrary, other scholars call for further investigation on the influence of individual actors and policy networks on policy process outcomes using theoretical approaches that are novel (Aviram, Cohen, & Beeri, 2019). A study by Teklewold et al. (2019) conducted in Ethiopia on livestock sector policy examine various actors in the policy arena, their interactions, salience and network features. Findings reveal that from the multilevel governance perspective, centrality of government actors at the transnational and federal levels positions them as policy change champions, brokers and actors bridging other actors in the devolved and local level governments.

Conceptual Framework

The conceptual framework shown in Figure 1 hypothesizes the interaction between policy network individual actors' characteristics and policy process outcomes in the road transport sector within Nairobi City County.

Independent Variable **Dependent Variable**



- Mobilization skills Policy adoption outcome
- Cognitive skills

Figure 1: Conceptual Framework RESEARCH METHODOLOGY

The study adopted a descriptive research design where all the actors in the transport sector in Nairobi City County, Kenya were surveyed. The target population of the study was 470 policy actors in the road transport sector within Nairobi City County, Kenya out of which a sample size of 407 was determined through Krejcie and Morgan (1970) formula. The sample size of 407 was then sampled through purposeful sampling. A mixed methodology was adopted whereby both quantitative and qualitative data was collected through structured questionnaires and Key Informant Interviews. The quantitative data was analyzed through descriptive statistics that is mean, frequencies and percentages as well as correlation and regression analysis. On the other hand, qualitative data was analysed through thematic analysis and reported in a narrative format. The effect of policy network individual actor's characteristics on policy process outcomes in the road transport sector in Nairobi City County, Kenya was established through a univariate linear regression model of the form below:

$$Y = \beta_0 + \beta_1 X + \varepsilon$$

Where Y is policy process outcome, X is policy network individual actor's characteristics and ε is the error term which is normally distributed with a mean of zero.

DISCUSSION OF STUDY FINDINGS Response Rate

The study targeted 407 actors in the road transport sector to respond to the questionnaires. In addition, 45 respondents were targeted to participate in the key informant interview. Out of the number, 307 respondents responded to the questionnaires as required giving a response rate of 75% while 42 participated in the interview and Focused Group Discussions giving a response rate of 93%. This was satisfactory according to the argument by Mugenda and Mugenda (2003) who stated that a response rate above 50% was an adequate response rate for analysis.

Descriptive Statistics of Policy Network Individual Actors' Characteristics

Descriptive statistics ranging from measures of central tendency (Mean and Standard deviation) as well as frequency and percentages of the responses to statements on this variable are presented in this section. The first part established the perception of the respondents using a five-point Likert scale from "strongly disagree' to 'strongly agree" on their attitudes, norms and beliefs on various individual actor's role in the public transport policy process involvement in the road transport sector within Nairobi City County. Table 1 summarizes the results.

Table 1: Perception on policy individual actor's characteristics on policy process outcomes

	Frequency	Percentage

Disagree	3	1.00%
Agree	203	66.30%
Strongly Agree	100	32.70%
Total	**307**	**100%**

The result in table 1 reveal that 98.9% of the respondents in the survey collectively "Agreed" and "Strongly Agreed" that individual actors were influential in the public transport policy within Nairobi City County. However, about 0.1% and 1% of the respondents were "indifference" and "Disagreed" respectively on their influential level in the in the public transport policy within Nairobi City County. Similarly, the qualitative findings revealed that various actors had different influence: citizens (75.2%), politicians (72.6%), political parties (87%), public servants (75.4%), epistemic communities and other cognitive leaders (66.3%), industry, business and professional associations (77%), public associations, trade unions and advocacy networks (80.1%) while the media (75.3%).

These findings are supported by the Focused group discussion and Key informant finding that generally opines that policy network individual actors allow deliberation and advocacy on road transport sector issues framed as problem for agenda setting by describing the causes of the problem and providing the policy solutions influence policy process outcomes. Policy network individual actors' characteristics temporarily spearhead policy making process tend to play a role in raising the issue to policy agenda (FGD1, 2022).

Conversely, the first and second focused group discussions opined that these network individual actors' characteristics leverage on resources which include policy network actors' capabilities, political, human capital and information communication technology capability to have competitive advantage over other actor interested in influencing policy agenda setting in the road transport sector and more importantly will always shape political resources by acting proactively through lobbying and building of advocacy coalitions to influence agenda setting outcomes(FGD1;FGD2, 2022).

However, a key informant opined that policy network individual actors' characteristics affect how various resources, interactions, linkages and interdependencies with both internal and external network actors in the agenda setting arena influence policy process outcomes (PK114,2022). In general Policy network individual actors' characteristics effectiveness directly or indirectly influence policy agenda setting depending on the level network integration, resource munificence, local capacity, management capacity, quality of collaboration, legitimacy and actor strategies and actor types (PK1-09,2022). Statements on policy network individual actors' characteristics were further rated on a five-point likert scale as shown in table 2.

Table 2: Descriptive Analysis of Policy Network Individual Actors' Characteristics

Item Statement	Response (% of 307)						
	SD	D	N	A	SA	Mean	Std Dev
I always have the curiosity, imagination and to connect ideas when seeking solutions to public policy problems in the road transport sector	3	5	5	14	73	4.50	1.00
I always have self-belief, self-assurance, selfawareness, feel empowered and confident to contribute to policy process in road transport sector	1	4	5	22	68	4.52	0.84
I am always self-driven, enthusiastic, motivated, persistent and committed in contributing to road transport sector policy process outcomes	1	4	5	28	62	4.47	0.83
I always have a high-risk tolerance and take calculated risks in contributing to road transport sector policy process outcomes	3	5	5	39	48	4.25	0.97
Item Statement	**Response (% of 307)**						
	SD	**D**	**N**	**A**	**SA**	**Mean**	**Std Dev**
I always argue and also persuade policy makers to include policy ideas that are supported strongly by citizens	1	4	5	13	77	4.62	0.83
I always identify, exploit and explore window of opportunities to strategically influence road transport sector policy process outcomes	1	4	5	4	86	4.71	0.81
I always build teams and networks among various policy network actors seeking to influence policy outcomes	3	4	5	52	36	4.19	0.92
I always strategize to participate in various policy venues	3	5	5	30	57	4.34	0.98
Average						**4.45**	**0.90**

Key:SD= Strongly Disagree; D= Disagree; N= Neither Agree or Disagree; A= Agree; D= Strongly Agree

Overall, the study established that there existed various policy network individual characteristics in road transport sector within Nairobi City County, Kenya which strongly determined policy

process outcomes (Overall Mean = 4.45). There was a small variation in the respondent's responses as shown by a small standard deviation (Std Dev = 0.90) which implies that most of the respondents held related opinions in regard to the theme. It was specifically established that majority of the respondents strongly agreed that they always have the curiosity, imagination and to connect ideas when seeking solutions to public policy problems in the road transport sector (M = 4.50), they always have self-belief, self-assurance, self-awareness, feel empowered and confident to contribute to policy process in road transport sector (M = 4.52) and that they are also always self-driven, enthusiastic, motivated, persistent and committed in contributing to road transport sector policy process outcomes (M = 4.47).

Importance was also placed on characteristics such as high-risk tolerance, persuasion and ability to identify, exploit and explore window of opportunities as important in driving policy process outcomes given that majority of the respondents agreed that they always have a high-risk tolerance and take calculated risks in contributing to road transport sector policy process outcomes (M = 4.25), they always argue and also persuade policy makers to include policy ideas that are supported strongly by citizens (M = 4.62) and that they also always identify, exploit and explore window of opportunities to strategically influence road transport sector policy process outcomes (M = 4.71). The respondents also placed emphasis on the importance of building teams and networks as well as strategizing by agreeing that they always build teams and networks among various policy network actors seeking to influence policy outcomes (M = 4.19) as well as strategize to participate in various policy venues (M = 4.34).

Regression Analysis

The assumptions of using the least square estimator are that the predictor variables should not be highly correlated, the error term should be normally distributed (normality) with a constant variance (homoscedasticity) and a mean zero and that it should not be highly correlated across the predictor variables (serial correlation). These assumptions are tested under this section before running the regression model. One of the assumptions of least square regression is that the error term should be normally distributed. This study tested for this assumption graphically using P-P plots for regression standardized residual as well as the normality plot as shown in figure 2.

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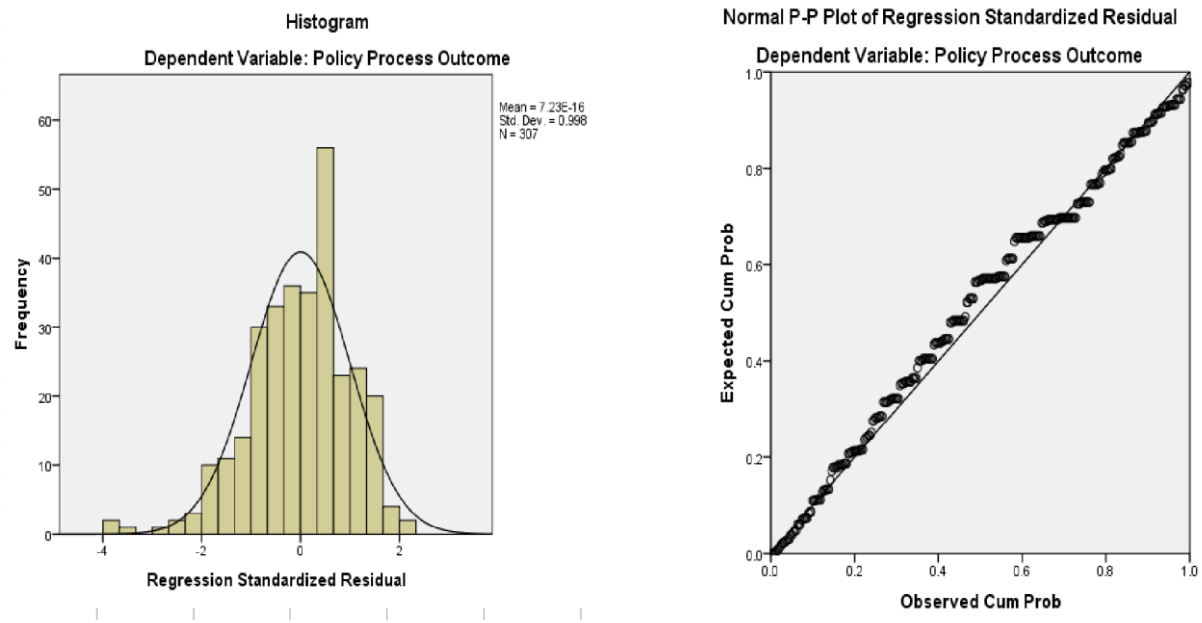

Figure 2: Normality Test of the Regression Residual

As indicated in figure 2, it was established that the error term adopted a normal distribution, as shown by a bell shape, which is a requirement of using least square. Therefore, it was suitable to use a least square estimator regression model. This assumption of serial correlation was tested using Durbin Watson method which requires the DW statistic to be between 1.5 and 2.0 to imply absence of serial correlation as shown in table 3.

Table 3: Durbin Watson Test of Autocorrelation Durbin Watson (DW)

1.773	

Predictors: (Constant), Policy Network Individual Actors' Characteristics

Based on the results in Table 3, it was documented that the DW value of 1.773 was between the recommended value of 1.5 and 2.0. This demonstrated absence of serial correlation hence it was suitable to use a regression least square estimator regression model. The assumption of Heteroscedasticity was tested using Breusch Pagan method which requires that the P-Value is not significant so that the null hypothesis of homoscedasticity is upheld. The results of this test are shown in table 4.

Table 4: Breusch Pagan test of Heteroscedasticity

Breusch Pagan test of Heteroscedasticity

Chi^2 (1)	0.0001
Prob > Chi^2	0.9671

As shown in table 4, the P-Value (0.9671 is greater than 0.05) meaning that the null hypothesis homoscedasticity is upheld. This implies that the error term had constant variance which is a requirement for using the least square estimator regression model. After ascertaining that the use of a least square model would not violate its assumptions, the study used this inferential method to determine the nature and magnitude of the relationship between Policy Network Individual Actors' Characteristics and Policy Process Outcome. The bivariate regression model summary results are presented in table 5. The coefficient of determination results (R-square) indicates the variation in the dependent variable (Policy Process Outcome) accounted for by the independent variable (policy network individual actors' characteristics). **Table 5: Model Summary**

		Adjusted R Square	Std. Error of the Estimate
.351	0.123	0.121	0.3072
R			**R Square**

Predictors: (Constant), policy network individual actors' characteristics

The results are presented in Table 5 indicate that policy network individual actors' characteristics have a positive association with policy process outcome to mean that an improvement in policy network individual actors' characteristics is associated with an improvement in policy process outcome (R = 0.351). In addition, the results showed that policy network individual actors' characteristics account for up to 12.3% of the variation in policy process outcome (R-Square = 0.123). Other than that, the remaining variation can be predicted by other factors. The study also tested for the fitness of the regression model linking the two variables using ANOVA as shown in table 6.

Table 6: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.056	1	4.056	42.973	.000
Residual	28.788	305	0.094		
Total	**32.844**	**306**			

Dependent Variable: Policy Process Outcome Predictors: (Constant), Policy Network Individual Actors' Characteristics

The results as presented in table 6 show that using F test, the F-calculated value of 42.973 was greater than the F-critical ($F_{0.05,1,305}$) value of 3.872 implying that the model was significant. This

is confirmed by a significant P-value (Sig = 0.000 < 0.05) implying that the regression model linking policy network individual actors' characteristics s to policy process outcome was significant and fit. Therefore, any conclusions drawn from it are relevant. Lastly, the regression model coefficients were established as shown in table 7.

Table 7: Model Coefficients **Unstandardized** **Standardized**

	B				
	Coefficients	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	2.99	0.220		13.569	0.000
Policy Network Individual Actors' Characteristics	0.323	0.049	0.351	6.555	0.000

Dependent Variable: Policy Process Outcome

The regression model coefficient results in table 7 indicate that other factors held constant, policy network individual actors' characteristics have a positive and significant effect on policy process outcomes ($\beta = 0.323$; $t = 6.555 < 1.96$; P-value < 0.05). This implies that a unit improvement in policy network individual actors' characteristics would result to an improvement in the policy process outcomes by up to 0.323 units. These findings are supported by finding by scholars such as Anderson et al. (2020); Aviram et al. (2019) and Botterill (2013) who established that the characteristics of individual actors within a policy network can significantly influence public policy processes by shaping how the policy is framed, how it is negotiated, and how it is implemented.

CONCLUSION

The study concludes that the characteristics of individual actors within a policy network can significantly influence public policy processes by shaping how the policy is framed, how it is negotiated, and how it is implemented. If an individual actor has a great deal of knowledge and expertise in a particular area, they may be able to shape the policy proposal in a manner that is more favourable to their interests and more likely to get approved. Similarly, the influence of individual actors may be amplified if they are well-connected and can draw on the support of other powerful actors in the policy network. Finally, individual actors may use their power to block or delay policy proposals that they oppose or seek to modify them in a way that works to their advantage. In this way, the characteristics of individual actors can have a major impact on the public policy process.

RECOMMENDATIONS

Based on the study findings, the study a recommends a need to increase the influence of individual actors within the policy network by providing them with more opportunities, resources and necessary support to engage in decision-making processes. There is also a need for involved

stakeholders in the policy making process in the transport sector in Nairobi City County to create a platform for individual actors to share their opinions, experiences, and perspectives on relevant policy issues. The study further recommends the involved stakeholders in the policy making process in the transport sector in Nairobi City County to encourage individual actors to use their networks to advocate for their causes and interests within the policy network.

There is also a need to provide resources and support to individual actors in order to strengthen their capacity and knowledge in policy making processes. This can also be achieved by creating opportunities for individual actors to build relationships with other actors within the policy network. Additionally, it can be achieved by providing training and education to individual actors on the policy-making process and on how to effectively influence the process. The involved stakeholders in the policy making process in the transport sector in Nairobi City County should also increase the visibility of individual actors within the policy network by highlighting their successes and contributions.

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