



## The Youth Bulge and Multidimensional Human Security: Evidence from Baringo County, Kenya

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### Abstract

The intersection of rapid demographic expansion and human security remains an underexplored area in sub-Saharan African policy research. This study examines the multidimensional impact of the youth bulge on economic, environmental, social, and political security in Baringo County, Kenya—a region in which persons aged 15–35 years constitute approximately 60 per cent of the total population. Employing a mixed-methods design, the study draws on a stratified random survey of 114 respondents alongside semi-structured key informant interviews with county government officials, community leaders, and youth representatives. Multiple regression analysis reveals that high youth unemployment ( $\beta = 0.401$ ;  $p < 0.001$ ) and social instability ( $\beta = 0.342$ ;  $p < 0.001$ ) are the strongest predictors of diminished human security, while untapped demographic dividend ( $\beta = -0.195$ ;  $p < 0.01$ ) compounds structural vulnerability. The model explains 67.3 per cent of variance in human security outcomes ( $R^2 = 0.673$ ;  $F = 47.82$ ;  $p < 0.001$ ). Qualitative evidence corroborates survey findings, underscoring resource depletion, youth political marginalisation, and rising criminality as interlocking threats. Yet the study also identifies nascent opportunities: youth-led conservation initiatives, emerging entrepreneurship, and community vigilance efforts signal latent social capital that, with appropriate policy scaffolding, could convert demographic pressure into a dividend. The article contributes to human security theory by situating demographic transition within devolved governance contexts, extending the analytical reach of Social Capital Theory to marginalised youth cohorts in arid and semi-arid lands (ASALs). Policy implications focus on integrated youth employment strategies, decentralised social service delivery, participatory environmental governance, and inclusive political architecture.

**Keywords:** *youth bulge; human security; demographic dividend; Baringo County; arid and semi-arid lands*

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## Introduction

Across sub-Saharan Africa, the confluence of sustained high fertility and declining infant mortality rates has produced one of the most pronounced demographic structures in recorded history. Nowhere is this more consequential than in Kenya's northern Rift Valley, where the youth cohort (ages 15–35) constitutes approximately 60 per cent of Baringo County's total population—a figure substantially above the national average of 35.6 per cent (Kenya National Bureau of Statistics [KNBS], 2019). This demographic configuration, widely theorised as a “youth bulge,” has generated substantial scholarly and policy interest, particularly regarding its capacity to simultaneously destabilise and develop fragile subnational economies (Urdal, 2006; Cincotta, Engelman, & Anastasion, 2003).

Human security—defined in its foundational formulation by the United Nations Development Programme (UNDP, 1994) as freedom from fear and freedom from want across seven interlocking dimensions (economic, food, health, environmental, personal, community, and political security)—offers a theoretically generative lens through which to assess the population-security nexus. Unlike state-centric security paradigms, the human security framework foregrounds the individual and community as the primary referents of analysis, making it analytically suited to contexts where demographic pressures are experienced unevenly across social strata. In Baringo County, the manifestation of this demographic-security interface is complex: the youth bulge simultaneously represents a potential engine of economic growth and a structural driver of unemployment, environmental strain, and political marginalisation.

The empirical record on youth bulges and insecurity is instructive but contested. Urdal (2006) established a robust statistical correlation between large youth cohorts and armed conflict risk in developing countries, an argument echoed in Collier and Hoeffler's (2004) resource curse and grievance framework. More recently, however, scholars such as Sommers (2011) and Honwana (2014) have cautioned against demographic determinism, arguing that institutional quality, governance structures, and the availability of productive pathways mediate the relationship between youth bulge and insecurity. In Kenya, these mediating conditions are particularly salient: devolved governance introduced under the 2010 Constitution created county-level institutional architectures that, in theory, bring resource allocation decisions closer to youth communities, yet empirical assessments of this devolution dividend remain sparse in marginalised ASALs such as Baringo (Hope, 2014; Bosire, 2019).

This article addresses three related gaps in the literature. First, it moves beyond aggregate national-level analyses to examine youth-security dynamics at the county level, where heterogeneous local conditions shape outcomes in ways that national surveys obscure. Second, it adopts a multidimensional human security framework rather than reducing insecurity to conflict or crime, thereby capturing the interconnected nature of economic, environmental, social, and political vulnerability. Third, it integrates regression-based inferential statistics with qualitative key informant perspectives, providing a methodological triangulation that strengthens causal inference in a context where administrative data are limited.

Baringo County presents a theoretically productive case. Its youth unemployment rate—21 per cent, well above the national rate of 14 per cent (KNBS, 2019)—combined with significant natural resource dependence, historical patterns of inter-communal conflict, and an ongoing devolution experiment, creates a natural laboratory for examining the multidimensional drivers of human insecurity in a youthful, agrarian economy. The article proceeds as follows: Section 2 develops the theoretical framework; Section 3 situates the study within the extant literature;

Section 4 outlines the research methodology; Section 5 presents and discusses findings; Section 6 concludes with policy recommendations.

## **Theoretical Framework**

This study synthesises three complementary theoretical traditions—Demographic Transition Theory (DTT), Devolved Government Theory, and Social Capital Theory—to construct an integrated explanatory framework for understanding the relationship between demographic change and multidimensional human security. Each theory illuminates a distinct mechanism through which the youth bulge shapes security outcomes, and taken together they provide a conceptual architecture that bridges macro-structural demographic forces with meso-level governance responses and micro-level community dynamics.

### *Demographic Transition Theory*

Demographic Transition Theory, originally formulated by Notestein (1945) and subsequently elaborated by Caldwell (1976) and Bloom et al., (2003), conceptualises the population trajectory of developing societies as a sequential movement from high birth and death rates to low birth and death rates. A critical intermediate phase—characterised by sustained high fertility following mortality decline—produces the youth bulge, in which the working-age cohort constitutes a disproportionately large share of the population. In this phase, the DTT identifies a theoretically contingent “demographic dividend”: the potential for accelerated economic growth arising from a favourable dependency ratio, provided that the social infrastructure (education systems, labour markets, healthcare) is adequate to absorb and productively employ the bulging cohort (Bloom et al., 2003). Applied to Baringo County, the DTT clarifies why the youth bulge is simultaneously an opportunity and a structural risk. Where the conditions for a demographic dividend are absent—as evidenced by a youth unemployment rate of 21 per cent, limited vocational infrastructure, and inadequate formal sector absorption—the theory predicts that the demographic transition amplifies rather than alleviates economic insecurity, environmental degradation, and social strain. The DTT thus provides the macro-level analytical anchor for interpreting the empirical findings in this study.

### *Devolved Government Theory*

Devolved Government Theory holds that decentralisation of political authority to subnational units enhances governance efficiency and equity by enabling local administrations to tailor policy responses to place-specific conditions (Olowu & Wunsch, 2004). In contexts of pronounced demographic pressure, devolution is theoretically significant because it relocates decision-making to the governance tier that is most proximate to the communities experiencing insecurity. Bardhan and Mookherjee (2006) argue that devolution can enhance local accountability and improve the targeting of social services—including youth employment programmes—relative to centralised delivery models. In Kenya’s post-2010 constitutional architecture, county governments possess constitutional mandates over health, agriculture, early childhood education, and county public works, creating the institutional space for locally responsive youth security interventions. However, Bardhan and Mookherjee (2006) also caution that devolution can reproduce or intensify inequalities when subnational units lack the fiscal capacity, technical expertise, or institutional integrity to operationalise their mandates. This caveat is particularly salient in Baringo, where the county government’s resource base is constrained and where programmes such as the Youth Enterprise Development Fund (YEDF)

and the Kenya Youth Employment and Opportunities Project (KYEOP) have achieved limited penetration. The Devolved Government Theory thus provides the meso-level institutional framework for evaluating governance responses to the youth bulge and their effectiveness in mitigating human insecurity.

### *Social Capital Theory*

Social Capital Theory, developed by Bourdieu (1986) and elaborated by Putnam (1994, 2000), Asquith, (2019) and Coleman (1988), foregrounds the role of social networks, trust, and norms of reciprocity in enabling collective action and community resilience. Putnam's conceptual distinction between bonding social capital (dense ties within homogeneous communities) and bridging social capital (connections across heterogeneous groups) is particularly generative for understanding the youth bulge's social security implications. Bonding social capital can sustain local livelihoods and provide safety nets for unemployed youth, but it can also entrench exclusionary boundaries between ethnic or kin groups—a dynamic that has historically fuelled inter-communal resource conflicts in Baringo (PRB, 2024).

Bridging social capital—connections that link youth to institutions, labour markets, and civic processes—represents the form most likely to convert demographic expansion into a developmental asset. The emergence of youth-led environmental initiatives and community security patrols documented in this study can be read as evidence of incipient bridging social capital; the question is whether governance institutions can cultivate and formalise these networks before the structural pressures of unemployment and resource scarcity erode them. Social Capital Theory thereby provides the micro-level framework for interpreting the community-level dynamics documented in the qualitative findings.

## **Literature Review**

### *Youth Bulges and Human Security: Global and African Perspectives*

The academic literature on youth bulges and insecurity spans political science, development economics, and security studies. Urdal's (2006) landmark quantitative analysis of 97 countries over four decades demonstrated a statistically significant positive relationship between the size of the youth cohort and the probability of internal armed conflict, a finding corroborated by Collier and Hoeffler (2004). Heinsohn (2021) extended this argument to argue that societies with youth bulges exceeding 30 per cent of the adult male population face endemic political violence due to competition for status and resources. These "youth bulge thesis" arguments, however, have attracted substantial criticism for their demographic determinism: they tend to underweight the role of institutions, economic opportunity, and political inclusion in mediating youth behaviour (Sommers, 2011; Honwana, 2014).

The African literature has been more attentive to context-specific mediating factors. Nkansah, G. B. (2022) and Lebakeng & Matebese-Notshulwana (2024) document how structural unemployment among African youth cohorts generates grievances that can be mobilised by political entrepreneurs, but emphasise that this mobilisation is conditional on the availability of organisational resources and ideological framing. Awan (2006) demonstrate that youth engagement in civic and economic life can serve as a protective factor against radicalisation, suggesting that the relationship between demographic bulge and insecurity is non-linear and policy-malleable. In East Africa specifically, Kanyinga (2016) and Ntara (2013) have

examined the Kenyan context, arguing that devolution has created new opportunities for youth engagement but that fiscal and implementation gaps have limited the dividend to more politically connected counties.

### *Environmental and Economic Dimensions of the Youth Bulge*

The environmental security literature has increasingly integrated demographic variables into analyses of natural resource competition and ecological degradation. Adeyanju (2023) theorises the overexploitation of common-pool resources by growing youth cohorts as a contemporary iteration of Hardin's (1968) "tragedy of the commons," arguing that insecure property rights and absent market mechanisms make young people in pastoral economies particularly prone to resource overconsumption. Simbanegavi (2019) documents similar dynamics in peri-urban ASALs across East Africa, where youth-driven urban migration generates waste management crises that overwhelm nascent municipal infrastructure. Njora and Yilmaz (2022) extend this analysis to Kenya's northern counties, where population growth has intensified land use conflicts that subsequently fuel inter-community violence—a feedback loop between environmental degradation and social insecurity that is theoretically consistent with the DTT's prediction of transitional turbulence.

On the economic dimension, the demographic dividend literature documents a robust empirical relationship between favourable dependency ratios and economic growth in East and Southeast Asia (Bloom et al., 2003). However, Muzondi (2014) cautions that the dividend is not automatic: its realisation requires simultaneous investments in education quality, labour market flexibility, and financial sector development that remain absent in most sub-Saharan African ASALs. NACADA (2017) specifically documents how the mismatch between educational credentials and labour market demands in Kenya's arid counties has produced a cohort of educated but unemployed youth whose frustration constitutes a latent social instability risk. Etikan and Babatope (2019a) provide econometric evidence linking youth unemployment to political disengagement and protest behaviour in Nigerian counties—findings with significant cross-national applicability to the Baringo context.

### *Research Gaps Addressed*

Despite the richness of this literature, three lacunae remain. Most existing studies on youth bulges and human security in Kenya rely on national-level data that obscure the significant sub-county heterogeneity characteristic of ASALs. Second, the dominant focus on conflict as the primary security outcome neglects the multidimensional nature of human insecurity—environmental degradation, political marginalisation, and economic precarity—that may be equally or more consequential for daily wellbeing in non-conflict contexts. Third, methodologically, the literature has tended to privilege either large-N quantitative designs or ethnographic case studies, with limited integration of inferential statistics and structured qualitative analysis at the subnational level. This study addresses all three gaps.

## **Research Design and Methodology**

### *Research Design and Epistemological Positioning*

The study adopts a mixed-methods convergent parallel design (Creswell & Plano Clark, 2018), in which quantitative and qualitative data are collected concurrently, analysed separately, and

subsequently merged at the interpretation stage to facilitate methodological triangulation. This design is epistemologically grounded in pragmatism, which prioritises research utility and recognises that complex social phenomena such as the youth-security nexus require multiple evidentiary logics—the explanatory power of statistical inference alongside the contextual depth of qualitative enquiry (Dawadi, Shrestha, & Giri, 2021).

Baringo County, situated in Kenya's northern Rift Valley, covers an area of 11,015.3 km<sup>2</sup> and encompasses predominantly arid and semi-arid landscapes. The county's economy is largely agropastoral, and it faces persistent structural challenges including irregular rainfall, limited formal employment, and underdeveloped infrastructure. According to the 2019 KNBS census, the county's population stands at approximately 666,763 persons, of whom approximately 60 per cent fall within the youth age bracket (15–35 years)—a proportion that drives the demographic pressures at the centre of this investigation.

The quantitative component employed stratified random sampling to select 114 respondents across four sub-counties—Baringo Central, Baringo South, Baringo East, and Mogotio—ensuring representation across gender, age, and occupational strata. The sample size was determined using Krejcie and Morgan's (1970) formula for finite populations at a 95 per cent confidence level. A structured questionnaire assessed respondents' perceptions of the youth bulge's impact across four human security dimensions: environmental, economic, social/personal, and political. Likert-scale items, frequency measures, and demographic identifiers constituted the primary quantitative instruments. The qualitative component comprised 12 semi-structured key informant interviews (KIIs) conducted with a purposively selected sample of county commissioners, education directors, chiefs of Mogotio and Marigat sub-locations, youth leaders from Kabarnet/Kapropita, Kabartonjo, and Baringo East sub-counties, representatives of local NGOs, and community members (mothers and spouses). KIIs were audio-recorded, transcribed verbatim, and translated where necessary. Thematic saturation was achieved by the tenth interview, with two additional interviews conducted to confirm analytical closure.

Quantitative data were analysed using IBM SPSS Statistics v.27. Descriptive statistics—frequencies, percentages, means, and standard deviations—characterised the distribution of responses across human security dimensions. Multiple ordinary least squares (OLS) regression analysis was employed to estimate the independent contributions of high youth population growth, demographic dividend, social instability, and high unemployment rates to an aggregated human security index. Regression assumptions—normality of residuals, homoscedasticity, and absence of multicollinearity ( $VIF < 5$  for all predictors)—were verified prior to model estimation. Qualitative data were analysed using NVivo 12 through reflexive thematic analysis following Braun and Clarke's (2006) six-phase procedure, with an inductive phase-one coding subsequently refined into theory-driven thematic categories aligned with the three theoretical frameworks. Integration of quantitative and qualitative findings employed a joint display approach (Fetters, Curry, & Creswell, 2013), enabling direct comparison between statistical patterns and interview evidence.

Ethical approval was obtained from the National Commission for Science, Technology and Innovation (NACOSTI) in Kenya. Participation was entirely voluntary, and informed consent was secured from all respondents in advance of data collection. Anonymity was maintained by assigning positional titles rather than personal names to key informants in all reported quotations. Data were stored on a password-protected institutional server accessible only to the research team.

## Findings And Discussion

This section presents and analyses findings organised around four human security dimensions, followed by the inferential statistical results. Quantitative data from the survey are integrated with qualitative insights from KIIs, and interpreted through the theoretical lenses established in Section 2.

### *Youth Population Growth and Environmental Security*

Environmental insecurity emerged as the most universally recognised consequence of the youth bulge in Baringo County. As shown in Figure 1 (see Appendix), the plurality of survey respondents (43%) identified overuse of natural resources—particularly land, water, and firewood—as the primary environmental impact of rapid youth population growth. This pattern is theoretically coherent with the DTT’s prediction of transitional resource stress: as the working-age cohort expands before formal employment absorbs it, livelihoods revert to natural resource extraction, generating pressure on commons-pool resources whose governance remains weakly institutionalised in pastoral ASAL contexts (Adeyanju, 2023). A further 31.6 per cent of respondents attributed escalating pollution and waste management failures to youth-driven rural-to-urban migration—a dynamic well documented in peri-urban East African contexts by Simbanegavi (2019). The County Commissioner articulated the structural drivers of this dynamic with precision:

*The youth population in Baringo has grown significantly in recent years, leading to intense competition for scarce resources. As more youth engage in agriculture, they are depleting natural resources at an unsustainable rate. Activities such as charcoal burning and illegal logging further exacerbate environmental degradation. (County Commissioner, 2025)*

These observations are consistent with the Social Capital Theory prediction that, where bridging social capital is weak, young people default to extractive rather than conservationist livelihood strategies, because the institutional links connecting them to sustainable alternatives are absent. Youth leaders from Kabarnet/Kapropita, Kabartonjo, and Baringo East elaborated on the urban dimension of this dynamic:

*As more young people migrate to urban areas in search of employment, we are witnessing a sharp increase in pollution and waste management challenges. The influx of youth into towns has led to overcrowded areas and poor waste disposal systems—young people are not equipped with the knowledge or infrastructure to manage waste effectively. (Youth Leaders, KII, 2025)*

Crucially, the study also documents an emerging counter-tendency: 18.4 per cent of respondents reported increased youth participation in environmental awareness and conservation initiatives—a finding resonant with Muzondi’s (2014) argument that youth cohorts, when properly supported, can serve as powerful agents of environmental change. This nascent civic engagement represents precisely the form of bridging social capital that, under the Devolved Government Theory, county institutions are positioned to formalise and scale. However, as the regression results (Section 5.5) confirm, the net effect of population growth on environmental security remains negative in the current absence of enabling governance structures. The theoretical implication is significant: environmental insecurity in Baringo is not an inevitable demographic outcome but a policy-contingent one. The difference between a

demographic dividend and a demographic burden in environmental terms rests on the existence of youth-inclusive natural resource governance frameworks—frameworks that the county government, under its devolved mandate, is constitutionally empowered but practically constrained to deliver.

### *Demographic Dividend and Economic Security*

Survey findings on economic security reveal a distribution that mirrors the theoretical ambiguity of the demographic dividend: the growth potential is acknowledged, but structural barriers severely constrain its realisation. As illustrated in the descriptive statistics, the largest category of respondents (50.9%) identified intensified competition for jobs and wage stagnation as the dominant economic experience of the youth bulge—a finding consistent with NACADA's (2017) documentation of skills-market mismatch in Kenya's northern counties and with Muzondi's (2014) analysis of youth unemployment as a structural labour market failure rather than a transient cyclical phenomenon. The County Commissioner's perspective encapsulated the structural nature of this challenge by stating that "*...the growing youth population puts immense pressure on the available jobs. There simply are not enough employment opportunities to accommodate this large, youthful workforce, which is driving down wages and increasing job competition.*" The Director of Education reinforced this assessment, identifying the absence of education-labour market alignment as a critical bottleneck and that "*without adequate educational resources and employment pathways, young people remain disconnected from the productive economy, and this disconnection generates cascading effects across economic, social, and political security dimensions.*

These qualitative assessments are consistent with Singh's (2012) finding that the demographic dividend is non-automatic and requires concurrent investments in human capital development and labour market reform. A countervailing signal, however, emerges from the 17.5 per cent of respondents who perceived the youth cohort as a driver of entrepreneurship and economic growth—a view that the County Commissioner partially corroborated, noting that young people are beginning to take up entrepreneurial ventures and contribute to the economy in innovative ways. This entrepreneurial potential aligns with Bloom et al.'s (2003) theoretical prediction that, under enabling conditions, a large working-age cohort can generate a sustained productivity uplift. Yet the 13.2 per cent of respondents who reported no discernible economic impact of the demographic dividend serves as a sobering reminder that positive effects remain localised and unsystematic in the absence of structural policy support.

The theoretical synthesis suggested by the DTT and Devolved Government Theory points to a clear institutional implication: the conversion of demographic potential into economic security in Baringo requires county-level coordination of vocational training, entrepreneurship financing, and market linkage programmes—precisely the type of locally tailored intervention that devolution is theoretically designed to enable but has thus far failed to operationalise at scale.

### *Social Instability and Personal Security*

The relationship between the youth bulge and personal security constitutes the most unambiguous empirical finding of the study. As presented in Table 1 below, 64.9 per cent of respondents reported that the youth bulge has significantly increased the risk of violence and crime in their communities—a proportion that substantially exceeds the threshold for majority

consensus and that aligns closely with the theoretical predictions of both the youth bulge thesis (Urdal, 2006) and the grievance-based mobilisation literature (Collier & Hoeffler, 2004).

Table 1

*Social Instability and Personal Security Due to the Youth Bulge (n = 114)*

<b>Perception of Impact on Personal Security</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Had no impact on personal security	8	7.0
Improved community vigilance and cooperation	14	12.3
Significantly increased risk of violence and crime	74	64.9
Somewhat increased feelings of insecurity	18	15.8
<b>Total</b>	<b>114</b>	<b>100.0</b>

Source: Field Survey (2025)

The Chief of Mogotio articulated the mechanism linking youth unemployment to violent behaviour with contextual specificity:

*The youth bulge has led to an increase in criminal activities such as theft, muggings, and even violent crimes. Many young people in this area and beyond are frustrated due to unemployment and lack of opportunities, and unfortunately, this frustration often translates into violence. (Chief of Mogotio, KII, 2025)*

This testimony maps onto Browman et al.'s (2019) finding that economic exclusion—rather than demographic expansion per se—is the proximate driver of youth-associated violence: the youth bulge amplifies insecurity conditionally, when structural unemployment generates a large pool of frustrated, marginalised young people whose grievances lack legitimate political outlets. The Social Capital Theory dimension of this dynamic is equally illuminating in communities where bonding social capital is strong but bridging social capital is weak, youth solidarity networks can facilitate collective action that is either constructive (community vigilance patrols, environmental conservation) or destructive (organised criminal activity, resource raiding), depending on the availability of legitimate institutional channels.

The 12.3 per cent of respondents who perceived the youth bulge as having improved community vigilance and cooperation—corroborated by a local youth leader's reference to community patrol initiatives—represents this constructive potential. As Kithinji (2024) argues, youth, when organised through civic infrastructure, can act as agents of community cohesion rather than vectors of instability. However, the dominant pattern in this study—reinforced by the regression coefficient for Social Instability ( $\beta = 0.342$ ;  $p < 0.001$ )—is one in which the absence of adequate institutional support allows structural frustration to translate into social disorder.

### *Youth Unemployment and Political Security*

Survey responses regarding the political security dimension reveal a pattern of polarised political behaviour driven by structural unemployment. Figure 3 data indicate that 41.2 per cent of respondents observed heightened political activism among youth—an expression of frustration that mirrors Sommers' (2006) analysis of politically marginalised youth cohorts in sub-Saharan Africa who channel economic grievances into demands for structural reform.

Concurrently, 39.5 per cent of respondents noted increased political disengagement, while 13.2 per cent reported growing support for alternative and potentially radical political movements. This bifurcation between activist engagement and apathetic disengagement represents a theoretically significant finding. Dawadi et al. (2021) document a similar polarisation in youth political orientations in contexts of structural exclusion: when mainstream political institutions fail to provide meaningful participation opportunities, youth cohorts divide between those who invest in reformist activism and those who withdraw entirely—both responses reflecting a crisis of political legitimacy that, unaddressed, poses a systemic threat to democratic consolidation.

The County Commissioner’s testimony confirmed the activation of the activist pathway by observing that *“The high levels of unemployment have caused a lot of frustration among the youth. This frustration is increasingly being channelled into political demands for better governance and economic opportunity.”* (County Commissioner, KII, 2025). The Chief of Marigat, in contrast, documented the disengagement pathway thus; *“Many of our young people feel disconnected from mainstream political processes. They do not see politics as a space that speaks to their needs, and so they simply disengage.”* (Chief of Marigat, KII, 2025). Under the Devolved Government Theory, county-level governance institutions bear a particular responsibility for arresting this political disengagement: devolution was explicitly designed, inter alia, to bring governance closer to citizens and to enhance youth participation in local planning and resource allocation (Article 174, Constitution of Kenya 2010). The evidence from this study suggests that this constitutional aspiration has not been translated into institutional practice in Baringo, and that the resulting political exclusion of youth constitutes an independent dimension of human insecurity with feedback effects on economic and social security.

#### *Perceptions of Human Security: Composite Evidence*

Table 2 presents the full battery of Likert-scale items assessing respondent perceptions of the youth bulge’s impact across human security dimensions. The composite picture that emerges is one of broadly shared concern about the negative consequences of demographic expansion, tempered by recognition of untapped potential.

The highest mean score (3.51) attaches to the statement that high youth unemployment has led to increased economic insecurity—consistent with the regression analysis results. The perception that the demographic dividend remains untapped (mean = 3.09; 91.2% agreeing or strongly agreeing) suggests a broad awareness among respondents that the county’s demographic structure contains unrealised economic potential, a finding that aligns with Owusu and Mensah (2021) and that carries direct policy implications for investment in skills development and labour market reform.

Table 2

*Composite Perceptions of Youth Bulge and Human Security (n = 114)*

Statement	SA	A	N	D	SD	Mean
High youth population growth has intensified competition for limited environmental resources.	32.5%	54.4%	4.4%	6.1%	2.6%	3.23
The demographic dividend in Baringo County has not been fully capitalised, leaving economic potential untapped.	29.8%	61.4%	5.3%	1.8%	1.8%	3.09
Social instability due to the youth bulge has heightened feelings of insecurity within the community.	21.1%	62.3%	4.4%	7.9%	4.4%	2.97
High unemployment rates among youth have led to increased economic insecurity.	42.1%	49.1%	2.6%	1.8%	4.4%	3.51
Political security is undermined by high youth unemployment, resulting in disengagement from political processes.	30.7%	49.1%	7.0%	7.9%	5.3%	3.35
<b>Average Mean</b>						<b>3.09</b>

Note: SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree.

Source: Field Survey (2025)

The perception of heightened political insecurity due to youth unemployment (mean = 3.35; 79.8% agreeing or strongly agreeing) reinforces Dawadi et al.'s (2021) argument that economic marginalisation and political disengagement are structurally co-constitutive rather than independently caused.

*Regression Analysis: Predictors of Human Security Outcomes*

Table 3 presents the results of the multiple OLS regression analysis estimating the independent effects of four theoretically derived predictors on an aggregated human security index.

Table 3

*Multiple Regression Analysis — Predictors of Human Security in Baringo County (n = 114)*

Variable	$\beta$ Coefficient	Std. Error	t- Statistic	p- value
Intercept ( $\beta_0$ )	1.045	0.312	3.35	0.001
High Youth Population Growth ( $X_1$ )	0.278	0.082	3.39	0.001
Demographic Dividend — Untapped ( $X_2$ )	-0.195	0.071	-2.75	0.007
Social Instability ( $X_3$ )	0.342	0.090	3.80	0.000
High Unemployment Rates ( $X_4$ )	0.401	0.105	3.82	0.000
$R^2 = 0.673$   Adjusted $R^2 = 0.659$   F-statistic = 47.82   $p < 0.001$				

Note: Dependent variable = Aggregated Human Security Index. All VIF values < 5 (multicollinearity not detected).

Source: Field Survey (2025)

The model demonstrates excellent explanatory power: the  $R^2$  value of 0.673 indicates that approximately 67.3 per cent of the variance in human security outcomes in Baringo County is accounted for by the four predictors, with the Adjusted  $R^2$  of 0.659 confirming model parsimony. The F-statistic of 47.82 ( $p < 0.001$ ) establishes the overall model's statistical significance.

High youth unemployment ( $X_4$ ,  $\beta = 0.401$ ,  $p < 0.001$ ) emerges as the strongest predictor of diminished human security—a finding with both theoretical and policy significance. This result aligns with Etikan and Babatope's (2019b) econometric evidence and with Naikuru's (2017) qualitative analysis, collectively establishing youth unemployment as the single most consequential structural driver of insecurity in contexts of demographic expansion. Social Instability ( $X_3$ ,  $\beta = 0.342$ ,  $p < 0.001$ ) is the second strongest predictor, reflecting the feedback loop between economic exclusion, frustrated youth, and escalating community insecurity documented in the qualitative findings. High Youth Population Growth ( $X_1$ ,  $\beta = 0.278$ ,  $p < 0.001$ ) exerts a statistically significant but more modest direct effect on human insecurity, suggesting that population growth per se is less determinative than its interaction with unemployment and institutional capacity—a result consistent with the conditionality thesis advanced by Sommers (2011) and Honwana (2014).

The negative coefficient for Untapped Demographic Dividend ( $X_2$ ,  $\beta = -0.195$ ,  $p < 0.01$ ) requires careful interpretation. This variable captures the degree to which the potential productivity of the youth cohort remains unrealised due to insufficient investment in education, skills development, and job creation. Its negative association with the human security index indicates that higher unrealised demographic potential is associated with lower human security—in other words, the gap between what the demographic dividend could deliver and what it actually delivers constitutes an independent source of insecurity, over and above the direct effects of population growth and unemployment. This finding extends the theoretical literature by operationalising the demographic dividend gap as an empirically estimable predictor of human insecurity, a conceptual contribution that enriches the DTT's policy implications.

Collectively, these regression results validate the integrated theoretical framework: demographic structure (DTT), governance capacity (Devolved Government Theory), and community resilience (Social Capital Theory) interact to produce the observed distribution of human security outcomes in Baringo County.

## Conclusion

This article has systematically examined the multidimensional impact of the youth bulge on human security in Baringo County, Kenya, contributing original empirical evidence to a literature that has heretofore been dominated by national-level analyses and single-outcome security studies. Three principal conclusions emerge from the integrated quantitative-qualitative analysis. First, the youth bulge in Baringo County is a structurally conditioned threat multiplier rather than a demographic determinant of insecurity. The regression model demonstrates that youth unemployment ( $\beta = 0.401$ ) and social instability ( $\beta = 0.342$ ) are the dominant drivers of diminished human security, while population growth per se exerts a more modest direct effect. This finding resolves an important theoretical debate by providing subnational empirical support for the conditionality thesis: demographic expansion amplifies insecurity primarily when institutional systems fail to absorb and productively employ the

growing youth cohort. In theoretically productive terms, this implies that human insecurity in Baringo is a governance failure mediated by demography, not a demographic failure per se.

Second, the study reveals that the potential for converting demographic pressure into a development dividend is real but systematically unrealised. Nascent forms of bridging social capital—youth-led environmental initiatives, community security patrols, entrepreneurial activity—are present but lack the institutional scaffolding that devolved governance could, in principle, provide. The devolution framework in Kenya's 2010 Constitution contains the institutional architecture for locally responsive youth policy, but fiscal constraints, capacity gaps, and political economy dynamics in ASAL counties such as Baringo prevent full operationalisation. This gap between constitutional aspiration and institutional delivery represents both the primary analytical finding and the most consequential policy challenge identified by the study.

Third, the multidimensional framework adopted in this study—integrating environmental, economic, social, and political security dimensions within a unified human security paradigm—reveals a pattern of interlocking vulnerabilities that unidimensional analyses would obscure. Environmental resource depletion fuels economic insecurity; economic insecurity generates social instability; social instability undermines political engagement; political marginalisation impedes the institutional responses that could mitigate environmental, economic, and social threats. Addressing any single dimension without attending to this systemic interconnection risks producing interventions that are simultaneously targeted and structurally insufficient. This systemic perspective constitutes the study's principal theoretical contribution to the human security literature.

### **Policy Recommendations**

The evidence presented in this study supports five interlocking policy recommendations, each grounded in the three-theoretic framework and calibrated to the institutional realities of a devolved Kenyan county.

First, county government investment in targeted vocational training and apprenticeship programmes, aligned with local labour market demands in agriculture, agro-processing, ecotourism, and construction, should be prioritised as the most direct intervention for reducing youth unemployment—the strongest individual predictor of insecurity in the regression model. The YEDF and KYEOP frameworks provide existing institutional vehicles, but require substantial capacity augmentation and outcome monitoring to achieve systemic impact.

Second, participatory natural resource governance mechanisms—including youth-inclusive county environmental committees, community-based land use planning processes, and county-funded conservation incentive schemes—should be institutionalised to channel nascent youth environmental agency into sustainable resource management. This approach harnesses existing bridging social capital identified in the qualitative data while generating the co-governance infrastructure that the Devolved Government Theory identifies as central to effective local governance.

Third, the Baringo County government should establish formal youth councils with meaningful advisory roles in county development planning and budget-making processes. Structured youth political participation not only addresses the political security dimension of human insecurity

directly but also generates the civic identity and institutional trust that Social Capital Theory identifies as foundational to community resilience.

Fourth, targeted urban planning investments—including affordable housing, waste management infrastructure, and public space design—should be prioritised in the secondary urban centres experiencing the highest rates of youth in-migration, to mitigate the personal security deterioration associated with overcrowding documented in the perceptions data.

Fifth, and at the systemic level, the national government should review the equitable share formula governing fiscal transfers to ASAL counties to ensure that counties with above-average youth dependency ratios—and thus above-average demand for youth services—receive proportionally greater resource allocations. The current formula insufficiently weights demographic pressures, resulting in a structural under-resourcing of precisely those counties that face the greatest youth-related human security challenges.

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