Low Usage of Modern Contraceptives Among Women of Reproductive Age in Tanzania: Analysis Beyond Availability and Awareness Factors

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Abstract

Most studies on contraceptives have linked low use with awareness and problems of availability. However, these studies have not considered low or discontinuation of use of contraceptives to be a positive phenomenon where women exercise their reproductive rights or autonomy. Hence, this article has adopted a Marxist-feminist theory of contraceptives to examine the association between socio-demographic factors and low usage of contraceptives among women of reproductive age. It also evaluates the influence of the availability and awareness on the use or non-use of contraceptives among such a group of women. The article is based on a cross-sectional case study conducted in Kigoma Rural District, Tanzania. The data were collected through questionnaires modified from TDHS, and interviews with nurses and an in-charge of a health facility. Secondary data were collected from TDHS (2016, 2022), Tanzania Service Delivery Point report, Stock Inventory Charts and Our World data sets. Quantitative analysis was performed through STATA 14, and secondary data was processed through content analysis. The study found that though the majority of the reproductive age are aware of contraceptives, most (80%) have not used them. We do not treat this as a problem, but as an exercise of reproductive rights and autonomy by women. In addition, there is no significant evidence to prove any influence of socio-demographic factors on low use of contraceptives. Low use and discontinuation of contraceptives are associated with the need for more children by women, and the side effects of contraceptives. Therefore, we conclude that women should be left to decide when and how to use contraceptives: they should not be forced through direct or indirect health services.

Keywords: *contraceptives, women, reproductive age, FP, Tanzania*

1. Introduction

The use of modern contraceptives has been in place since the 19th century to prevent unwanted pregnancies, and as a means of family planning (FP) (Jalanko et al., 2021; Schaapveld & van der Vlugt, 2018). The use of contraceptives emerged from the perception that the high population growth in the Global South was unsustainable and caused poverty (Johnson, 2023; Wilson, 2016: 97). In other words, the use of contraceptives is attributed to a pessimistic view that if the fast growing world population is left unattended, it will affect economic development (Tiago, et al.,

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2021; Strulik, 2017). Hence, these views gain momentum with the growing world population. The world population was projected to reach 8bn by November 2022, and it is anticipated to reach around 8.5bn in 2030, and 10.4bn in 2100 (UN, 2022). This growth in population might be used to justify the need to use contraceptives. Several factors are associated with the growth in population, including declining levels of mortality, as reflected in increased levels of life expectancy at birth, which stood at 72.8 years in 2019. In addition, growth in population, especially in developing countries, is attributed to higher fertility rates (UN 2022). In 2021, the average world fertility rate was 2.3 births per woman over a lifetime, although the future global fertility is projected to decline to 2.1 births per woman by 2050.

More than half of the projected increase in global population will be concentrated in countries such as the Democratic Republic of the Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, the Philippines and the United Republic of Tanzania (UN, 2022). In the last ten years, global population grew at 1.2% per year. Although Africa is not as populous as Eastern and South-Eastern Asia, it is projected to be one of the fastest growing regions. Africa's rapid population growth results from a combination of extremely high fertility and declining mortality rates, which have fallen by one third in the past 20 years (Zimmer et al., 2020). The current fertility rate for Africa is 4.212 birth per woman. Tanzania is also witnessing the same trend in population growth, which grew by about 88% in a period of 21 years, while the population density increased from 14 to 26 persons per km^2 in the same period. It has been argued that if this natural rate of increase is maintained, Tanzania's population will double to about 60m in 25 years to come (Ochako et al., 2018). Compelled by this trend, advocates of FP have embraced contraceptives as the panacea to reduce or contain population growth.

Contraceptive use has continued to be one of the health interventions of the 21st century to control population. It allows women and couples to take control of their fertility, choose how many children they want, and how to space their births better (Butame, 2018). Contraceptives are significant for social and economic development (UN, 2020). Indeed, the emphasis on contraceptives contributes to achieving Sustainable Development Goal (SGD) 3 (Good Health and Wellbeing), which aims to ensure the world's universal access to sexual and reproductive healthcare services by 2030 (WHO, 2018), and SDG 1 (No Poverty). Tanzania, just like any other developing country, has integrated FP services into its reproductive and child health (RCH) programmes. It has established the National Family Planning Costed Implementation Programme (NFPCIP-2009) to mobilize resources for FP, making its services available to all residents, and attaining a contraceptive prevalence rate of at least 60% by 2015 (MoHSW, 2010). In addition, the Ministry of Health, Community Development, Gender, Elderly and Children updated the National Family Planning Research Agenda (NFPRA) in an attempt to identify existing FP challenges using evidence-based information (URT, 2013).

Furthermore, the national roadmap for health (One Plan II, 2016–2020) added an objective of achieving a national modern contraceptive prevalence rate (MCPR) of 45% by 2020 and lowering the unmet demand for FP to 10% by 2020 (MoHSW, 2016). Through these strategies, the government of Tanzania aimed to increase the number of FP users to 4.2m by 2020. On the contrary, contraception use among married women in Tanzania has remained low, at 38% (31% modern, and 7% traditional) (TDHS, 2022). For unmarried women, 45% use any contraceptive (MoH et al., 2022), lower than neighbouring countries like Kenya, Rwanda, Malawi, Zimbabwe, and Zambia (Mackfallen & Hinke, 2020). In addition, discontinuation in using contraceptives has remained one of the challenges for FP (Mahande et al., 2021). At the centre of this trend of low use and discontinuation, are diverse accusations and antagonism for the rush in CPs.

Several critics have challenged the rush for CPs in developing countries, while there is less emphasis for developed countries. They claim that such a rush is associated with interest on population reduction, especially in developing countries, and a way to perpetuate capitalist or Western domination (Wilson, 2016). It is argued that because of the stakes in developing countries, interventions on CPs are seen as other soft skills for a market economy; and have little difference from gender equality strategies, poverty reduction among women, and reproductive health. The argument further goes that women are used instrumentally to realize capitalistic interests in developing countries (Roberts & Soederberg, 2012). To emphasize this, Göransson (2022) finds this as smart economics because the same efforts are not directed towards women of the Global North. Hence, continued emphasis on the use of CPs targeting women and girls of the Global South is a smart economic framing by capitalist and industrialized nations.

While this heat in FP research is rising in Tanzania, there has been limited research to find out whether low contraceptive use from women of reproductive age (WRA) themselves can be viewed as a problem beyond current awareness. The existing knowledge has put emphasis on availability and the awareness factors as drivers of low use of CPs (Shoo et al., 2017; Ochako et al., 2018; Safari et al., 2019). However, there is a limited knowledge regarding low use and effects of contraceptives by women as a way of exercising their reproductive right, and not a problem in the society. The extent to which low use of CPs can be treated as a reproductive right and not a problem remains insufficiently explored. With a case study of Kigoma Rural District, this article examines the factors contributing to low use of contraceptives by WRA. In addition, it examines the drivers of low contraceptive use in relation to socio-demographic and economic characteristics of WRA.

The article is organized into five sections. Section one gives an introduction and background to the study. It is followed by the theoretical section, methodology, results and discussion. The last section provides the conclusion.

2. Theoretical Analysis: Marxist-feminist Theories of Contraceptives

Marxist-feminist theories of contraceptives are founded on feminist movements. These theories associate the inequality prevailing between men and women as emanating from community social classes (Martha, 1991). They hold the view that contraceptive use is guided by gender roles/norms and power relations (Alspaugh, 2020). It is argued that clinicians should evaluate power structures as inherent in their practices, while providing women-focused and evidence-based contraceptive education. The evidence should focus on how women's priorities, needs, desires and concerns play a role in how they interact with their contraception; and should be addressed and understood within the context of public health. Feminist discourse believes that the use of contraceptives is a masculine control and colonization of women's rights (Lind, 2010). Also, emphasizing on Marxist ideologies, Marxist-feminists point towards capitalism and imperialism as instrumental in exploiting women's rights (Wilson, 2015).

The feminist theory of contraceptives focuses entirely on the concern for equality, rights, access to health and autonomy when using contraceptives (Cornwall & Edwards, 2014). Hence, feministic movements and scholarships have helped to raise consciousness and encouragement for women to demand autonomy over their bodies; as well as the provision of information on the risks and contradictions associated with contraceptives. These Marxist-feminists put emphasis on contraceptive autonomy theorization, which considers factors necessary for a person to consider safe when using contraceptives (Newman & Feldman-Jacobs, 2015). This discourse of contraceptive autonomy gives priority to three factors that should be considered as safe use of contraceptives: informed choice, full choice, and free choice. The factors insist on decisions based on sufficient and unbiased information about the range of FP options, including benefits and risks associated with both use and non-use. Informed choice is also based on decisions made with access to sufficient and wide range of methods, decisions made about whether or not to use contraceptives, and voluntary choice of the method of CPs without coercion. Hence, this theory guides the analysis of this article, to determine whether low use of CPs is a problem.

3. Materials and Methods

The findings in this article are drawn from a study conducted in Kigoma Rural District. The district is bordered by Mpanda District to the south, Urambo District to the East, the Democratic Republic of Congo and Burundi to the west, and Kasulu District to the north (Figure 1). Kigoma Rural District is one of the districts ranked the lowest in contraceptive use, by achieving only 14.3% for WRA in 2014 (CDC, 2014; DHS, 2016). Another reason why the district was an important area for this study is because Kigoma Region was one of the priority regions for the implementation of national health plans and programmes between 2008 and 2016. The interventions that targeted the region included the

National Roadmap Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania (2008–2015), the Big Result Now (BRN), *Wazazi Nipendeni* ('Parents Love Me') initiative, and a mobile health initiative that included FP and safe motherhood text messages (Dynes et al., 2016). Consequently, after over 14 years of these initiatives, studies were necessary to contribute to knowledge on the effects of low use of contraceptives.

Figure 1: Kigoma Rural District and the Study Area
Source: National Bureau of Statistics, 2021

Using a cross-sectional case study, both quantitative and qualitative methods were used to collect and process data in this study. A questionnaire modified from TDHS was used to collect data from government staff. The researcher administered questionnaires to 3 in-charges of health facilities, and 5 nurses. Self-administered questionnaires are useful to engage staff who cannot be easily met physically (Bhattacherjee, 2012). Health facility exit-interviews were conducted with 200 WRAs who were receiving health services at the facility. Secondary data were collected from the 2016 TDHS, Tanzania Service Delivery Point report (TSDP), Stock Inventory Chart, and Our World data sets. The data were processed and analysed by STATA 14 to associate use and non-use of CPs

among different socio-demographic characteristics. Pearson's Chi-square and Binary Logistic Regression were used to examine factors influencing use and non-use of CPs, with p-values of <0.05 considered significant. The level of confidence for all of the analyses was set at 95%. The formulas for these inferential statistical methods are elaborated in equations (1) and (2).

(i) Chi-square test

$$X^2 = \sum \frac{(oij - eij)^2}{eij} \qquad (1)$$

Where:
X^2 is the Chi-square
$\sum$ is Summation
oij is the observed frequency
oij is the expected frequency

(ii) Binary Logistic regression model used is as follows:

$$Ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_k X_k \qquad (2)$$

Where:

β_0 to β_k are regression coefficients
X_1 to X_k are the independents
P is the expected probability that the outcome is present

4. Results and Discussion

4.1 Contraceptive Usage and Socio-demographic Characteristics of WRA

The use of contraceptives varies with different factors (UN, 2019), and these variations could be viewed in different contexts. The interest of this study was on socio-demographic and geographical factors. Table 1 presents the distribution of WRA (15–49 years), including both users and non-users of contraceptives, based on age and marital status. In terms of age, the majority (77.5%) of WRA were not using contraceptives, while only 22.5% were using this facility. The number of those using CPs were mostly aged between 20–39 years. Those who were not using CPs were also concentrated on the age group between 15–39 years. It was noted that as age increased, the number of women using CPs decreased. It was considered a valid phenomenon because older people have lower sex desire as fertility levels decline (Allen et al., 2013).

In terms of marital status, the results (Table 1) show that most women who were using contraceptives were single (9%), while married women were 7%. Before marriage, women are conscious of using contraceptives as they are wary of getting unwanted pregnancies and infectious diseases. Having a child before

marriage in Africa is socially unacceptable. One of the respondents said, "Bearing children is one of the expectations of the family and the community; in case a woman fails to bear children, she is despised by the community." In other words, children are a prestige to the family, a blessing, an investment and capital. It was also found out that those who did not use contraceptives with regard to marital status were led by married women (36%), followed by single mothers.

Table 1: Age and Marital Status of WRA Using and Not Using Contraceptives

Variable	Total		Using CPs		Not Using CPs	
	Freq.	*%*	*Freq.*	*%*	*Freq.*	*%*
Age						
15–19	33	16.5	2	1	31	15.5
20–24	49	24.5	10	5	39	19.5
25–29	34	17	9	4.5	25	12.5
30–34	23	11.5	7	3.5	16	8
35–39	31	15.5	11	5.5	20	10
40–44	18	9	5	2.5	13	6.5
45–49	12	6	1	0.5	11	5.5
Total	**200**	**100**				
Marital status						
Single	71	45	18	9	57	28.5
Married/ Living Together	90	35.5	14	7	72	36
Separated	29	14.5	8	4	21	10.5
Divorced	6	3	3	1.5	3	1.5
Widow	4	2	2	1	2	1
Total	**200**	**100**				

Source: Field Data, 2021

Higher education is associated with higher use of contraceptives (Safari et al., 2019). In this article, use of contraceptives, depending on one's education level, shows that 10.5% of the women had no formal education, 8.5% had primary school education, and only 0.5% had secondary school education. The majority of those not using CPs had non-formal education (33.5%), and 27% had primary education. Very few (2.5%) had secondary education (Table 2). These results comply with those of the Ministry of Education acknowledging that the majority of people in rural areas end up with primary school education (Mazana et al., 2020). It is easier to associate low use of CPs with low education level (Yussuf et al., 2020), because the women at this level do not have the necessary skills and knowledge on how to access and use CPs. However, this seems an old school of thought because the fact is that women in rural areas have knowledge on when and how to use CPs. Refraining from using CPs is seen as exercising human rights by women, and should not be linked to one's educational level.

**Table 2: Education and Occupations of WRA Using
and Not Using Contraceptives**

Variable	Total		Using Contraceptives		Not Using Contraceptives	
	Freq.	*%*	*Freq.*	*%*	*Freq.*	*%*
Education						
Non-Formal	88	44	21	10.5	67	33.5
Primary	71	35.5	17	8.5	54	27
Primary Incomplete	34	17	6	3	28	14
Secondary	6	3	1	0.5	5	2.5
Diploma	0	0	0	0	0	0
Bachelor	1	0.5	0	0	1	0.5
Total	**200**	**100**				
Occupation						
Formal employment	16	8	4	2	12	6
Self Employed	70	35	18	9	52	26
Livestock keeping	33	16.5	5	2.5	28	14
Farmers	80	40	17	8.5	63	31.5
Students	1	0.5	1	0.5	0	0
Don't have a job	0	0	0	0	0	0
Total	**200**	**100**				

Source: Field Data, 2021

Based on employment, the majority of those using CPs were self-employed (9%), and the rest were farmers (8.5%). Those who had formal employment were only 2% (Table 1). Results show that the majority were again farmers (31.5%), self-employed (26%), and only (6%) had formal employment. All the occupations (farming, formal employment, self-employment, and livestock keeping) were dominated by non-use of CPs. According to the 2016 TDHS, Kigoma Region was among the top three regions with the lowest use of CPs, standing at 18%; and by 2020 it had remained among the lowest regions in CP use, which stood at 30% (Figure 2). This also characterizes most other regions in Tanzania. The lowest in terms of CPs use are Simiyu (11%), Shinyanga (23%), Geita (22%), Tabora (21%) and Mara (29%). It is interesting to note here that low use cannot be directly associated with the economic activities women engage in, or their education level.

4.2 Dominant Types of Contraceptive Methods
In this study, it was imperative to find out the types of contraceptive that WRA prefer. It was revealed that of the different types of CPs, implants were preferred by 42%, injectables by 37%, and oral contraceptive pills by 12%. Traditional methods were preferred by only 3% (Table 3). Those using CPs reported that despite the challenges of modern contraceptives, users preferred them to traditional means because they guarantee protection from unplanned pregnancies.
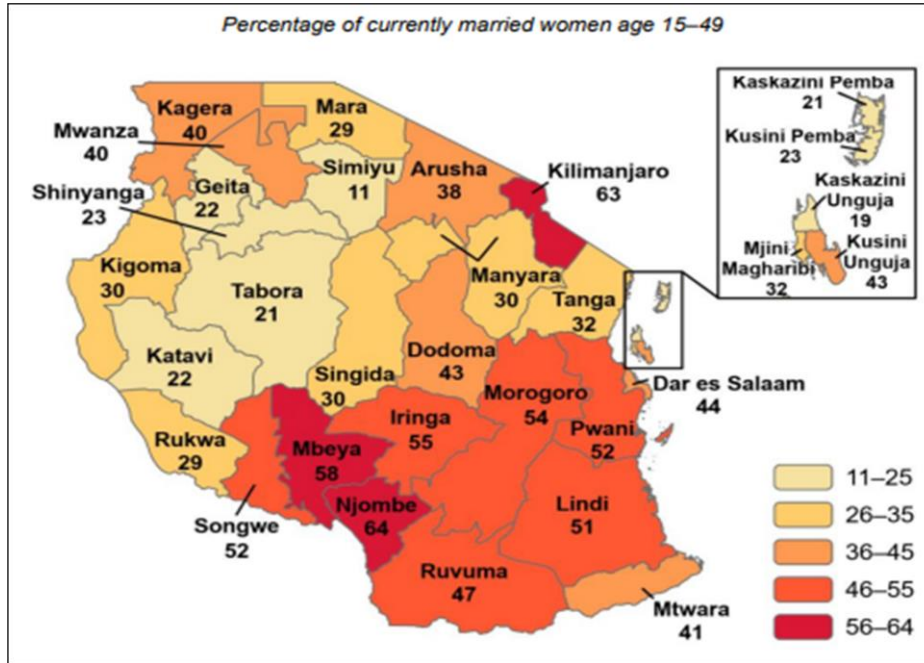
Figure 2: Modern Contraceptive Use in Tanzania among Married WRA
Source: DHS, 2020

Table 3: Dominant Contraceptive Methods

Global Contraceptive Use		Methods of Contraceptive Used	
Type	*%*	*Type*	*%*
Modern methods	44 (842m)	Implants	42
Traditional methods	4 (80m)	Oral Contraceptives	12
Unmet needs	10 (190m)	Female Sterilization	2
No needs	42 (790m)	Traditional Methods	3
		Injectables	37
		Male Condoms	2
		IUCD	2

Source: UN, 2019

Other methods, like as using condoms, reduce the transmission of infectious diseases such as HIV/AIDS, and syphilis. A report by the United Nations (2019) shows that among the 779m contraceptive users who are married (15–49 years), closer to 50% use permanent and long-acting methods of contraception. Such methods include female sterilization (25.5%), and IUD (19.4%). Also, 143m users, who are unmarried women, rely on permanent and long-acting methods. Of this group, the common methods used are male condoms (33.1%), and

contraceptive pills (26.1%). Further, results from the UN (2019) suggest that among the 1.9bn WRA (15–49 years) who lived in the world in 2019, 1.1bn had a need for FP; 842m were users of modern CPs; while 80m were users of traditional methods or had an unmet need for FP. Again, 190m women attempted to avoid pregnancy, and did not use any contraceptive method. In a nutshell, the world is dominated by modern CPs than traditional methods (Mahande et al., 2020; Nonvignon & Novignon, 2014; Islam, 2017; Osmani et al., 2015). Out of these methods, implants, injectables and oral contraceptives have dominated the global community of CP consumption (THHS, 2016; Massenga et al., 2021; CDC, 2014; Kamangu, 2016).

When reflecting on the reasons for low use of CPs in developing or poor countries, this article drew a comparative analysis of the status of use from different continents/regions. The results depicted in Figure 3 show that, of the different types of contraceptive methods, withdrawal and use of male condom are commonly used in Asia, Europe, America, Oceania, Africa and the Caribbean. Other methods mostly used in all the regions include contraceptive pills and injectables. However, there are variations in some of the uses of contraceptives globally. For married or in-union women, out of 779m, 26% resort to female sterilization, 18% depend on male condom, and 16% use male sterilization.
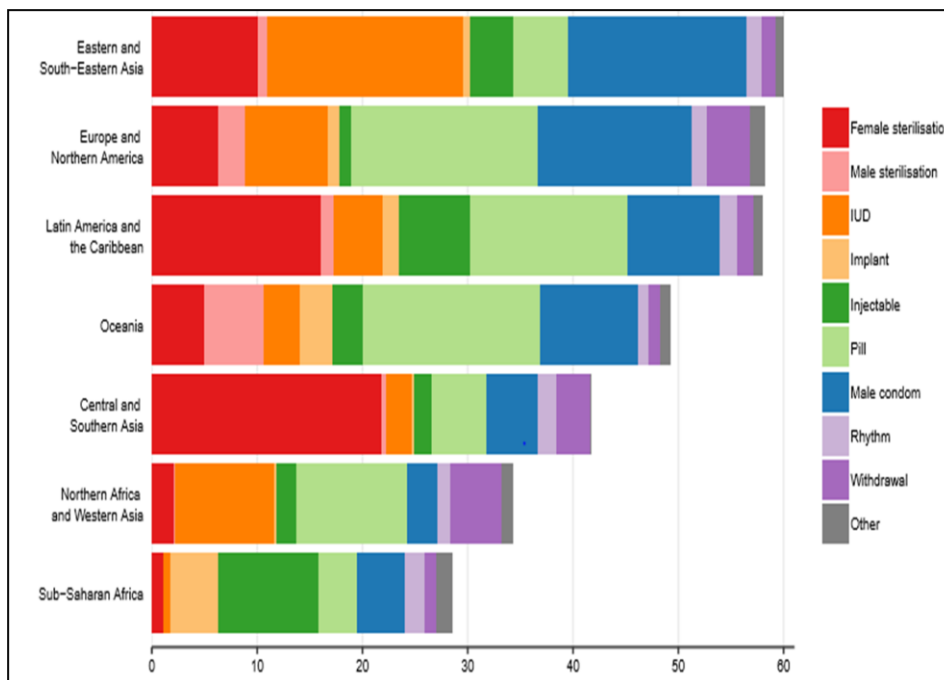

Figure 3: Global Use of Contraceptives
Source: UN, 2019

For unmarried or not-in-union women, 33% use male condoms, 26% use pills, and 13% accept female sterilization (Figure 4). While IUDs are mostly used in Eastern and South-Eastern Asia, North Africa and Western Asia, they are less used in Sub-Saharan Africa (Figure 3). The results also show that female sterilization is dominant in Central and Southern Asia, Latin America and Caribbean, Eastern and South-Eastern Asia, Europe, and North America. Female sterilization is used to a lesser degree in Sub-Saharan Africa.
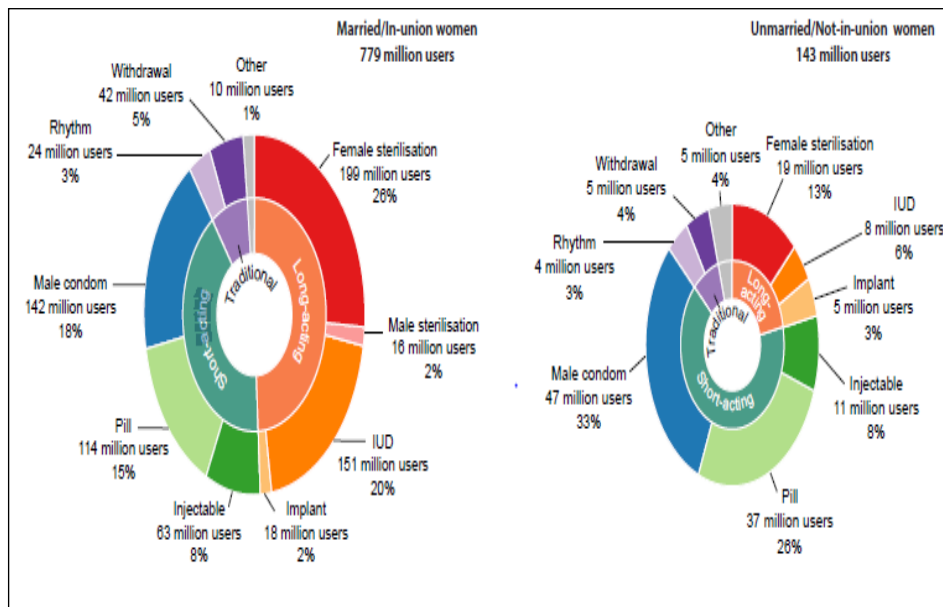

Figure 4: Global Married and Non-Married Contraceptive Use
Source: UN, 2019

These results offer two implications on the existing literature on contraceptive use. First, the dominance of withdrawal and use of male condom show that the problem of low use of modern contraceptives is not prevalent only in low-income countries but also in developed countries. This state of affairs attracts curiosity on the arguments for FP policies, emphasizing CP use in low-income countries. The authors of this article agree with the view that FP is a smart economy, and it is an instrumentalization by capitalist countries (Göransson, 2022). Second, contraceptive methods in both developed and developing countries have used women instrumentally in FP activities. This is because they give emphasis on the use of contraceptive pills, injectables and female sterilization: all of which are subjected upon women. Göransson (2022) is of the opinion that this is contrary to gender rights and rights of women, where Africa is placed at the forefront in recognizing the rights of women. This push for women's FP and contraception have attracted diverse feministic movements and academic debates (Newman et al., 2014, Brunson, 2020).

4.3 Availability as a Factor for Low Contraceptive Use

The shortage of staff and facilities for the provision of contraceptives has occasionally been pointed out as a big factor contributing to the low usage of CPs (Lee, 2021). It was also important in this study to affirm whether availability was a challenge in rural areas. The results from household respondents (Table 4) show that availability of CPs was not a challenge in health facilities in rural areas. Over half (56%) of the contraceptives available were oral contraceptive pills, while 40.8% were male condoms (Table 4). Only a few used injectables (1.6%), 0.2% used female condoms, while those who used implants were 0.9%, and those who used IUCD were 0.6%.

Table 4: Availability of Contraceptive Methods at Health Facilities

Methods	Bitale	Kizenga	Total	Percent
Oral Contraceptive Pills	11	5,040	5,051	56.0
Injectable	99	43	142	1.6
Emergency Contraceptive Method	0	0	0	0.0
Male Condoms	3,220	460	3,680	40.8
Female Condoms	10	7	17	0.2
IUCD	52	0	52	0.6
Implants	51	26	77	0.9
Total	**3,443**	**5,576**	**9,019**	**100.0**

Source: Village Health Facility, 2021

In the same vein, the district data in Table 5 show that availability was not a problem. By June 2021, the CPs available were 43,900 male condoms, 8,850 injectables, and 9,000 female condoms. Other contraceptives available were 1,470 implants, 550 emergency pills, and 279 IUCDs. Out of the available contraceptives, the distributed contraceptives for use were 6,233 injectables, 2,407 oral pills, 2,316 male condoms, 186 female condoms, and 181 implants.

Table 5:   Number of Contraceptives Available at the District Level

Types of CPs	Available	Expired	Distributed to Users
Temporary			
Injectable	8,850	0	6,233
Oral contraceptive pills	4,977	0	2,407
Emergency Pills	550	78	495
Male condoms	43,900	0	2,316
Female Condoms	9,000	0	168
Long Term			
IUCD	279	37	1,041
Implants	1,470	0	181
Permanent			
Female sterilization	0	0	81
Male Sterilization	0	0	2

Source: Kigoma Rural District Health Department, 2021

A comparison between the available CPs and the distributed CPs shows that availability was not a problem. All the contraceptives were available, and others had even expired because of the lack of use. For example, in the villages in which this study was conducted, a total of 78 emergency pills and 37 IUCD were reported to have expired by the health Department in Kigoma Rural District. The ensuing sub-section describes the socio-demographic factors associated with low usage of contraceptive methods.

4.4 Socio-Demographic Factors Associated with Low Usage Contraceptive Methods

Low use of CPs has been identified as one of the challenges of FP by advocates of modern contraceptives (Mackfallen & Hinke, 2020; WHO, 2018). For years, low use of contraceptives has been dominated by capitalist and development ideologies. These have treated low use as an obstacle to development (Johnson, et al., 2021; Wilson, 2018), arguing that low use of modern contraceptives increases costs for human necessities, including food and health expenses. Nevertheless, this thinking ignores the value of human labour for development. This can be proven by the population growth in China. In addition, if rapid population was a problem, developed nations would have been the first affected, and CPs would be a priority for these nations. The world population prospects (2022) show that the population of the most populous nations like China had reached 1.4bn, in India it was 1.4bn; while in the USA it was 337m, and it was 145m in the Russian Federation (UN, 2022). With this trend, knowledge should shift towards understanding if at all low use of CPs is a problem, and identifying what factors would help to explain this phenomenon in Tanzania.

Table 6 illustrates the Chi-square test results for the association between socio-demographic and binary variables affecting contraceptive use. Of these factors, the number of children born per woman, and any attempted measures to stop pregnancy, were associated with the usage of contraceptive methods ($p < 0.05$). On the other hand, age, educational level of both wife and husband, marital status, plan to have more children, and occupation were not associated; hence not statistically significant. This is in line with the results of a study conducted by Gogoi et al. (2017), which found out that the number of children influences the use of CPs. Furthermore, age, education level or husband's education, occupation and marital status were found to have less influence on the use of CPs, and they were obsolete factors of knowledge (Safari et al., 2019; Massenga et al., 2021). Knowledge is widespread, and women in Africa are free to get pregnant when they want, and by whoever they want. Rejection or stopping using CPs are forms of reproductive rights. Hence, the use of modern contraceptives in Africa should be transparent, carried out voluntarily, and be free from coercive measures or involuntary strategies integrated through other health services such RH and treatment.

Table 6: Factors Associated with the Use of Contraceptives among Women of the Reproductive Age

Variable	Current use of CPs (N)	Chi Square Test
Age of women in 5–year groups		
15–19	6.1(33)	
20–24	20.4(49)	Pearson chi2(6) = 11.0409; Pr = 0.087
25–29	26.5(34)	
30–34	30.4(23)	
35–39	35.5(31)	
40–44	27.8(18)	
45–49	8.3(12)	
Women's highest level of education		
No Formal Education	23.9(88)	
Primary	23.9(71)	
Primary Incomplete	17.6(34)	Pearson chi2(4) = 1.0453; Pr = 0.903
Secondary	16.7(6)	
Higher Education	0.0(1)	
Husband's highest level of education		
No Formal Education	30.0(10)	
Primary	20.0(55)	Pearson chi2(3) = 1.8353; Pr = 0.607
Primary Incomplete	11.1(18)	
Secondary	28.6 (7)	
Marital Status		
Single /Never Married	19.7(71)	
Married /Living Together	20.0(90)	
Separated	27.6(29)	Pearson chi2(4) = 5.4048 Pr = 0.248
Divorced	50.0(6)	
Widow	50.0(4)	
Tried measures to stop pregnancy*		
Yes	41.5(106)	Pearson chi2(1) = 46.7371; Pr = 0.000
No	1.1(94)	
Plan to have another child		
Yes	20.7(159)	Pearson chi2(1) = 1.3548 Pr = 0.244
No	29.3(41)	
Number of children born per woman*		
No child	5.7(53)	
1–2	22.6(62)	Pearson chi2(3) = 14.0025; Pr = 0.003
3–4	31.7(41)	
5 or more	34.1(44)	

Note: * indicates that the variable is significant at $p < 0.05$, based on the Chi Square-Test;
N = Total Number, PrV = Provability Value
Source: Kigoma Rural District Health Department, 2021

Furthermore, results from the logistic regression model in Table 7 demonstrate that women who have had a large number of children are more likely to use contraceptive methods than women who have had a small number of children (p=0.049). This implies that after women have satisfied the need for more children, they will voluntarily use CPs. Similarly, being in a situation that compels someone to try measures to stop pregnancy increases the likelihood of using contraceptives (p=0.000). Attempts to stop pregnancies are attributed to health- or marriage-related challenges. In other words, those who have tried to use contraceptives have a tendency to use them more. The freedom to stop pregnancy, and the number of children a woman would like to bear, are among the forms of reproductive rights that ought to be respected. These results are in line with the findings by Sensoy et al. (2018), TDHS (2016), Light et al. (2018), Schrumpf et al. (2020), and Mumah et al. (2018); all of whom emphasized that the number of children women would like to have influences the use of contraceptives. Consequently, the desire to have more children should not be considered a constraining factor, but a choice and reproductive right.

Table 7: Binary Logistic Regression of Factors Influencing Use of Contraceptive Methods

Factors	Odds Ratio	Robust Std. Err.	z	P>z	[95% Conf.	Interval]
Number of Children ever born	1.170	0.093	1.97	0.049	1.001	1.367
Ever Tried Measures to Stop Pregnancy						
Yes	1.000	(base)				
No	0.018	0.018	-3.93	0.000	0.002	0.132
Constant	0.430	0.136	-2.68	0.007	0.232	0.798
Logistic regression Number of obs. = 200						
Wald chi2(2) = 19.14						
Prob > chi2 = 0.0001						
Log pseudo likelihood = -75.551305 Pseudo R2 = 0.2915						

Source: Research, 2021

The results from both the Chi-square and logistic regression have shown that women do not like using CPs because of the value attached to children. The need for more children is evident for both users and non-users of CPs. This study has found that 16.5% of those who were using contraceptives needed to have less children, while 63.0% of those who were not using contraceptives desired to have more children. Also, overall, 55.9% of those who had stopped using contraceptives had done so because they needed a child; 22.1% had quitted because they had experienced side effects such as over-bleeding, irregular and painful menses; 7.4% had quitted because they were pregnant, and they wanted to try another contraceptive method following complications by earlier methods. In general, children are thought to be a prestige and investment; and this is

probably why people want more children (Juma, 2015); TDHS, 2016; Tuyishime, 2016). A small percentage of women (2.9%) said they had stopped using CPs because they were breastfeeding. A big number of children indicates the state of low CPs use (Juma, 2015; TDHS, 2016; Tuyishime, 2016).

5. Conclusion

This article contributes to the knowledge on family planning and contraceptive use, especially in poor and developing countries. These countries are accused of low use of CPs, and governments are being blamed for not having made sufficient efforts to improve the use of CPs. At the heart of this accusation, awareness and availability factors have been associated with low use. In fact, low use itself has been observed to be a problem through a socio-economic development lens. However, this study found out that low use should not be treated as a problem, rather it should be viewed as a choice and a reproductive right. It is something to be cherished as it shows a climb by women towards reproductive health autonomy, and women's liberation.

As regards the main objective of the article, it has been found that socio-economic and demographic factors—such as age, sex, education level of wives/husbands, and occupations—have little contribution to low usage. The number of children one has, and the side effects encountered by women, influence use or non-use of CPs. Moreover, availability is not a constraining factor for the use of contraceptives, as the results show that CPs were available in numbers, and some were getting past their expiry dates. Therefore, it seems very likely that the emphasis on contraceptives use in developing or poor countries—particularly in Africa—is instrumentally being used for smart economy by developed nations as there is less push for CPs among women of the West or developed countries. These findings offer two policy implications: (i) developing or poor countries should concentrate on FP or demographic policies that reduce the side effects of CPs; and (ii) policies need to put emphasis on awareness related to child spacing, and the number of children that a family can handle in offering good services.

References

Allen, R. H., Cwiak, C. A. & Kaunitz, A. M. (2013). Contraception in Women Over 40 Years of Age. *CMAJ* 185(7): 565–73. doi: 10.1503/cmaj.121280.

Alspaugh, A., Barroso, J., Reibel, M. & Phillips, S. (2020). Women's Contraceptive Perceptions, Beliefs and Attitudes: An Integrative Review of Qualitative Research. *Journal of Midwifery Women Health*, 65(1): 64–84.

Anasel, M. G. & Mlinga, U. J. (2014). Determinants of Contraceptive Use Among Married Women in Tanzania: Policy Implication. *Etude de La Population Africaine*, 28(2): 978–988. https://doi.org/10.11564/28–0–550.

Asiedu, A., Asare, B. Y. A., Dwumfour-Asare, B., Baafi, D., Adam, A. R., Aryee, S. E. & Ganle, J. K. (2020). Determinants of Modern Contraceptive Use: A Cross-sectional Study Among Market Women in the Ashiaman Municipality of Ghana. *International Journal of Africa Nursing Sciences,* 12: 100184: hhtps:// doi.org/10.1016/j.ijans. 2019.100184.

Bhattacherjee, A. (2012). *Social Science Research: Principles, Methods, and Practices*. Digital Commons, University of South Florida.

Brunson, J. (2020). Tool of Economic Development, Metric of Global Health: Promoting Planned Families and Economized Life in Nepal. *Social Science and Medicine,* 254: 112298.

Butame, S. A. (2018). The Prevalence of Modern Contraceptive Use and Its Associated Socio-Economic Factors in Ghana: Evidence From a Demographic and Health Survey of Ghanaian Men. *Public Health*, 168: 128–136.

Centre for Disease Control and Prevention (2014). 2014 Kigoma Reproductive Health Survey, Kigoma Region, Tanzania. *Centre for Disease Control and Prevention*. http://www.cdc.gov/reproductivehealth/Global/Publications/Surveys/Africa/K igoma-Tanzania/index.htm.

Cornwall, A. & Edwards, J. (2014). Introduction: Negotiating Empowerment. In Cornwall, A. & J. Edwards (Eds). *Feminisms, empowerment and development: Changing women's lives*, pp. 1–31. London: Zed Books.

Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (3rd Ed.). Los Angeles, CA: Sage.

Dynes, M., Stephenson, R., Rubardt, M. & Bartel, D. (2012). The Influence of Perceptions of Community Norms on Current Contraceptive Use Among Men and Women in Ethiopia and Kenya. *Health Place*, 18 (4) 766–773.

Gogoi, K., Hazarika, P. J., Chanu, N. S. & Hazarika, J. (2017). A study on Status of FP Practices and Its Association With Socio-Economic and Demographic Factors in Manipur, India. *International Journal of Statistics and Systems*, 12(3): 441–455. http://www.ripublication.com.

Göransson, M. (2022). Smart Economics Within FP: An Analysis of the Framings of FP Initiatives and their Relation to Smart Economics. Unpublished thesis for a Bachelor in Development Studies, Uppsala University.

Islam, K. (2017). Contraceptive Use, Method Choice and Discontinuation of Contraception in South Asia. *American Journal of Sociological Research*, 2017(4): 109–116. https://doi.org/10.5923/j.sociology.20170704.02.

Jalanko, E., Gyllenberg, F., Krstic, N., Gissler, M. & Heikinheimo, O. (2021). Municipal Contraceptive Services, Socioeconomic Status and Teenage Pregnancy in Finland: A Longitudinal Study. *BMJ Open* 2021: 11: e043092. doi:10.1136/ bmjopen-2020-043092.

Johnson, K. M. (2023). The Recent US Population Growth Rate Increased From Last Year's Record Low, But Remains Below Historical Levels. The Carsev. School of Public Policy at the Scholars' Repository, 454.

Juma, J. H. (2015). The Challenges of Modern Family Planning Methods on Fertility Rate in Zanzibar: A Case of Makoongwe Island in Mkoani District, Pemba. A dissertation for Masters in Demography, University of Dodoma, Tanzania.

Lee, M. (2021). Barriers to Using Modern Contraceptive Methods Among Rural Young Married Women in Moshi Rural District, Kilimanjaro Region, Tanzania. *African Journal of Reproductive Health*, 25(4): 99.

Light, A., Wang Lin-Fang., Zeymo, A. & Lobo-Gomez, V. (2018). Family Planning and Contraceptive Use in Transgender Men, *PubMed*, 98 (4) 266–269.

Lind, A. (Ed.) (2010). *Development, Sexual Rights and Global Governance*. London: Routledge.

Kamangu, A. A. (2016). Perceptions on the Availability, Accessibility and Use of Modern Contraceptive Methods Among Women in Iringa Municipality, Tanzania. *International Journal of Humanities and Social Science*, 6(9): 123–127.

Mahande, M. J., Shayo, E., Amour, C., Mshana, G. & Msuya, S. (2020). Factors Associated With Modern Contraceptives Use Among Postpartum Women in Bukombe District, Geita Region, Tanzania. *PLoSONE,* 15(10): 1–14.

Mackfallen, G., Anasel, M. G. & Hinke, H. (2020). Variation in Contraceptive Prevalence Rates in Tanzania: A Multilevel Analysis of Individual and Regional Determinants. *Sexual & Reproductive Healthcare,* 25.

Massenga, J., Noronha, R., Awadhi, B., Bishanga, D., Safari, O., Njonge, L., Kim, Y. M., Roosmalen, J. van. & Akker, T. van den. (2021). FP Uptake in Kagera and Mara Regions in Tanzania: A Cross-sectional Community Survey. *International Journal of Environmental Research and Public Health,* 18(4): 1–16.

Martha, E. G. (1991). The Mode of Reproduction in Transition: A Marxist-Feminist Analysis of the Effects of Reproductive Technologies. *Gender and Society,* 5(3). Special Issue: pp. 334–350.

MoHSW (March, 2010). *The National FP Costed Implementation Programme* 2010–2015. Dar es Salaam.

MoHSW (2016). The *National Road Map Strategic Plan to Improve Reproductive, Maternal, Newborn Child & Adolescent Health in March* 2015: 157.

Ministry of Health (MoH) (Tanzania Mainland): Ministry of Health (MoH) (Zanzibar): National Bureau of Statistics (NBS): Office of Government Statistician (OCGS) and ICF (2023). *Tanzania Demographic and Health Survey and Malaria Indicator Survey* 2022 *Key Indicators Report*. Dodoma, Tanzania.

Mumah, J. N., Casterline, J. B., Machiyama, K., Wamukoya, M., Kabiru, C. W. & Cleland, J. (2018). Method-specific Attributes That Influence Choice of Future Contraception Among Married Women in Nairobi's Informal Settlements. *Studies in FP*, 49(3): 279–292. https://doi.org/10.1111/sifp.12070.

Mazana, M. Y., Montero, C. S. & Casmir, R. O. (2020). Assessing Students' Performance in Mathematics in Tanzania: The Teacher's Perspective. *International Electronic Journal of Mathematics Education,* 15(3): em0589.

Newman, K., Fisher, S., Mayhew, S. & Stephenson, J. (2014). Population, Sexual and Reproductive Health, Rights and Sustainable Development: Forging a Common Agenda. *Reproductive Health Matters,* 22: 53–64. doi:10.1016/S0968–8080(14)43770–4O'Neill, B.2000.

Newman, K. & Feldman-Jacobs, C. (2015). Family Planning and Human Rights: What's the Connection and Why is It so Important? Population Reference Bureau. Washington DC. https://www.prb.org/wp-content/uploads/2016/07/ family-planning- rights-brief.pdf.

Nonvignon, Jacob, & Novignon, Justice (2014). Trend and Determinants of Contraceptive Use Among Women of Reproductive Age in Ghana. *Etude de La Population Africaine*, 28(2): 956–967. https://doi.org/10.11564/28–0–549.

Ochako, R. A., Temmerman, M. & Askew, I. (2018). Patterns of Contraceptive Use Among Vulnerable Populations in Kenya. In *International Perspectives on Sexual and Reproductive Health*, 14(1): 1–15.

Osmani, A. K., Reyer, J. A., Osmani, A. R. & Hamajima, N. (2015). Factors Influencing Contraceptive Use Among Women in Afghanistan: Secondary Analysis of Afghanistan Health Survey 2012. *Nagoya Journal of Medical Science*, 77(4): 551–561. https://doi.org/10.18999/nagjms.77.4.551.

Roberts, A. & Soederberg, S. (2012). Gender Equality as Smart Economics. A Critique of the 2012 World Development Report. *Third World Quarterly,* 33(5): 949–968.

Safari, W., Urassa, M., Mtenga, B., Changalucha, J., Beard, J., Church, K., Zaba, B. & Todd, J. (2019). Contraceptive Use and Discontinuation Among Women in Rural North-West Tanzania. *Contraception and Reproductive Medicine*, 4(1): 1–10. https://doi.org/10.1186/s40834–019–0100–6.

Shoo, R. S., Mboera, L. E., Ndeki, S., Munishi, G. (2017). Stagnating Maternal Mortality in Tanzania: What Went Wrong and What Can Be Done. *Tanzania, J. Health Res.* 19(2): 1–12.

Schrumpf, L. A., Stephens, M. J., Nsarko, N. E., Akosah, E., Baumgartner, J. N., Ohemeng-Dapaah, S. & Watt, M. H. (2020). Side Effect Concerns and Their Impact on Women's Uptake of Modern FP Methods in Rural Ghana: A Mixed Methods Study. *BMC Women's Health*, 20(1): 1–8. https://doi.org/10.1186/s12905–020–0885–0.

Sensoy, N., Korkut, Y., Akturan, S., Yilmaz, M., Tuz, C. & Tuncel, B. (2018). Factors Affecting the Attitudes of Women Toward FP. *FP*. https://doi.org/10.5772/ intechopen.73255.

Strulik, H. (2017). Contraception and Development: A Unified Growth Theory. *International Economic Review*, 58(2): 561–584. http://www.jstor.org/ stable/ 44280185.

Schaapveld, A. & van der Vlugt, I. (2018). *Contraceptives Knowledge File*. Rutgers, Netherlands.

Tiago, C., Kocharkov, G. & Santos, C. (2021). FP and Development: Aggregate Effects of Contraceptive Use. The *Economic Journal*, 131(634): 624–657: https://doi.org/ 10.1093/ ej/ueaa070.

Tuyishime, E. (2016). Factors Associated With the Prevalence of Contraceptive Use Among Women of Reproductive Age in Rwanda: A Cross-sectional Study Using Demographic and Health Survey Rwanda 2010. *International Journal of Women Health*, 135(15) 23–44. https://www.diva-portal.org/smash/get/diva2:938518.

United Nations (2022). *World Population Prospects* 2022*: Summary of Results*. Department of Economics and Social Affairs, Population Division, UN DESA/POP/2022/TR/NO. 3.

United Republic of Tanzania (2016). *Kigoma Socio-Economic Profile,* 1: 76.

United Nations (2020). *World Fertility and FP Highlights*. Department of Economics and Social Affairs, Population Division, New York.

United Republic of Tanzania (2013). *National FP Guidelines and Standards*. 6. https://www.prb.org/wp-content/uploads/2018/05/National-Family-Planning-Guidelines-and-Standards-2013,Tanzania.pdf.

Wilson, K. (2016). Feminizing Responsibility? Women's 'invisible' Labour and Sub-Contracted Production in South India. *Journal of International Women's Studies*, 18(1): 33–51.

Wilson, K. (2015). Towards a Radical Re-Appropriation: Gender, Development and Neoliberal Feminism. *Development and Change,* 46(4): 803–832. DOI: 10.1111/dech.1217.

World Health Organization (2018). *World Health Statistics* 2018*: Monitoring Health for the SDGS, Sustainable Development Goals*. World Health Organization. http://apps. Who. Int/iris/handle/10665/272596. License: CC BY-NC-SA 3.0 IGO.

Yussuf, M. H., Elewonibi, B. R., Rwabilimbo, M. M., Mboya, I. B. & Mahande, M. J. (2020). Trends and Predictors of Changes in Modern Contraceptive Use Among Women Aged 15–49 Years in Tanzania From 2004–2016: Evidence From Tanzania Demographic and Health Surveys. *PLoS One,* 15(6): e0234980. doi: 10.1371/journal.pone.0234980.

Zimmer, A., Guido, Z., Tuholske, C., Pakalniskis, A., Lopus, S., Calylor, K. & Evans, T. (2020). Dynamics of Population Growth in Secondary Cities Across Southern Africa Landscape. *Ecol* (2020) 35: 2501–2516 https://doi.org/10.1007/s10980–020–01086–6.