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JURNAL KEPENDUDUKAN DAN KEBIJAKAN

FAMILY PLANNING PRACTICES, KNOWLEDGE, DECISION MAKING, AND FACTORS ASSOCIATED WITH UNPLANNED PREGNANCIES AMONG WOMEN WORKING IN A SELECTED GARMENT INDUSTRY IN URBAN BENGALURU, INDIA

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Fadlan Habib and Eddy Kiswanto

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PREFACE

Populasi Volume 32 Issue 1 June 2024 presents five articles. These articles discuss population issues, such as family planning, fertility, migration, poverty, and economic welfare.

The first article is written by Chandana Hombaiah, discusses Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India. According to the author, less than half of them had used any form of contraceptive method. Among that half nearly three-fourths had chosen tubectomy. Nearly one in five women ended up with unplanned pregnancy. Author recommends to do an extensive research and health education to the working women regarding various and newer family planning methods.

Next the second article covers the issue of the Dynamics of Fertility Trends in Sleman Regency Amid Global Shocks, 2018-2022. This article is written by Muhammad Arif Fahrudin Alfana. This article highlights the resilience of Sleman Regency's demographic dynamics in the face of global disruptions. Sleman Regency experienced significant fluctuations in fertility trends amidst global challenges, including the Covid-19 pandemic. Author says that, the importance of continuous monitoring and analysis of demographic data to anticipate and manage future demographic shifts. This research contributes to the demographic field by providing insights into the fluctuating fertility patterns in a specific region during a period marked by global disruptions.

Meanwhile, the third article is written by Nubia Zulma Nieto Flores and highlights the issue of migration with a case study in London. This article has as objective to explore the drivers behind of migration to London. This work uses qualitative and quantitative materials, such as face to face interviews, data reports and statistics on migration and direct observations. Some conclusions are offered, which consider that there are subtle causes of emigration which are usually underestimated, such as learning English as a personal achievement, acceptance of different sexual orientation, cultural diversity, and relative political stability are among the most representative.

On the other hand, the fourth article written by Pauline Gaspersz unpacks the problem related to Poverty Linked to Government Performance, Insights from Maluku Barat Daya and Halmahera Timur. Author states that poor government performance lowers the quality of education and infrastructure performance through the limited number of qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability. Poor education resulted in low technological advances, low examination results, and few good accreditation schools. In infrastructure development, the incapability of local government to provide essential services pushed people to survive on their resources and become more vulnerable to experiencing poverty. Therefore, this research concludes that government performance influences poverty reduction through education and infrastructure performance.

The fifth article as the last article in this issue discusses the Village-Owned Enterprise Strategy in Improving the Economic Welfare of Sustainable Farmers. The authors of the articles are Fadlan Habib and Eddy Kiswanto. According to them, the problems faced by farmers are largely influenced by middlemen's play in determining prices which has an impact on farmers' losses, apart from that it is also influenced by the lack of access to information

related to the market. For this reason, the village government is trying to create an agricultural business unit under the auspices of BUMDes which provides assistance to farmers in the form of capital support, marketing and also providing market guarantees. This innovation is considered successful in improving farmers' livelihoods and welfare.

Thus, a brief overview of the contents of the June 2024 edition of *Populasi* Journal. Hopefully these articles will add new insights for readers. Thank you and have a good reading.

June 2024

Editor in Chief,
Muhadjir Darwin

Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India

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Abstract

Background: According to UN population estimates, India has surpassed China as the world's most populated nation, marking the biggest upheaval in global demography since records have been kept. Providing universal family planning services is an important strategy to reduce maternal morbidity and to control population growth. Even though the country has multiple programs addressing family planning issues, they are missing out on working women. Thus, this study aims to estimate the prevalence of unmet needs of family planning and determinants for improper access to family planning methods among women working in a selected Garment industry in Urban Bengaluru. **Methodology:** A community based cross-sectional study was conducted in a selected garment factory for a period of two months. Women workers in Reproductive age group (18-49 years) and who gave voluntary consent to participate in the study were taken up. Total sample of 454 women were included. The data was collected using a semi-structured and validated questionnaire. Collected data was entered in Microsoft Excel and was analysed using SPSS version 16. **Results:** Among 454 participants, 42.3% (n=192) of them had used contraceptive method. Out of 192 women, most of them (72.9%, n=140) had chosen tubectomy as the contraceptive measure. Among 407 women, 14.3% (n=58), 13.3% (n=42), and 20.9% (n=9) of them had not planned for their 1st pregnancy, 2nd pregnancy, and 3rd pregnancy respectively. **Conclusion:** Less than half of them had used any form of contraceptive method. Among that half, nearly three-fourths had chosen tubectomy.

Keywords: Family Planning; unplanned pregnancy; working women; contraception garment industry

Introduction

According to WHO Family planning is defined as "A way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family

group and thus contribute effectively to the social development of a country". Another Committee of WHO defines Family planning as: "Family planning refers to practices that help individuals or couples to attain certain objectives: (a) to avoid unwanted births; (b) to bring about wanted births; (c) to regulate the intervals between pregnancies; (d) to control

the time at which birth occurs in relation to the ages of the parent; and (e) to determine the number of children in the family (WHO, 2020)

An estimated 150 million married women in the developing world wants to delay or stop child-bearing and are not using contraception (Chafó & Doyore, 2014). Currently, the world population is growing by over 80 million every year; such a change is unprecedented. According to the United Nations projection, by 2025 the world population will be over 8 billion people, of which 6.8 billion will live in developing countries (UNFPA, 1969; TOI, 2017). According to UN population estimates, India has surpassed China as the world's most populated nation with a population of around 1.4 billion, marking the biggest upheaval in global demography since records have been kept (Ellis-Petersen, 2023).

Although India was the first nation to adopt the National Family Planning programme in 1952, the target was on health of the women and population control was neglected. By 1980s, there was an alarming population growth which necessitated the adoption of population control strategies in India (National Health Mission, 2023). Providing universal family planning services is an important strategy to reduce maternal morbidity and to control population growth. Ten percent of all pregnancies are mistimed, and 11% of all pregnancies are unwanted in India (Bongaarts & Bruce, 1995) In India, female sterilization is the most commonly preferred method of contraception accounting for 76 % of all methods, but the usage of temporary methods of contraception remains low, which is mostly due to social stigma and cultural misbeliefs (Pathak et al, 1998; Nag, 1984; Basu, 1984) lack of knowledge (Chaudhury, 2001; Athavale & Athavale, 2003) and concern about side effects (Pathak et al, 1998; Chaudhury, 2001; Athavale & Athavale, 2003; Vishnu Prasad, 2016; Lule et

al, 2007). Family planning does not mean just limiting a family size, it also means helping infertile couples to have babies (Aniruddha, 2023). Infertility is currently affecting 1 in 6 couples in India, with a prevalence of 10 to 14%. This rate is higher in urban areas. It is a major cause for concern for the government as well as for individual couples. The social and interpersonal relationships would be impacted. The results of infertility will impact a person's and a country's various facets of life (Kalidasan et al., 2020).

Worldwide, when contraception is used properly and effectively to avoid unwanted pregnancy it can reduce maternal deaths to 25–35 % (Vishnu Prasad, 2016; Lule et al., 2007). Family planning and population strategies help the country achieve developmental goals. Even though the country has multiple programs addressing family planning issue, we are missing out on working women. Why choose garment Industry? There are about 70,000 garments manufacturing units in the country providing employment to more than 3 million people (Awashthi & Singh, 2003). Garment workers make up a major part of the total labour force in the country, which contributes a significant part of the country's foreign income. In the labour unit of garment industries, most of the workers are females of reproductive age group. Most of them belong to low socio-economic status and are not that (Bongaarts & Bruce 1995). Because the female garment workers are unaware of family planning options, they become pregnant unintentionally and repeatedly, which raises the risk of spontaneous abortion, low birth weight, preterm delivery, and other complications. Thus, this study aims at assessing the practices, knowledge and decision making about family planning and factors associated with unplanned pregnancy among women working in a selected Garment industry in Urban Bengaluru.

Methodology

A community based cross-sectional study was conducted in a selected garment factory for a period of two months. Women workers in reproductive age group (18-49 years) and who gave voluntary consent to participate in the study were taken up. Women who had undergone hysterectomy were excluded from the study. Among 1,400 women, 454 women satisfied the inclusion and exclusion criteria. Purposive sampling method was used. Data collection was started after obtaining the ethical clearance from the Institute.

The data was collected using a semi-structured and a validated questionnaire, which had three sections. First section about socio-demographic variables, second section about the usage of contraceptive methods and reasons for not using any, and the 3rd section had questions regarding the knowledge about contraceptive methods, who should use contraceptive methods, where did they hear about it, who took the decision for who had used contraception and the contraceptive method preferred by them. The data was collected using interview method.

Collected data was entered in Microsoft Excel and was analysed using SPSS version 16. Quantitative data, such as age was expressed in mean and standard deviation. Qualitative data were expressed in percentages. Tables and bar graph have been used to represent the data. Chi-square/ Fisher's exact test was used to find the association between the usage of contraceptive method and socio-demographic variables. A p-value of <0.05 was considered as statistically significant.

Results

Mean age of the study participants of the study was 36 ± 7.3 . Among 454 participants, 52.6% (n=239) had finished their high school, 75.3% (342) belong to upper middle class according to modified Kuppaswamy scale, 97.1% (n=441) of them were Hindus and 87.4% (n= 397) of them were married (Table 1). Most of them (46.9%, n=213) were married at the age less than 15 years and between 15-18 years and 57.7% of them (n=262) had at least 2 children (Table 1).

Table 1. Socio-Demographic Variables of the Study Participants (n=454)

Variables	Number	Percentage
Education Category		
Illiterate	46	10.1
Primary school	12	2.6
Middle school	88	19.4
high school	239	52.6
PUC/Diploma	57	12.6
Graduate	12	2.6
Socio-economic status		
Upper Middle Class	342	75.3
Lower Middle Class	102	22.5
Upper Lower Class	10	2.2
Religion		
Hindu	441	97.1
Muslim	13	2.9

Marital Status	Single	28	6.2
	Married	397	87.4
	Widowed	24	5.3
	Separated	5	1.1
Age at marriage	<15 years	213	46.9
	15- 18 years	213	46.9
	19- 23 years	27	5.9
	24- 30 years	1	0.3
	>30 years	0	0
Number of children	0	47	10.3
	1	103	22.7
	2	262	57.7
	3	42	9.3

Among 454 participants, 42.3% (n=192) of them had used contraceptive method (Table 2). Out of 192 women, most of them (72.9%, n=140) had chosen tubectomy as the contraceptive measure (Table 2). Among 407 women, 14.3% (n=58), 13.3% (n=42), and 20.9 (n=9) of them had not planned for their 1st pregnancy, 2nd pregnancy, and 3rd pregnancy

respectively (Table 2). Participants who had not used any contraceptive method (n=262), 59.9% (n=157) of them reasoned that they had no knowledge about contraceptive method (Table 2). Currently, 149 women were using one or the other form of contraception. Among 149, 140 of them had underwent permanent sterilization method (Table 2).

Table 2. Information Regarding the Usage of Contraceptive Methods among Women Working in Garment Factory

Variables	Number	Percentage
Did you use any contraceptive method to delay or to prevent getting pregnant? (n=454)	Yes	192
	No	262
Type of contraceptive used by women (n=192)		
Barrier methods	7	3.7
IUCD	35	18.2
Oral contraceptive pills	9	4.7
Natural methods	1	0.5
Tubectomy	140	72.9
Planned 1 st pregnancy (n=407)		
Yes	349	85.7
No	58	14.3
Planned 2 nd pregnancy (n=315)		
Yes	273	86.7
No	42	13.3

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Planned 3 rd pregnancy (n=43)		
Yes	34	79.1
No	9	20.9
Reasons for not using family planning methods (n=262)		
No facilities available	3	1.1
No staff	7	2.7
Not accessible	1	0.4
No knowledge	157	59.9
Afraid of complication	49	18.7
Inconvenient to use	1	0.4
Wants to have a child	30	11.5
Uncomfortable	5	1.9
Expensive	1	0.4
Against religion	1	0.4
In-laws' objection	2	0.7
Others	5	1.9
Current method used to prevent further pregnancy (n= 149)		
Natural methods	1	0.7
Condoms	2	1.3
IUD	4	2.7
Oral contraceptives	2	1.3
Tubectomy	140	94.0

Among 454 participants, 65.4% (n=297) had heard of a method to delay or prevent pregnancy, 63% (n=286) thought that only females had to use contraceptive method, and 37.7% (n=112) had heard about it from a health worker (Table 3). Then 67.1% (n=100)

opined that both her and her partner decided to use the contraceptive method (Table 3). Furthermore, 83.3% (n=378) opined that getting sterilized (tubectomy) as the preferred method (Table 3).

Table 3. Information Regarding Knowledge, Decision-Making of Women Regarding Contraception and Contraceptive Method Preferred by Women (n=454)

Variables	Number	Percentage
Have you heard of any method used to delay or prevent pregnancy?		
Yes	297	65.4
No	157	34.6
Who has to use contraceptive method?		
Male	40	8.8
Female	286	63.0
No preference	34	7.5
Both	67	14.8
Do not know	27	5.9

How or where did you get to know about it? (n=297)		
Doctor	79	26.6
Health worker	112	37.7
Media	8	2.7
Family	71	24.0
Friends	27	9.0
Who took the decision to adopt a contraceptive measure? (n=149)		
Self	16	10.7
Husband	18	12.2
Both self and partner	100	67.1
Relatives and friends	6	4.0
Doctor or HW	9	6.0
Contraceptive Method preferred		
Pills	3	0.7
Injectables	2	0.4
IUCD	15	3.3
Implants	2	0.4
Condoms	12	2.6
Female sterilization	378	83.3
Male sterilization	0	0
Natural methods	42	9.3

Association between usage of any contraceptive method and socio-demographic variables was assessed using Chi-square/ Fisher's exact test. It was noted that education, socio-economic status, and religion did not have any association with usage of contraceptive methods (Table 4). Whereas marital status, age at marriage and number of children were associated with the usage of contraceptive method (Table 4).

Table 4. Association between Usage of Any Contraceptive Method and Socio-Demographic Variables (n=454)

Variables	Usage of any contraceptive method		p-value
	Yes	No	
Education Category			
Illiterate	21 (45.7)	25 (54.3)	0.454
Primary school	8 (66.7)	4 (33.3)	
Middle school	32 (36.4)	56 (63.6)	
high school	101 (42.3)	138 (57.7)	
PUC/Diploma	24 (42.1)	33 (57.9)	
Graduate	6 (50)	6 (50)	
Socio-economic status			
Upper Middle Class	144 (42.1)	198 (57.9)	0.189
Lower Middle Class	41 (40.2)	61 (59.8)	
Upper Lower Class	7 (70)	3 (30)	
Religion			
Hindu	185 (42)	255 (58)	0.768
Muslim	6 (46.2)	7 (53.8)	

Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India

Marital Status	Single	5 (17.9)	23 (82.1)	0.015*
	Married	178 (44.8)	219 (55.2)	
	Widowed	8 (33.3)	16 (66.7)	
	Separated	1 (20)	4 (80)	
Age at marriage	<15 years	81 (38)	132 (62)	0.044**
	15- 18 years	103 (48.4)	110 (51.6)	
	19- 23 years	8 (29.6)	15 (70.4)	
	24- 30 years	0	1 (100)	
	>30 years	0	0	
Number of children	0	1 (2.7)	36 (97.3)	<0.05**
	1	32 (31.1)	71 (68.9)	
	2	139 (51.5)	131 (49.5)	
	3	17 (44.7)	21 (55.3)	
	4	2 (66.7)	1 (33.3)	
	5	0	1 (100)	

*p-value was significant

#Fischer's exact value was taken

Association between socio-demographic characteristics and unplanned pregnancy was done using Chi-square/ Fisher's exact/ Yate's chi-square. Among 58 women who had 1st unplanned pregnancy, it was noted that there was statistically significant association of unplanned pregnancy with age at marriage and whether contraceptive was used or not (Table 5). Among 42 women who had 2nd unplanned pregnancy, it was

noted that there was statistically significant association of unplanned pregnancy with whether contraceptive was used or not and reasons for not using any contraceptive method (Table 5). Among 9 women who had 3rd unplanned pregnancy, it was noted that there was statistically significant association of unplanned pregnancy with whether contraceptive was used or not (Table 5).

Table 5. Socio-Demographic Characteristics and Their Association with Women Who Had Unplanned Pregnancy

1 st unplanned pregnancy (n=58)		2 nd unplanned pregnancy (n=42)		3 rd unplanned pregnancy (n=09)	
Mean age	35.3 ± 7.3	Mean age	35.98 ± 6.76	Mean age	37.33 ± 6.72
Education	N (%)	Education		Education	
(p-value: 0.528)		(p-value: 0.528 [^])		(p-value: 0.79 [^])	
Illiterate	03 (5.2)	Illiterate	2	Illiterate	1
Primary school	03 (5.2)	Primary school	2	Primary school	0
Middle school	10 (17.2)	Middle school	9	Middle school	1
High school	35 (60.4)	High school	24	High school	7
PUC/Diploma	06 (10.3)	PUC/Diploma	4	PUC/Diploma	0
Graduate	01 (1.7)	Graduate	1	Graduate	0

SES (<i>p</i> -value: 0.751)		SES (<i>p</i> -value: <0.05)		SES (<i>p</i> -value: 0.970 [^])	
Upper Middle Class	45 (77.6)	Upper Middle Class	33	Upper Middle Class	05
Lower Middle Class	12 (20.7)	Lower Middle Class		Lower Middle Class	04
Upper Lower Class	01 (1.7)	Upper Lower Class	09	Upper Lower Class	00
			00		
Religion (<i>p</i> -value: 0.677 [#])		Religion (<i>p</i> -value: 1.000)		Religion (<i>p</i> -value: 0.621 [#])	
Hindu	56	Hindu	41	Hindu	09
Muslim	02	Muslim	01	Muslim	00
Marital Status (<i>p</i> -value: 0.973 [#])		Marital Status (<i>p</i> -value: 0.697 [^])		Marital Status (<i>p</i> -value: 0.787 [^])	
Married	56	Married	42	Married	09
Single	00	Single	00	Single	00
Widowed	02	Widowed	00	Widowed	00
Age at marriage (<i>p</i> -value: 0.046 [*])		Age at marriage (<i>p</i> -value: 0.048 [*])		Age at marriage (<i>p</i> -value: 0.081 [#])	
<15 years	36	<15 years	24	<15 years	08
15- 18 years	22	15- 18 years	18	15- 18 years	01
Usage of contraceptive (<i>p</i> -value: <0.05 [*])		Usage of contraceptive (<i>p</i> -value: <0.05 [*])		Usage of contraceptive (<i>p</i> -value: 0.05 ^{**})	
Yes	05	Yes	07	Yes	01
No	53	No	35	No	08
Reason for not using contraceptives (<i>p</i> -value: 0.43 [^])		Reason for not using contraceptives (<i>p</i> -value: 0.004 ^{**^})		Reason for not using contraceptives (<i>p</i> -value: 0.481 [^])	
No facilities available	01	No facilities available	02	No knowledge	06
No knowledge	38	No knowledge	28	Afraid of complication	02
Afraid of complication	09	Afraid of complication	07	Against religion	01
Uncomfortable	03	Uncomfortable	03		
Against religion	01	Against religion	02		
Others	01				

**p*-value was statistically significant

[#]Fisher's Exact value was taken

[^]Yate's chi-square correction was taken

Total women with unplanned pregnancy not using any contraception are 96. Among 454 women, 96 women (21.1%) ended up with unplanned pregnancy who were not on any form of contraception. Among 96 women, 43 women (44.8%) wanted to limit or increase

the space between each pregnancy. Among 454 women, 5 women were suffering from primary infertility. Among 130 women who had not used any form of spacing method, around 51% of them had no knowledge about spacing methods (Figure 1).

Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India

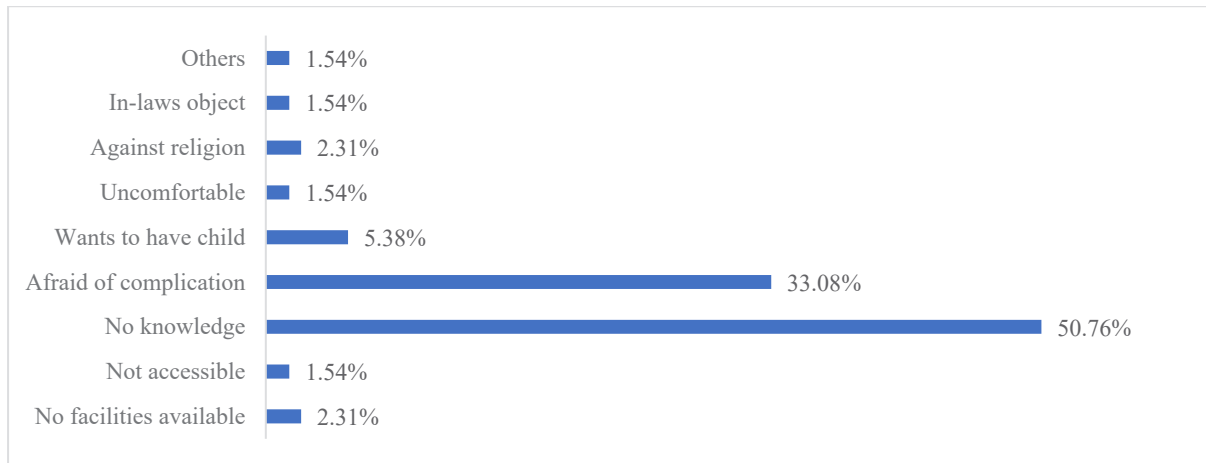


Figure 1. Reasons of Women who Did Not Use any Spacing Method (n=130)

Discussion

The right to life and liberty, freedom of expression, the ability to work and receive an education, as well as other rights, are advanced when everyone has access to the contraceptive methods they desire. This also has major health and other benefits. When births are separated by less than two years, the infant mortality rate is 45% higher than when births are separated by 2-3 years, and 60% higher than when births are separated by four or more years (Guttmacher Institute, 2023; <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>). Use of contraception reduces pregnancy-related health risks for women, especially for adolescent girls. It provides a number of possible non-health benefits, including increased educational opportunities, female emancipation, and country-wide sustainable population growth and economic development (<https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>).

Most of the participants had finished their high school, belonged to upper middle class, Hindus and were married. Among those who were married most of them belonged to less than 18 years age group and had at least 2 children. More than half of the interviewed women were not using any form

of contraception. The most common reason for not using any family planning method was no knowledge and afraid of complication and this same as the study conducted by Bongaarts & Bruce (1995). Among those were using contraceptives, most preferred method used was tubectomy followed by IUCDs and this is similar to a report written by United Nations (2019).

Most of them had heard about a method to delay or prevent pregnancy, and majority of them had heard it from the health worker and predominant of them thought only females had to use contraception. Both the study participant and her partner took the decision together to adopt a contraceptive measure. According to the knowledge questionnaire, most of them preferred female sterilization followed by natural methods and IUCD and this is similar to a study done Sherpa, S.Z., et.al. (2013).

According to a study done by Sharma, V., et.al. (2012) parity, religion, education, and socio-economic status were associated with the usage of contraceptive method, whereas in the current study, we have noted that marital status, age at marriage, and number of children were associated with the usage of contraceptive method.

A study done in Salvador (Coelho et al., 2012) showed that there was an association

between age, marital status, occupation, family income, and unplanned pregnancy, and a study done in 6 South Asian countries (Sedgh et al., 2007) showed that there was an association between age, education, religion, number of children, intention of contraceptive use and unintended pregnancy status. Whereas, in our study, it was noted that association between age at marriage, usage of contraceptive, and 1st unplanned pregnancy; and association between socio-economic status, age at marriage, usage of contraceptive, reasons for not using contraceptives, and 2nd unplanned pregnancy; and association between usage of contraceptive and 3rd unplanned pregnancy. It was noted in our study that more than half of them who were not using any spacing method had no knowledge about the spacing method and this is contradicted by a study done by Sarder (2021).

Strength of our study is that we have focussed on working women who are usually left out during a community survey. Limitation of the study is sample size calculation.

Conclusion and recommendations

Less than half of them had used any form of contraceptive method. Among that half nearly three-fourths had chosen tubectomy. Nearly one in five women ended up with unplanned pregnancy. We recommend to do an extensive research and health education to the working women regarding various and newer family planning methods.

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From Decline to Rebound: Analyzing the Dynamics of Fertility Trends in Sleman Regency Amid Global Shocks, 2018-2022

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Abstract

This quantitative study aims to examine the trends of live birth rates in Sleman Regency over a five-year period (2018-2022). The study utilizes birth data obtained from the Ministry of Home Affairs (Kemendagri). The analysis focuses exclusively on live birth data without considering socio-economic indicators or environmental factors. The findings indicate that Sleman Regency experienced significant fluctuations in fertility trends amidst global challenges, including the Covid-19 pandemic. Initially, the fertility environment was stable, with a slight increase in live births from 13,102 in 2018 to 13,354 in 2019. However, a notable decline to 11,702 live births was observed in 2021, followed by a robust rebound to 14,908 live births in 2022. The study highlights the resilience of Sleman Regency's demographic dynamics in the face of global disruptions. These findings underscore the importance of continuous monitoring and analysis of demographic data to anticipate and manage future demographic shifts. This research contributes to the demographic field by providing insights into the fluctuating fertility patterns in a specific region during a period marked by global disruptions.

Keywords: fertility trends; Sleman Regency; Covid-19 pandemic

Introduction

Fertility rates are influenced by global shocks, such as changes in national income, contraceptive availability and cost, and climatic shocks. Studies have shown that national per capita income has a negative effect on fertility, with higher income leading to lower fertility rates (Hailemariam, 2024). However, the effect of monetary costs on contraceptive use is not significant, indicating that keeping contraceptive prices low may not be a major determinant of fertility behavior (Frankenberg, et.al., 2004). In agrarian communities dependent

on rainfed agriculture, droughts can lower the opportunity cost of having children and increase fertility rates (Dessy, et.al., 2019). Additionally, a decrease in child mortality due to positive weather shocks leads to a decrease in fertility, particularly among larger households (Jones & Schoonbroodt, 2016). These findings suggest that global shocks can have varying effects on fertility rates, depending on factors such as income, contraceptive availability, and child mortality rates.

The most recent global shock which occurred was the Covid-19 pandemic. The Covid-19 pandemic has had varying effects

on fertility rates and reproductive health globally. The severity and duration of the epidemic, as well as socio-economic factors and policy responses, have influenced the impact on fertility rates. Some countries have experienced a decline in births during the pandemic, while others may see a short-term increase in fertility due to unintended pregnancies resulting from disruptions in access to family planning services (United Nations, 2023). The pandemic has also led to a decrease in sexual and reproductive health care services due to global lockdowns and closures of non-essential health sectors (Falana, et.al., 2023). In terms of reproductive behavior, individuals in Czechia considered the most restrictive period of the pandemic to be unfavorable for childbirth, leading to a reduction in the planned number of children (Slabá, 2023). However, overall, there is no evidence for long-term effects of the pandemic on fertility, suggesting that pre-pandemic fertility forecasts still apply (Vanella, et.al., 2023).

The global landscape has changed greatly with the emergence of the Covid-19 pandemic, which has impacted various aspects of human life, including demographic trends (Van Dalen & Henkens, 2021; Liu & McKibbin, 2022). Before this pandemic, global fertility rates were already showing signs of fluctuation due to various factors ranging from economic conditions to advances in health services. The emergence of Covid-19 introduced additional complexities, affecting birth rates through both direct and indirect pathways. Sleman Regency, a region in Indonesia, provides a unique case study in this regard. Known for its stable demographic patterns, the regency is facing unprecedented challenges during this pandemic. This study aims to determine shifts in fertility trends in Sleman Regency from 2018 to 2022, a period marked by significant global disruption. This period, characterized by a global pandemic, offers a unique opportunity to study the impact of unprecedented global

events on fertility trends (Wang, et.al, 2022; Sobotka, et.al., 2023). Understanding these patterns is critical to addressing long-term socio-economic challenges associated with demographic shifts (Tasneem, et.al., 2023; Ahmed, et.al., 2024). By focusing on live birth rates as the main indicator, this research excludes socio-economic and environmental variables usually associated with fertility studies, allowing for a concentrated analysis of birth rate dynamics amidst the pandemic.

The primary concern of this research is to elucidate the dynamics of fertility trends in Sleman Regency during the span of 2018 to 2022, a period characterized by the global Covid-19 pandemic. The abrupt onset and pervasive impact of the pandemic have raised questions regarding its effects on demographic trends, particularly fertility rates. Meanwhile previous studies have explored the relationship between pandemics and fertility, the specific impacts of Covid-19 on local demographics remain less understood. General approaches to addressing this research problem involve the quantitative analysis of birth data, offering insights into how global crises influence regional fertility patterns. This study adopts a focused methodology, analyzing live birth data from the Ministry of Home Affairs (Kementerian Dalam Negeri/Kemendagri) to trace the fluctuations in birth rates, thereby providing a microcosmic view of broader demographic shifts during this tumultuous period.

Research on fertility trends amidst global shocks typically integrates a multi-faceted approach, encompassing socio-economic, health, and environmental factors (Anser, et.al., 2020; Pezzulo, et.al., 2021; Țarcă, et.al., 2022; Nkalu, 2023; Ahmed, et.al., 2024). However, this study narrows its scope, concentrating solely on live birth data to analyze fertility trends. This decision is grounded in a methodological preference which seeks to isolate the pandemic's direct impact on birth rates from other variables. The literature reveals that focusing on live

birth rates can offer a clear, albeit partial, picture of fertility dynamics. This approach is informed by studies such as Salvati, et.al. (2020), which employed similar methodologies to dissect fertility trends during health crises. Other studies also use similar things such as Sobotka, et. al. (2022), Marteleto, et.al. (2020) and John & Adjiwanou (2022). By emulating this focused approach, the study aims to contribute to a nuanced understanding of how specific global events, like the Covid-19 pandemic, directly affect regional fertility rates, independent of broader socio-economic trends.

A comprehensive review of existing literature indicates that while there is a significant body of research on the impact of pandemics on fertility/birth rates (Kirchengast & Hartmann, 2021; Aassve, et.al., 2021; Karasek, et.al., 2021; Pasternak, et.al., 2021; Molina, et.al., 2022), few studies have specifically focused on the direct relationship between global health crises and live birth rates in the Indonesian context. Most existing research incorporates a wide array of variables to explain fertility trends, including economic conditions, healthcare access, and environmental factors (Alfana, et.al., 2021; Siregar & Siregar, 2021; Akbar, et.al., 2022; Tjahyadi, et.al., 2022). This broad analytical scope, while valuable, often dilutes the direct impact of pandemics on fertility rates. The literature review underscores a research gap in studies which exclusively analyze live birth data to understand fertility trends during the Covid-19 pandemic in regions like Sleman Regency. This gap highlights the need for focused research that can provide clear insights into the pandemic's direct impact on birth rates, offering valuable data for policymakers and demographers.

The objective of this study is to analyze the dynamics of fertility trends in Sleman Regency from 2018 to 2022, a period notably affected by the Covid-19 pandemic. This research is novel in its focused examination of live birth rates as a solitary measure of

fertility trends, excluding socio-economic and environmental factors from its analysis. This narrowed approach provides a distinct perspective on the direct impact of the pandemic on fertility rates, filling a notable gap in the literature. The justification for this hypothesis lies in the preliminary data indicating significant fluctuations in live birth rates during the study period, suggesting a direct correlation with the global health crisis. The scope of this study is deliberately limited to analyzing birth data from the Ministry of Home Affairs, avoiding the conflation with broader demographic factors. This focused examination aims to contribute targeted insights to the discourse on fertility trends amid global disruptions, specifically within the Indonesian context.

Materials and Methods

The main material used in this research consists of birth data collected in Sleman Regency. This study employs secondary data sourced from the Ministry of Home Affairs, focusing on live birth records. The data encompasses live birth occurrences within Sleman Regency during the period from 2018 to 2022. This comprehensive dataset provides a solid foundation for analyzing fertility trends and calculating the Total Fertility Rate (TFR) amidst global shocks.

The preparation of the dataset involved the aggregation and cleaning of birth records from Sleman Regency. This process included verifying the accuracy of the data, removing duplicates, and ensuring completeness for the period under study.

The main parameter measured in this research is the Total Fertility Rate (TFR) which is obtained from birth data (live birth). TFR is an important demographic indicator which reflects the average number of children a woman has throughout her reproductive life, given the current birth rate. These parameters are analyzed in the context of

population dynamics in Sleman Regency, allowing for an in-depth understanding of fertility trends and their implications.

Statistical analysis was conducted to interpret the calculated TFR values and assess their significance within the broader demographic trends observed in Sleman District. This analysis involved the use of descriptive statistics to summarize the TFR.

Total Fertility Rate (TFR) will be calculated using the following meticulously designed steps.

1. **Calculating Live Births by Specific Age Groups in Sleman:** This entails tallying the number of live births from mothers aged between 10 and 64 years. These age groups are further broken down into five-year intervals, offering a detailed perspective on fertility patterns across different stages of reproductive age.
2. **Enumerating Women by Age Group:** Similar to the first step, this involves counting the number of women within the same age range of 10 to 64 years, also categorized into five-year age groups. This segmentation provides a foundational dataset for further fertility rate calculations.
3. **Calculating the Age-Specific Fertility Rate (ASFR):** Employing the formula **ASFR X = (Number of Births at Age X / Number of Women at Age X) × 1000**
This step precisely measures the fertility rate for each age group, offering insights into age-specific fertility behaviors.
4. **Summing Up All ASFR Values:** By aggregating the ASFR values, we gain a composite view of the fertility landscape, laying the groundwork for the next calculation.
5. **Determining the Total Fertility Rate (TFR):** The TFR is calculated using the formula **TFR = 5 * ∑ASFR**,

encapsulating the overall fertility rate across all age groups into a single figure.

6. **Analyzing TFR Fertility Trends:** This final step involves a thorough analysis of the TFR, discerning patterns, and interpreting the fertility trends over time.

Results and Discussion

Live Birth Trends in Sleman Regency from 2018 to 2022

This part of the discussion delves into the changes in the number of live births in Sleman Regency from 2018 to 2022, a period marked by unprecedented global shocks. This analysis investigates the resilience and dynamics of fertility patterns, shedding light on how local demographics have not only navigated through challenges but also shown signs of a remarkable rebound. This exploration offers a unique lens through which to understand the evolving demographic landscape, providing pivotal insights for policymakers, researchers, and communities alike.

Analyzing the trend of live births in Sleman Regency over a five-year period uncovers a narrative of demographic shifts possibly influenced by socio-economic and environmental factors. Beginning in 2018, with a live birth count of 13,102, a slight increase was observed in 2019, reaching 13,354, suggesting a stable fertility environment initially (Figure 1). This stable trend was maintained in 2020, with a small decline to 13,275 live births. A notable decrease occurred in 2021, descending to 11,702, which could potentially be correlated with global phenomena impacting fertility decisions. However, the subsequent escalation to 14,908 live births in 2022 warrants an in-depth analysis of the contributing factors that led to such a robust recovery.

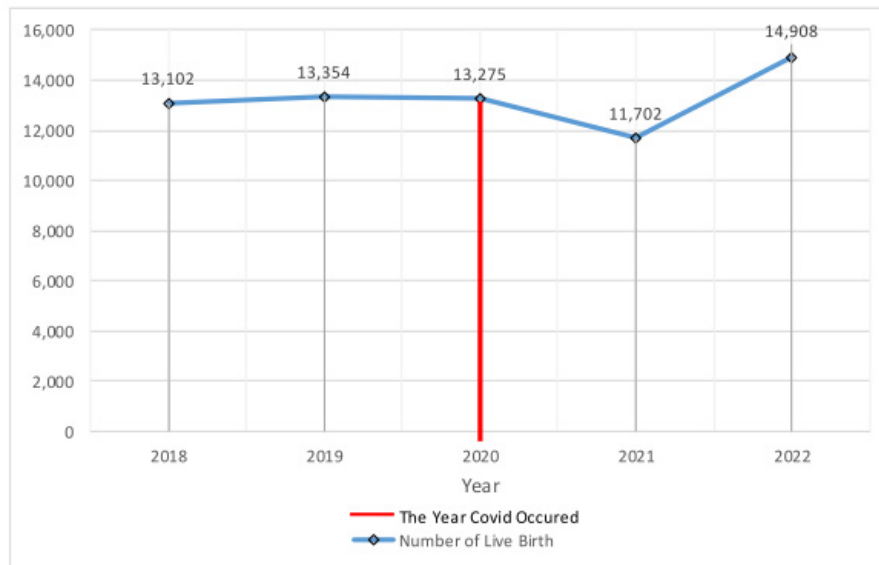


Figure 1. Live Birth Trends in Sleman Regency from 2018 to 2022

The dramatic decrease in live births in Sleman Regency during 2021 raises questions about the specific factors which contributed to this decline. A thorough understanding of the drivers of fertility rates is critical for informed policy-making. In Sleman Regency, as in many regions, various factors contribute to fertility rates, including mortality rates, access to contraceptives, socio-economic status, and urbanization trends, which have been identified as significant factors in fertility decline (Herzer, et.al., 2012; Götmark & Andersson, 2022; Jiang, et.al., 2019; Alazbih, et.al., 2017). Additionally, the impact of environmental factors on fertility cannot be underestimated. Pollution has been tied to decreased male fertility (Li & Li, 2017), and for females, the quality of oocytes and ovarian aging are critical (Takahashi, et.al., 2011). The global shift towards urbanized living also plays a role, as evidenced by the significant fertility decline associated with rapid urbanization (Zhao, et.al., 2017).

Moreover, the broader implications of fertility decline on societies and economies are considerable. A Total Fertility Rate (TFR) falling below 2.1, a critical demographic threshold, signals potential demographic and economic challenges ahead, as lower

fertility rates can eventually lead to aging populations and labor shortages, impacting the economy's dynamism (Herzer, et.al., 2012; Jiang, et.al., 2019).

The inter-annual variations in live birth rates in Sleman Regency prompt a comparative evaluation against wider literature and the potential implications of such demographic shifts. The decrease observed in 2021 could align with global influences, such as the Covid-19 pandemic, which has been shown to affect fertility intentions and behaviors adversely (Aassve, et.al., 2021; Chen, et.al., 2022). The pandemic's impact has been different across demographics, with larger declines in fertility predicted for women with lower educational attainment and those from minority groups (Wilde, et. al., 2020). The economic fallout from the pandemic, including recession and income shocks, likely contributed to reduced fertility intentions, further exacerbating the decline in live births during this period (Emery & Koops, 2022).

On the contrary, the rebound in live births in 2022 could be attributed to a post-pandemic recovery phase, which may have included catch-up fertility, a concept where delayed childbearing during a crisis occurs

once conditions stabilize. This concept is supported by historical precedents and the observed rapid recovery post-2021. The trend in Sleman Regency may reflect a localized manifestation of these broader demographic and economic patterns. Understanding these dynamics is pivotal for policymakers to prepare for future demographic shifts and to implement strategies which address the socio-economic implications of fluctuating fertility rates.

The 2021 decline and the 2022 recovery in live births underscore the complexity of fertility dynamics and the interplay of global and local factors, including economic conditions, healthcare access, educational attainment, urbanization, and environmental issues. These findings reiterate the importance of continuous monitoring of fertility trends and the necessity of responsive policies which can adapt to changing demographic realities.

Fertility Trends in Sleman Regency 2018-2022

The analysis of fertility patterns in Sleman Regency during a span from 2018 through 2022 unveils a nuanced picture of demographic changes influenced by a combination of socio-economic factors and significant global events, most notably the

Covid-19 pandemic. The initial period saw a relatively stable fertility environment, as indicated by slight variations in live birth counts and fertility rates. This equilibrium in birth trends was disrupted as the pandemic unfolded, leading to a discernible contraction in fertility rates, which can be attributed to the pandemic's far-reaching effects on health, mobility, and economic conditions. This can be seen from the decline in the number of births, which has an impact on the decline in TFR in Sleman Regency in 2021 (Table 1). This is in accordance with several other studies that the pandemic predicted and actually caused a decrease in birth rates. (Ullah, et. al., 2020; Alfana, et.al., 2021; Shah, et.al., 2021; Sobotka, et.al., 2023; Kearney & Levine, 2023).

The most striking aspect of the trend was observed in the aftermath of the pandemic, where a robust recovery in fertility rates was noted, with a surge which surpassed previous years, suggesting a post-crisis rebound. This upswing reflects the resilience of the population and possibly the resumption of postponed family planning decisions. The dip and subsequent resurgence underscore the region's adaptive responses to external shocks, offering insights into the reproductive choices made in the face of uncertainty in Sleman Regency.

Table 1. Total Fertility Rate in Sleman Regency, 2018-2022

Years	Number of Women Aged 10-64 Years	Number of Live Birth	ASFR (Per1000)	TFR=5 x ASR/1000
2018	273,678	13,102	345.00	1.73
2019	385,581	13,354	349.00	1.75
2020	419,880	13,275	344.25	1.72
2021	422,903	11,702	301.11	1.51
2022	426,164	14,908	381.26	1.91

Source: Data Processed, 2024

The data on birth differences in Sleman reflects a significant demographic shift between 2020 and 2021, with a noticeable decline in births across all maternal age groups, most profoundly within the 20-29 and 30-39 age brackets (Table 2). This trend denotes a widespread impact on fertility decisions and outcomes during 2021, aligning

with the challenging circumstances brought on by the global pandemic. The decrement across such a broad range of reproductive ages suggests that the factors contributing to this decline were pervasive and influential, likely linked to the socio-economic and healthcare strains experienced during the height of Covid-19.

Table 2. Difference in Births Between Years, 2018-2022 Period

Age Group	Birth Difference				
	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
10-14	0	0	1	4	-3
15-19	79	-10	-21	-42	52
20-24	357	1	151	-354	277
25-29	462	100	180	-482	1217
30-34	42	36	-177	-401	1013
35-39	44	99	-195	-280	445
40-44	-72	22	-15	-10	167
45-49	-24	1	-4	-6	19
50-54	0	2	0	-1	4
55-59	0	1	1	-2	0
60-64	0	0	0	1	-1

Source: Data Processed, 2024

In stark contrast, the year 2022 marked a period of demographic rebound with an increase in births across all age groups, signaling a recovery phase. This rebound was especially pronounced in the 25-29 and 30-34 age groups, which experienced the most substantial increases. The resurgence in these age groups could be indicative of a delayed response to family planning decisions put on hold during the pandemic, as well as improved socio-economic conditions and possibly a return to normalcy post-pandemic.

These shifts underscore the sensitivity of fertility patterns to external shocks and the capacity for rapid change in response to evolving conditions. The substantial recovery in 2022 suggests a degree of optimism and adaptability among the population, as

families may have been moving forward with plans that were previously postponed. This analysis highlights the need for a flexible and responsive approach to demographic planning and healthcare provision, to better accommodate the fluctuations in fertility which can result from such global events.

The trend of age-specific fertility rates (ASFR) and total fertility rate (TFR) in Sleman Regency from 2018 to 2022, as depicted in Table 1, provides a demographic snapshot of the region's fertility patterns. Over these years, the ASFR and TFR have experienced notable fluctuations. The TFR, particularly, has hovered around the replacement level of 2.1, dipping below it in certain years. This indicates a pattern where, on average, women are bearing fewer children than the

number required to maintain the population size independently of migration, raising questions about the long-term demographic and socioeconomic implications for Sleman Regency. This condition was made worse by the global shock in the form of Covid-19, which was able to reduce fertility in Sleman Regency. Fortunately, this condition quickly rebounded, even though in fact the TFR remained below 2.1.

The TFR in Sleman Regency reflects a broader demographic transition pattern observed globally. When the TFR falls below the critical threshold of 2.1, it reflects a decline to below-replacement fertility, meaning the population may not be self-sustaining in the long run without immigration (Rabbi & Kabir, 2015; Sobotka, 2004; Saadati, et.al., 2017). This phenomenon has been documented in various regions worldwide, including a significant decrease in TFR in countries such as China, which witnessed a rapid decline from higher levels to below replacement levels (Morgan, et. al., 2009; Jiang, et.al., 2019). The reasons behind these shifts are multifaceted, including socio-economic factors such as increased education, women's participation in the workforce, urbanization, access to family planning, and broader economic trends.

Low Fertility Rates in Sleman Regency

The persistent sub-replacement fertility rates pose significant challenges for societal sustainability, as seen in various European and Asian contexts where lowest-low fertility levels have been sustained over the decades (Kohler, et.al., 2002; Myrskylä, et.al., 2009; Sobotka, 2017). This declining trend necessitates an analysis of the potential socio-economic impact, such as an aging population, a shrinking labor force, and the pressure on social welfare systems. It also requires an examination of policy measures which can be implemented to mitigate these effects and to bolster fertility rates to

sustainable levels, which is essential for the long-term demographic and economic health of Sleman Regency (Guo, et.al., 2021; Hu & Chiang, 2020).

By examining these trends and their implications, policymakers can devise strategies that address the multifaceted drivers of fertility decline, aligning demographic goals with broader societal well-being.

Our findings on the fluctuation of Total Fertility Rate (TFR) in Sleman Regency from 2018 to 2022 can be interpreted through the lens of several key theories in demographic and socio-economic research. Each theory offers a unique perspective on the factors influencing fertility trends observed in our study.

1. Demographic Transition Theory (Notestein, 1945): This theory suggests that as a society progresses economically and socially, its fertility and mortality rates decline from high to low levels. The shifts in TFR in Sleman Regency can be partially understood within this framework, reflecting the region's ongoing economic development and modernization processes.
2. Human Capital Theory in Fertility (Becker, 1960): Becker's theory posits that higher investments in education and health, which constitute human capital, are associated with lower fertility rates. This is because individuals, especially women, with higher education levels often prioritize quality over quantity of children. The decline in TFR during periods of economic uncertainty in Sleman Regency may reflect such decision-making processes influenced by educational attainment.
3. Household Economic Theory (Becker, 1981): According to this theory, family decisions about the

number of children to have are influenced by the costs and benefits associated with child-rearing. The economic pressures brought about by the Covid-19 pandemic likely impacted these cost-benefit analyses, contributing to the temporary decline in birth rates observed in 2021.

4. **Social Choice Theory** (Sen, 1970): Sen's theory underscores the impact of social norms and cultural values on fertility decisions. Changes in societal views on family size, employment, and gender roles might have influenced fertility trends in Sleman Regency, reflecting broader shifts in social preferences and values.
5. **Resilience Theory** (Holling, 1973): Originally applied in ecology and psychology, the concept of resilience can also explain how populations adapt to sudden external shocks, such as a pandemic. The quick recovery of fertility rates in 2022, following the decline in 2021, demonstrates the resilience of the population in adapting to and recovering from crises.
6. **Fertility Delay Theory** (Lesthaeghe, 1995): This theory explains that individuals or couples may choose to delay childbearing due to economic, educational, or career reasons. The post-pandemic recovery phase might have seen a "catch-up fertility" effect, where delayed childbearing during the crisis is compensated for once conditions improve, as evidenced by the rebound in TFR in Sleman Regency.

Integrating these theoretical perspectives provides a comprehensive understanding of the dynamic and multifaceted nature of fertility trends in Sleman Regency. The

decline and subsequent recovery in TFR can be seen as the result of complex interactions among economic conditions, educational levels, social norms, and individual resilience in the face of global and local challenges. These theories not only help to explain the observed patterns but also highlight the importance of considering a broad range of factors in fertility research and policy-making.

Low Fertility and Policy

Addressing the issue of low fertility in Sleman requires a multifaceted approach that not only identifies the underlying causes but also proposes comprehensive policy solutions. This discussion explores the phenomenon of low fertility rates, their implications, and suitable political policies, focusing on Sleman's context.

Low fertility rates have become a significant demographic concern globally, with profound implications for societal structure, economic development, and the welfare state. In Sleman, like in many parts of the world, this demographic shift poses challenges to traditional growth models and social security systems. The Total Fertility Rate (TFR) in Sleman, reflecting the average number of children a woman would have over her lifetime, has seen a marked decline, mirroring trends in developed and some developing countries.

Factors Contributing to Low Fertility

Several factors contribute to low fertility rates, including but not limited to:

1. **Economic Conditions:** Economic uncertainty and the high cost of living, including the expenses associated with child-rearing and education, deter families from having more children (Kim, Oh & Ahn, 2022; Wang & Zhong, 2022; Wang, Gozgor & Lau, 2022).

2. **Workforce Participation:** Increased female participation in the workforce, coupled with insufficient maternity leave and childcare support, challenges work-life balance and family planning (Enache, 2013; Kato & Kato; 2021).
3. **Societal and Cultural Shifts:** Changes in societal norms and individual priorities, with a greater focus on personal development and career aspirations, influence decisions regarding family size (Kearney, Levine & Pardue, 2022; Doepke, et. al., 2023).
4. **Access to Education and Contraception:** Higher levels of education, especially among women, and widespread access to contraceptive methods, allow individuals to plan their families and delay childbearing (Götmark, F., & Andersson, 2020; Liu & Raftery, 2020; Ross, 2021).
2. **Work-Life Balance Initiatives:** Promoting flexible working hours, remote work options, and adequate parental leave for both mothers and fathers can help parents balance their careers and family life. Employers should be encouraged, through policy incentives, to create family-friendly workplaces.
3. **Education and Awareness Programs:** Public campaigns which promote the value of family and address misconceptions about fertility can help shift societal attitudes. Education programs focused on family planning and parenting skills are also crucial.
4. **Childcare Support and Services:** Expanding access to affordable, high-quality childcare services eases the burden on working parents and supports early childhood development. This includes investing in early childhood education facilities and programs.
5. **Gender Equality Measures:** Policies which promote gender equality in the workplace and combat discrimination against working mothers are vital. Ensuring equal pay, career advancement opportunities, and protection from workplace discrimination can empower women to make choices about childbearing without fear of economic or professional setbacks.
6. **Healthcare and Fertility Services:** Improving access to healthcare, including reproductive health services and fertility treatments, can support couples wishing to have children. Comprehensive healthcare policies should address the physical and mental health aspects of fertility and child-rearing.
7. **Urban Planning and Housing Policies:** Creating family-friendly

The decline in fertility rates has several implications for Sleman, including an aging population, potential labor shortages, and increased pressure on social security systems. Moreover, it affects the dependency ratio, increasing the burden on the working-age population to support the elderly.

Addressing low fertility requires comprehensive policy interventions that tackle the root causes and provide supportive measures for families. Key policy recommendations include:

1. **Economic and Financial Support:** Implementing financial incentives, such as tax breaks, child allowances, and subsidies for childcare and education, can alleviate the economic burden on families. Policies aimed at housing affordability and job security can also create a more conducive environment for family expansion.

communities with access to parks, schools, and healthcare facilities can make urban areas more attractive to young families. Housing policies which consider the needs of families can also encourage higher fertility rates.

Conclusion

This study has systematically analyzed the trends in live births and Total Fertility Rate (TFR) in Sleman Regency from 2018 to 2022, highlighting significant demographic shifts. The findings reveal a notable decline in TFR in 2021, followed by a rebound in 2022, underscoring the resilience of fertility behaviors amidst socio-economic and environmental challenges, including the Covid-19 pandemic. These fluctuations are indicative of a complex interplay between various factors, such as economic uncertainty, healthcare access, urbanization, and environmental quality, affecting fertility decisions. This research also reveals that Sleman's fertility is at a low level. This is revealed from the TFR which is less than 2.1. The existence of a global shock has proven to have an impact on the decline in the TFR value. For this reason, it is very important to continue to study the fertility issue in Sleman Regency.

One of the key limitations of this research is its reliance on secondary data from the Indonesian Ministry of Home Affairs, which may not capture all nuances of individual fertility decisions. Additionally, the study focuses primarily on quantitative analysis, potentially overlooking the qualitative aspects of why families make specific fertility choices.

For future research, it is recommended to incorporate qualitative methods, such as interviews or focus groups, to gain deeper insights into the motivations behind fertility decisions. Further studies could also explore the impact of specific government

policies on fertility trends, offering a more comprehensive understanding of how policy interventions can effectively support demographic sustainability.

This research contributes to the broader discourse on demographic trends, providing valuable insights for policymakers and scholars interested in fertility dynamics. It highlights the importance of adaptive and multifaceted policy approaches to address the challenges of fluctuating fertility rates, ensuring societal and economic well-being in the face of global and local disruptions.

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Migration: A Process of Search - London A Case Study

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Abstract

TV news, social media, and newspapers continue presenting migrants as a threat to the rich economies. However, the richness of cosmopolitan cities is the migration. London, the capital of the United Kingdom, is a case in point. In this context, the present article is guided by the following research question: what are the main causes of migration to London? This text has as objective to explore the drivers behind of migration to London. The hypothesis is based on the assumption that people who migrate to London have different motivations and not necessarily economic reasons. This work uses qualitative and quantitative materials, such as face to face interviews, data reports and statistics on migration and direct observations. This article is divided in four sections. The first one exposes some outstanding theories on migration. The second one describes the methodology applied. The third one offers some personal experiences of migrants living in London. The fourth one presents some results about the main drivers of migrants to London, and finally some conclusions are offered, which consider that there are subtle causes of emigration which are usually underestimated, such as learning English as a personal achievement, acceptance of different sexual orientation, cultural diversity, and relative political stability are among the most representative.

Keywords: migration; London; United Kingdom; cultural diversity

Introduction

The process of migration has been condemned in recent years as a result many people feel shame to define themselves as migrants. Xenophobia, discrimination, classism, isolation, racial attacks, bullying, sexism, social exclusion, marginalisation, physical, social, and mental abuses are the most common experiences among emigrants when arriving to a foreign country.

The stereotype of migrants in wealthier countries is full of prejudices spread by the media and by politicians who know how to exploit the stigma against migrants to their

political benefit. Many far-right extreme movements have flourished recently all around the world. In the US, Donald Trump (2017-2021), former US president, is well known due to his narrative against Latino communities, particularly Mexicans who were called by Trump “as criminals, drug dealers, rapists” (Gabbatt, 2015). In Europe, anti-migrant feelings have been encapsulated by nationalist movements. Meanwhile in France, it is the National Front (FN); in Spain, the Vox Party; in Italy, the Five Star Movement and in Germany, Alternative for Germany (AfD). In the United Kingdom, it is the UK Independence Party (UKIP), promoter of the

Brexit; in Austria, the Freedom Party (FPÖ); in Sweden, the Sweden Democrats (SD); in Finland, the Finns Party and in Poland, the Confederation Party. Furthermore, in Hungary, it is the FIDESZ party; in Slovenia, the Slovenian Democratic Party (SDS); in Greece, the Greek Solution and in Australia, the New Guard Organisation (BBC, 2019a).

A new wave of far-right politicians has flourished around the world and they are getting closer to the mainstream of public policies, using the anti-migration narratives to blame for economical setbacks, unemployment, criminality and other social problems. The United Kingdom like many other countries has experienced an increase on anti-migration feelings reflected in many policies. The Brexit, as reference of the withdrawal process of the UK from the European Union (EU), is one of the most aggressive social expressions against European migration.

The Brexit as a result of the referendum launched on 23 June 2016, and put in place on 31 January 2020, contributed to create a divisive society and reinforce anti-migration policies. The illegal Migration Bill introduced in March 2023 by the Secretary of State for the Home Department, Suella Braverman (2022-2023), which considers “people who arrive illegally after the 7 March 2023 have no right to be in the UK” (Gower, 2023). In this new context, the UK government also launched on 14 April 2022 a five-years scheme trial to process asylum seekers claims in Rwanda, which means that asylum seekers would be sent to Rwanda on a one way ticket, and claim asylum there or being resent to their origin country (BBC, 2023).¹The current UK

government of Rishi Sunak (2022-currently-May 2024), following the pressure of the anti-migration groups has announced his commitment to curb migration and reduce arrivals, focusing on refugees and asylum-seekers (Picheta, et.al., 2023).

The anti-migration feeling continues being high in the UK and London as cosmopolitan capital fights against anti-migration groups. Paradoxically, one of the most important sources of pride of British people is the richness offered by the multicultural diversity groups living in London. In this framework, the purpose of the research is to shine a light on the main drivers which motivate people from different parts of the world and social, economic and cultural background to move to this capital. Certainly, economic causes are the most prevalent, but there are also other psychological, cultural, artistic, and personal motives which drive people to London, which this text pretend to analyse. It is also important to mention that this paper aims to contribute to demystify the supremacy of north-south relations or rich versus poor countries, which contribute to increase the prejudice against immigrants, considering them as illiterates, poor and dangerous people.

Theoretical Discussions

The process to move from one place to another has been constant in the history of humanity. According to United Nations-Migration Agency a migrant is “any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) person’s legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is” (UN, 2020) This is a broad definition which offers different spectrum of possibilities to abandon the born-country. However, this perspective considers the

¹ This initiative has been proved to be highly controversial. Recently in June 2023, charities and other activists won an appeal, after judges at the court of appeal ruled in favour of campaign groups and 10 affected asylum seekers, considering Rwanda is not a safe country to send refugees. However, the Prime Minister, Rishi Sunak, announced plans to appeal at the Supreme Court against this decision, insisting that Rwanda is a safe country for asylum seekers to have their claims processed (Quinn, et. al., 2023).

migration as a movement limited from the south to the north, from developing countries to developed ones, as if migration were a movement solely determined by factors of economic development.

For Bhugra and Becker (2005), migration can be defined as “the process of going from one country, region or place of residence to settle in another. The duration of this new settlement varies”. These authors put the spotlight to individuals, who relocate either semi-permanently or permanently to another country and they may move en masse or singly, delimiting the migration as movement through a geographic space.

De Hass proposes a wider definition considering “migration as an intrinsic part of broader processes of economic, political, cultural, technological, and demographic change embodied in concepts such as social transformation, ‘development’ and globalisation”. For De Hass, migration is a social process that cannot be seen in isolation from the broader processes of change (De Hass, 2021, p.12)

According to De Hass, the concept of migration also includes the factor of freedom in its own right, as he defines human mobility not by the criterion of actual movement, but as people’s capability (freedom) to choose where to live (De Hass, 2021, p.22)

Another important factor analysed by De Has in his research on migration is the advance of digital communications, which have improved in recent years, giving people’s general life expectations based on wealthier countries, particularly in young people who are more exposed to social media and digital technology communication (De Hass, 2021, p.17).

Another important contribution in the understanding of migration is offered by Castelli, who in line with De Hass, considers that the communication technology plays an important role in the process of migration. Castelli envisages the migration research in two factors. The first one is the “meso-factors”,

which compile the communication technology and *diaspora* bonds. The second one is the ‘micro-factors’, such as education, religion, marital status, and personal attitude toward migration as key elements in making the final decision to migrate (Castelli, 2018, p.1)

Castelli demystify the image of the stereotype of the illiterate, poor and rural migrant reaching the borders of affluent countries, since poor people from developing countries do not have the financial resources and the mind set to migrate. The expectations of poor people in developing countries, when consider migrating, is to the capital of their own country: “The poorest people simply do not have the means to escape war and poverty and remain trapped in their country” (Castelli, 2018, p.1).

The study of Castelli contrasts with the economic perspective, which underlines that economic factors are the only drive forces to migrate. Harris and Todaro are some of the represents of this migration theory. They interpret migration under the logic of income and other opportunities between country origin and country destination. This model assumes that people make rational decisions based on economic profits to maximise income and utility (Harris and Todaro, 1970).

These authors add important elements to the study of migration, such as flows of resources: money, goods, working conditions; however, the economic perspective has a reductionist character by ignoring other variables which are also important in the process of migration. This theory also reinforces the perception of unequal relations between the north and the south, where the first represents the rich countries and the second, the poorest ones. Under the economic perspective, people are driven to migrate on the grounds to find better economic opportunities in the country destination. Certainly, the economic variable continues being valid to encourage migration. However, this is just a part of the whole picture.

From the anthropologist perspective, migration is driven as an historical movement which has accompanied the human development condition. From this overview, the study of migration is a social, political, economic, and cultural process. The migration process under this perspective adds important insights in the understanding of this phenomenon such as the concept of “transnationalism” which explores interconnected relations of migrants with their home countries (Brettell, 2003).

Robin Cohen also goes in the same line, since he considers that migration is part of the human history. “The phenomena of hunting and gathering, seeking seasonal pasture and nomadic were part of the human social organisation itself. Flight from natural disasters, adverse climatic changes, famine, and territorial aggression” (Cohen, 2019). Therefore, migration is not a new phenomenon of aggression or threat from the south to the north or from the poorest to wealthiest, rather than an historical feature of human development.

For the purpose of this text, the migration is considered under the perspective of the sociology and anthropology, as an interactive process, which takes into account historical, social, cultural, economic, geographical and culinary factors of individuals, who cross local and international borders in search of their own expectations. From this perspective, the migration is a creative and challenging process, as migrants need to put in place all their creativity and resourcefulness to recreate a new version of themselves in a new environment full of challenges and adversities.

Methodology

The text follows a quantitative and qualitative methodology selected due to the nature of the study. Regarding qualitative data, an ethnographic framework was implemented

through personal observations, personalised interviews and cross data collected from respondents living in London during many years. This text does not pretend to answer all questions around migration, rather offering a humble contribution in the understanding of a complex phenomenon.

In terms of quantitative data, according to the Office for National Statistics (ONS, 2022), London is one of the most diverse ethnic² societies worldwide due to the migration of individuals from all over the world. The number of people arriving in the UK in 2022 hit a record of 1.2 million people, and about half that number leaving. The net migration, which represents the difference between the number of people arriving and those leaving, meaning the long term migration reached 606,000 for the same year, while in 2021 were fewer than 500,000 (Lawless, 2023).

Since the Brexit referendum in 2016, after seven years, the far wing has campaigned to reduce migration. Certainly, EU migration reached less than 51,000 in 2022, while the non-EU nationals represented 662,000 in the same year (Harding & Duncan, 2023).

Following to the Migration Observatory, at the end of June 2021, about half of the UK’s foreign-born population (48% in total) were either in London 35% (3,346,000) or the South East 13% (1,286,000). Northern Ireland, the North East and Wales have a low share of the UK’s total foreign-born population, at 1–2% each. On the other hand, in the same period, only 10% of the UK-born population lived in London (The Migration Observatory, 2022).

² Ethnic groups are composed of people who may or may not share the same race but do share common cultural characteristics, including history, beliefs, values, food and entertainment preferences, religion, and language. Ethnicity typically incorporates both race and culture. Race is based on biologic constructs, such as sharing certain physical attributes; it may or not be also a social and political construct, then ethnicity is a source of social identity. And cultural identity include religion, rites of passage, language, dietary habits, and leisure activities (Bhugra & Becker, 2005).

Following the same report released by the Migration Observatory in 2021, the most common reason that non-EU migrants gave for having originally moved to the UK in 2021 was family (46% of non-EU born), followed by work (23%). On the opposite, the EU migrants were more likely to have moved for work reasons (48%) (The Migration Observatory, 2022). In the report of the UK Office for National Statistics in 2022, one out of every 12 non-EU migrant entering to Britain was an asylum seeker, meaning that only 8.33% non-EU migrant come to UK looking for political asylum (Harding & Duncan, 2023).

According to the census data for England and Wales 2021, the most ethnically diverse region in the UK was London, since 46.2% of residents were identified with Asian, black, mixed or "other" ethnic groups, and a further 17.0% with white ethnic minorities. London had the smallest percentage of people who identified as British (Office for National Statistics, 2022).

It is necessary to mention that in the category "other ethnic" groups, the largest groups reported are Sikh (77,000 persons, representing 0.1%), Hispanic or Latin American (76,000, 0.1%) and Kurdish (76,000, 0.1%). The report also includes other backgrounds: White constituted by White British, Irish, Gypsy or Irish Traveller and other; Black includes Black African, Caribbean, and other. Asian comprises Indian, Pakistani, Bangladeshi, Chinese and other. Mixed group considers White and Black Caribbean, White and Asian, White and Black African or any other mixed race (Office for National Statistics, 2022).

UK government acknowledges that the category of ethnic group is multi-dimensional, complex, and subjective, since a person may choose to be identified with different ethnic groups, for example as "sikh" person can also be identified as Asian, Asian British or Asian Welsh. The ethnicity is a personal choice based on elements in common such as ancestry, elements of culture, identity,

religion, language and physical appearance (Office for National Statistics, 2022).

Life Histories of Migrants Living in London

London, as one of the most important centre of migration from all over the world, is also the centre of the most intriguing hubs to collect personal histories of people, who decide to create a family, partner, enterprise, job, discovery, inspiration or simply a place to call home.

There are hundreds of reasons why people move to London which go beyond imagination and contradict the media stereotypes. Some histories are kindly shared through some friends, acquaintances or people who offered the author their support when they knew the nature of this text. Some names were changed due to the will of the interviewees.

Family

I come from Peru. My aunt was married with an English man. She had two kids. She and her husband were working at that time. They needed someone to care of the kids, while they were working, she proposed me to care of her kids in exchange of paying my English school fees, house accommodation, food, and some little money. After three years. I came back to Peru, where I met an English guy, who later I would marry and having two kids and then we came back to London again to join my husband's family and my aunty family (Andrea, 2023).

Sexual Expression

Hi. My name is Kemal. I am 35 year-old. I am an IT technician. I come from Turkey, where homosexuality is legal, but socially misperceived, and my parents were not very happy with my choice, many times they

introduced me some beautiful girls, but I was tired to refuse them and I didn't want to hurt anyone. So one day I met in Turkey someone from London, who told me about the London Gay Pride and the Gay community. Then I contacted them by social media. I came once as a tourist and then I decided to move and to live here. I feel better living here because I am anonymous, I don't feel judged and I can walk hand in hand with my boyfriend and no one cares (Kemal, 2023).

Job

As a Hungarian person, and trained as a medical specialist in Spain, I was fascinated by the British culture, long before my decision to move to London back in the 2000s. The feeling of being respected and considered as a valuable asset by the managers of the NHS hospital, who paid me accordingly, boosted my self-confidence. Not forgetting, the warm welcome of my peers that made me feel that I made the right career move. My needs were seriously considered when the job plan was scheduled and mutually negotiated, an expression which still raises eyebrows in Spain. Working hard, sometimes without being demanded, was greatly rewarded by the work flexibility reflected on my work schedule. This effectively means that I could spend a few weeks from time to time travelling around Europe, even spending a considerable amount of time with my family in Hungary and Spain. A healthy work balance between job related stress and well deserved relax time was one of my objectives to work in London. If tell you the truth, I say frequently to my friends that I loved being a health care professional in the UK, but I would rather be a patient in Spain. What I enjoy the most from London is to be exposed to all kind of cultures, a truly unique melting pot (Norbert, 2023).

Religion

I am from Egypt, most of the population is Muslim, my husband and I, we are Christian-Catholic. The living conditions were not very well for us. Job expectations were null. I am teacher and I had always bad positions due to my religion. We knew that if we wanted to have family, Egypt was not a good place for our kids, so we move to London, thanks to a Christian organisation that gave us some help at the beginning. After eight years, I have a baby and I work as teacher assistant and my husband as a taxi driver (Kara, 2023).

Political Grounds

Well, my family including my parents, brothers, and sisters, we arrive to the UK in the 1990, due to the genocide in Rwanda. I was a child. We didn't have anyone in the UK. It was quite difficult time, we didn't speak English, we learnt on the ground. My father worked in the Rwandan government, but no one could be saved from the prosecution of the Rwandan Civil War. My mom sometimes reminds us how we left from Rwanda. We left without anything just our passports to avoid suspicious of our departure. UK held a refugee program, so we came to London to rebuild our lives. Today, all my brothers have jobs in different sectors. One is a doctor, another and IT engineer, another one a linguist and I work for global consultancy Sector Company, and I have my own family living here in London (Mugabo, 2023).

Artistic Career

I am from Mexico. I studied Opera. I have a school of languages well established over there. I have my house, car, and some money, but I was feeling that I needed to pursuit my life passion which is the opera and in Mexico, there are not many opera events during all

year, while here there are many opportunities. The theatre, comedy and artistic life are quite dynamic sectors. For an artist, London is the equivalent to Broadway-New York as it represents the highest level of artistic expression. I've already won an important award here. This is the reason what I want to continue living here (Maria, 2023).

Freedom of Expression

I was a journalist in Nigeria, I used to work for a national newspaper, but there are some topics quite sensitive such as religion and politics, but as a journalist you must talk about it, even if politicians don't feel comfortable. The Nigerian media is not formally controlled by the government, but there are groups with a lot power in alliance with criminals. I received several dead threats, and then I came to London 12 years ago. I continue writing, but not for Nigerian media, but for a UK media consortium as a freelance (Peter, 2023).

Climate Change

I come from Punjab, in Pakistan, my parents used to produce basmati rice, but in recent years the land is not productive as it was many years ago, and water scarcity is getting from bad to worse. The crops and profit are unpredictable, the rains are not seasonal anymore and water supply is becoming more expensive. I studied at the University of the Punjab agriculture; but my parents didn't want that I continue farming as the family business, because the weather makes agriculture more difficult, and the work and money invested were not compensated any more the effort. They encourage me to leave Pakistan and I came to London ten years ago, since we had some friends already living here. I work a taxi driver. I hope one day to return to my lands if they survive the droughts (Muhammad, 2023).

Studies

I came to London in 2006, I was just finished my master degree in Economy in Italy. One day, my lecture told me that I would have great job opportunities in Italy if I spoke English. Italy as part of the European Union, and in that time, UK had arrangement for European nationals to come to the UK without visa to study, work and moving with the same freedom and entitlement than being in the rest of the Euro zone. After 17 years, I continue living in London, I am married, and I have a great job in one of leading digital tech companies worldwide. Not as an economist, but as part of the security staff. I was seduced to live here, because I was young, I met great people during my journey (Giacomo, 2022).

Improving English Language

My name is Manjari, I come from Calcuta, India. I came to London 10 years ago. I am a nurse. I worked as a nurse in India, but I wanted to improve my English. In India, I learn English since I was young, but it is never the same. So I had a friend, who encouraged me to come to work here, but for doing that I needed to make some administrative procedures to make recognize my qualifications, then I focused to study and improve my English language. Besides, when you go back to India speaking English with English accent you feel different, perhaps it is a kind of unconscious inferior feeling, inherited by our colonial past, but I wanted to know better this country. Today I work as a nurse in the NHS (National Health Service) (Anukul, 2022).

Making Friends

Hi. I come from a small town in the Netherlands. I came to London 12 years ago, because I wanted to meet people from different part of the world and London is a

great city for young people as there are always events, concerts and many outdoors activities, many of them are free. I am a writer. I wanted to meet people, who have the courage to leave their countries either for the comfort where they come from or for the needs they pursuit. My advice. Beware that people come to London to make money. It most likely will be challenging to find and make friends as a lot of people don't have time, however, eventually you will find friends by doing the things you enjoy and probably through work. If you come from a warm place, don't expect warm and hot weather everyday! I would suggest having a sense of humour, having a positive mindset and being resilient - will make you enjoy London and survive the harshness of the city as well. Get an oyster card, learn the bus routes, and study the transport for London map. These things will save you! (Volka, 2022).

Love

I was very young. I was 18 years old. I am German and I met a British boy in my country then we started to date and I felt in love. Then I move to London to live together. The relation didn't prosper, but I am still in London after 30 years. I love this city, except the living cost that makes my life more difficult and isolated particularly in recent months, after the Russian-Ukrainian war, everything becomes more expensive and I feel now more tied financially to enjoy this city. I work as yoga tutor (Hannah, 2023).

Women Freedom

I come from Mexico as international student at the Metropolitan University to study interior design. I came here eight years ago. The first thing that I remember was the freedom as a woman that I experienced here. I remember to see other women to use miniskirts and necklines, walking with confidence on the streets. In Mexico, due to the machismo and

violence against women, which have caused millions of women deaths, this scenario is unthinkable. Living in London I feel in total confidence to go out from my house dressed as I want and no one cares. This is the reason why enjoy to live here, even if I don't have the same comfort that I could have over there (Tatiana, 2023).

Results: Diluting Borders

The migration flow is the result of a combination of different drivers which may be internal or external factors that not necessary are linked to the economic causes. Certainly, the economic drivers continues being prevalent reflected in job opportunities, improve income or profit revenue, but even these elements could be associated to other variables such as job flexibility, work conditions, job mobility, employees cultural diversity or work environment. This may help to explain why some overseas employees like to work in London.

Another of the most frequent argument of the far-right movements, when attacking the migration is the idea that all migrants arriving to UK, and London in particular, are asylum seekers and social benefits searchers. This is quite relative statement, because most of the people arriving under this status are educated people who run away from their countries, due to their political engagements or personal choice. Some of them are university students, journalists, teachers, nurses or doctors, as it is reflected in the interview statements mentioned in the section of life histories of migrants living in London, which demystify the stereotype of "ignorant asylum seekers".

The factor climate change as a driver of migration is not anymore a myth, it is a reality. Hundred, thousand and soon millions of people are abandoning their home countries due to water scarcity, food production, and land infertility as one of

the interviews suggests. In this sense, instead of criminalise migration in the west; developed countries should invest more to reduce climate change effects and share their technology with undeveloped countries, because there is still an unbalance in the climate change bill. For example, United Kingdom accounts among the countries with the highest water waste with 20 trillion gallons per year (Marsh, 2018) in comparison with Ethiopia where water scarcity oblige to people to use all drops of water that they can get carefully.³ Or even worse the rich countries continue using the poorer nations to put their waste out of sight and out of their territories (Varkkey, 2019). According the interview statements mentioned in the section of life histories of migrants living in London one participant – Muhammad from Pakistan- already mentioned climate change as cause to migrate to the UK.

The political factor is without any doubt another driver of migration to the west, almost all continents face war, bloody conflicts, political instability, human rights infringements, and some countries have also dictatorships. Certainly, the developed countries have less political instability than the less wealthy economies. There is no secret that political stability is correlated to economic growth.⁴ It is not a coincidence either that failed states are also influenced by political instability, economic set back, and

colonial past (Tusalem, 2016).⁵The trend migration driven by political reasons is also related to recent interventions of some of the west countries, such as US, UK, France, and Belgium among some cases. Political instability in the Middle East: Syria, Afghanistan or Iraq. In Africa: Mali, Gambia, Congo, Nigeria. Not to mention the political instability caused by organised crime in Latin America: Mexico, Colombia, El Salvador, Haiti and so on. Political migration has caused the increase of migration figures. In the UK, asylum and resettlement comprised an estimated 6% of overall long-term immigration in 2018 (The Migration Observatory, 2022). According the interviews statements mentioned in the section of life histories of migrants living in London Peter from Nigeria is a journalist who moved to the UK due to political instability and threats to exercise his job.

Furthermore, emigration caused by religious motives is usually mixed with other political drivers such prosecution, political harassment, torture or killings. For example, Catholics and Christians run away from Muslims majority populations or Muslim civilians are killed by Burmese army or Hindu groups. These kinds of events continue making the headlines of the news.⁶The infringement of civil rights is also a cause for political migration, such as women rights or

3 China is at the top of the countries with the highest water waste with 362 trillion gallons per year. United States: 216 gallons/ year. France: 20 trillion gallons/year. Canada: 19 trillion gallons/year and Australia 12 trillion gallon/year (Marsh, 2018).

4 According to the U.S. News &World Report, the top 10 stable countries are also the riches ones in the world: Switzerland is classified as the most politically stable with a GDP per capita of \$77,324. Followed by Sweden (GDP per capital \$59,324), Denmark (GDP per capital \$64,651), Germany (GDP per capital 57,928), Belgium (GDP per capital \$58,931), Australia (GDP per capital \$55,807), UK (GDP per capital \$49,675), Canada (GDP per capital 52,085), Norway (GDP per capital \$79,201) and Netherlands (GDP per capital \$63,767) (US. News &World report, 2023).

5 Tusalem analyses how the colonial past may have led to substandard institutions and problematic state-society relations. He finds that state failure is largely a mix of variables, such as the type of colonial rule and duration of colonial control. The state failure in the modern world is influenced by the historical process of colonialism and its institutional legacies (Tusalem, 2016).

6 For example, two Ethiopian Christians were killed by police for building a church on a Muslim area (BBC, 2019b). On the other hand, several people from Rohingya Muslim minority were killed, women raped and extra-judiciary arrests by the Burmese army in Myanmar due to religious hate crimes (BBC, 2016). Another case in point was the Gujarat riots, in India, where 1,000 people died, mostly Muslims, as well as many women were reported to be raped during the riots (BBC, 2004).

difference sexual orientation. Unfortunately, poor governance, lack of transparency, inappropriate function of the rule of law, impunity and high levels of corruption contribute to nourish this type of migration. Following the interviews statements mentioned the section of life histories of migrants living in London ,there are two people – Kemal from Turkey and Tatiana from Mexico- who mentioned that sexual orientation and women freedom rights were the main drivers to move to the UK.

The migration continues being motivated by better education opportunities. According to the Migration Observatory, study is one of the major reasons that people move to the UK, in the academic year 2020/2021 around 605,000 international students both EU and non-EU came to study in UK higher education universities (The Migration Observatory, 2022). This figure contrast with the image which media and far-right movements spread about international migrants who are portrayed as illiterate and poor people that do not have anything to eat in their home countries. As Castelli (2018) mentions, some migrants are more educated than their peers left behind in their origin country. Sometimes, they are even more educated than their peers in the destination country.

The educational international migration constitutes an asset for the destination countries, as they receive qualified, skilled, and creative people. On the opposite, the poor and middle-income countries, they lose key people for their development, this phenomenon is known as “brain drain”, which is without a doubt a lost for developing countries.

For example, according to Nigerian officials, at least 5,600 Nigerian medical doctors have migrated to the United Kingdom (UK) in the last eight years, and 200 Nigerian doctors moved to the UK in one single month between 31 August and 30 September 2022 (Tolu-Kolawole and Adejoro, 2022).

According to the interviews statements mentioned in the section of life histories of migrants living in London there are nurses, doctors, students and artists, who are qualified people, that moved to London, UK, due to different purposes, but ultimately they are contributing to the UK economy.

Historical factors and family links are also important drivers of migration, as the migration statistics continue showing, there were in 2022, 48,107 family-related visas granted, three quarters (76%) of family-related visas granted were for partners, with the remainder being for children or other dependants, even if this recent information shows that in 2022, there were 14% fewer family-related visas than 2019 (Office for National Statistic, 2022).

Another factor influencing the migration destination is the relationship between empire and colony. As Mahmud indicates “the immigrant is lured by the cultural homogeneity, linguistic commonality, shared history, a sense of belonging” (Mahmud, 1997). This theory makes sense in the relationship of Latin American people, who want to migrate to Spain. Algerians or Senegalese eager to go to France, or Indians, Nigerians or Jamaicans address their interest to the UK. In fact, according to the Migration Observatory of the University of Oxford (2022), at the end of June 2021, India, Poland, and Pakistan were the top three countries of birth for the foreign-born, accounting respectively for 9%, 7% and 5% of the total. Certainly, Poland was not a British colony, but India and Pakistan continue being countries with high immigration presence from the old British Empire in the UK. According to the interviews statements mentioned in the section of life histories of migrants living in London, there are interviewees, who come from India and Pakistan and feel a great attachment to the UK.

Today, the trace of colonialism⁷ is still present in most of the migratory trends. The far-right movements and government should consider the historical roots relations that hold with emigrants, rather than condemn this human movement that has been the origin of the richness of the west, since they were the first to invade immigrant's lands.

Conclusions

Migration is a controversial subject in most of the countries. The phenomenon of migration is driven by different internal and external factors, which influence people's decision to migrate, and economical drivers are not necessary the most determinant variables that motivate people to migrate, as most of the media and far-right groups want to portray. The migration is a complex and historical phenomenon which goes beyond to a political agenda. Migration from village to village, from towns to cities, from countries to countries is a constant in the human development history.

Certainly, the inequalities from the north to the south are present in process of migration. There are also historical roots triggered by the colonial dominance which influence migration destinations. Citizens from the west, particularly from colonial past need to be educated to assimilate migration as part of their own historical identity. For example, some British people feel proud of the colonial expansion, but they refuse to integrate people from their colonies on equal basis. This identity conflict continues inflicting pain, exclusion, marginalisation, and violence to migrants from Africa, Asia, and the Caribbean. People, who condemn migration, also deny themselves the opportunity to meet

different people and broaden their vision of the world and the planet, where we live and share.

It is not a secret that UK and many other European countries experience high levels of ageing population, and they do not have enough young people to take care of this population. Not to mention, the lack of contributions to maintain the pension scheme, which need to be nourished by young people, through taxes.

Qualified and unqualified migration are also economic drivers for recipient countries, as qualified migration increases expertise, talent and cutting-edge predominance, while low-skills migration is also essential for social care, community maintenance and keeping running cities.

Migration is also an asset for the host country since it helps to increase productivity and boosts market and economic expansion. For instances, "the Covid-19 pandemic (2019 to 2022) has cause one of the worst job crises since the Great Depression" (OECD, 2023), which creates a crisis and a real risk to increase poverty and widen inequalities, and the UK is not the exception of this situation. Even worse, the Brexit effects are also reflected in the demand for workers across different sectors. Skill shortage mainly in nursing, social care and medical services is agonising the NHS services, where average waiting time for a treatment is 13.9 weeks, almost the double to the Pre-covid time, that was 7.2 weeks (BMA, 2023). Without forgetting supermarket food shortages, staff shortages at the UK airports, lack for lorry drivers, staff shortage in accommodation, construction, and many others. In resume, migration is a process that brings retroactive benefits and challenges for both sides. The recipient countries and the origin countries.

⁷ Colonialism can be defined in this text as "the conquest and control of other people's land and goods (...) and as the takeover of territory, appropriation of material resources, exploitation of labour and interference with political and cultural structures of another territory or nation" (Loomba, 2015, p. 20-27).

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Poverty Linked to Government Performance: Insights from Maluku Barat Daya and Halmahera Timur, Indonesia

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Abstract

This study aims to uncover the connection between government performance and poverty in a process-tracing mechanism, utilizing documentation and archival records of Maluku Barat Daya and Halmahera Timur in East Indonesia, 2016-2019. Incorporating process-tracing as the method to tracing which linkage is a new approach in poverty discourse, which is the novelty of this study. Process tracing is not without challenges, considering that it requires the presence of the expected case-specific implications of its existence, which is constrained by the data availability. However, spatially speaking, the findings of this study provide valuable insights into Indonesia's context as an archipelago nation and can be a reference for any country facing disparity and inequality. Poor government performance lowers the quality of education and infrastructure performance through the limited number of qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability. Poor education resulted in low technological advances, low examination results, and few good accreditation schools. In infrastructure development, the incapability of local government to provide essential services pushed people to survive on their resources and become more vulnerable to experiencing poverty. Therefore, this research concludes that government performance influences poverty reduction through education and infrastructure performance.

Keywords: local government; poverty; process tracing; education; infrastructure

Introduction

Indonesia, the largest economy in Southeast Asia and the world's fourth most populous nation, has performed impressive economic growth since overcoming the Asian financial crisis of the late 1990s. Being a G20 nation, having projected that it will become one of four big economies in the world by 2045, the Government of Indonesia's calculations showed that at the time, Indonesia would have a 5-6 percent level of economic growth and

Gross Domestic Product (GDP) of US\$9.1 trillion and its income per capita is predicted to be at the level of US\$29,000.¹ However, it is more likely that the western region would benefit from this golden era Indonesia is embracing due to its more adequate infrastructures/support required for such a future, in contrast to the eastern part, which is experiencing slow development – hence high poverty. Poverty reduction on the east

¹ <https://setkab.go.id/en/indonesia-will-be-worlds-4th-largest-economy-by-2045-president-jokowi-says/>

side has not achieved significant progress by 2019. Four of Indonesia's five provinces have the highest poverty rates on the east side (BPS-Statistics Indonesia, 2020).

Along with infrastructure, education is another critical sector all tiers of government deal with in empowering poor people. BenDavid-Hadar (2014) demonstrates the benefit of government investment in education to improve the cognitive development of the coming generations, which will partly alleviate poverty. Sen (2000) presents that the more reachable primary education and health facilities are, the better the poor can escape poverty. However, we must be aware of the quality of both services. Despite more spending on education, Indonesia is not getting the appropriate results (Afkar, Luque, Nomura, & Marshall, 2020). Indonesia's policy to allocate 20 percent of its budget to the education sector seems to have no considerable effect. Educational inequality due to the inefficiency of educational policies may affect education development goals in eradicating poverty (Bonal, 2016). In addition, Rosser asserts that the root of Indonesia's low quality of education is the underlying political prerequisites (2018). These statements align with the poor quality of local government staff in eastern Indonesia, directly affecting the development quality in that area (Resosudarmo & Jotzo, 2009).

Governance is the process by which public policy decisions are set – who gets what, when, and how – and implemented as a result of interactions, relationships, and networks between its stakeholders (United Nations of Development Programme [UNDP], 2015; Taylor, 2016). The World Bank shows the importance of governance from the perspective of aid in offering aid support (Moyo, 2009). More than just having money to reduce poverty, there is an increasing acknowledgment of governance, including restructuring social and political institutions (Moyo, 2009; Page & Pande, 2018; Sillah, 2016). Considering that the decentralization mechanism in Indonesia involves the delivery

of proportional funding and authority to support development by the local governments, a significant difference in poverty eradication performance indicates a disparity in the local government's capability to plan and deliver suitable development programs. The provincial/district government is considered incapable and inferior to its higher sphere of government (Stanton, 2009), such as in the internal control system and competent human resources in providing information (Dewi, et.al., 2019). The incapability and inferiority of local governments link poverty to essential governance principles: effectiveness and efficiency, transparency, accountability, competence, performance evaluation, and economic, social, and cultural human rights (Addink, 2019; Kaufmann, et.al., 1999; Taylor, 2016; Organisation for Economic Co-operation and Development [OECD], 2014).

How government performance technically affects poverty reduction efforts is still an interesting topic to work on, and open to new perspectives to employ. Therefore, using two provinces in eastern Indonesia – Maluku and Maluku Utara – in a process-tracing mechanism, this study contributes to the poverty eradication effort Indonesia's government is working on by proposing that poor government performance causes the slow reduction of the poverty rate through poor educational performance and inadequate infrastructure development. Incorporating process tracing as the method of mapping the linkage between poverty and government performance via education and infrastructure performance is a relatively new approach in poverty discourse, which is the novelty of this study. The findings of this study provide valuable insights into Indonesia's context as an archipelago nation; spatially speaking, it can be a reference for any country facing disparity and inequality. In addition, when we link it to the spirit of SDGs which leaves no one behind, this paper participates in localizing poverty analysis that fits any specific situation and level of

government such that the stakeholders may obtain a clearer view of inequality facing a particular area.

Method

Considering that district-level research would provide a more holistic understanding (Chaudhuri & Gupta, 2009), this study sets the district as the unit of analysis. It uses process tracing to identify a causal mechanism (M) between poor government performance (independent variable – X) and slow poverty rate reduction (dependent variable – Y). The essence of process tracing research is that scholars want to go beyond merely identifying correlations between independent variables (Xs) and outcomes (Ys) (Beach & Pedersen, 2016) by performing parsimonious pathways in which X contributes to producing Y.

A mechanism understanding of causality in the process tracing method applied here is a theoretical process whereby X produces Y and does not necessarily imply regular association (Beach & Pedersen, 2016). However, some experts debated the ontology of causality in process tracing. Causation in the regularity approach is considered a regular pattern of association between X and Y in which the actual causal process of X toward Y is black-boxed (Beach & Pedersen, 2016). In other words, researchers make hypotheses about the pattern of the X:Y association and test the observable implications of these hypotheses, but they do not directly observe causal mechanisms. Encountering this school of thought, Bennett and Checkel stated that these experts miss the more fundamental fact that causal mechanisms are, to some extent, ultimately unobservable and that researchers do not get to observe causality (2015). They make inferences about it.

This research deduces a theory from the existing literature. It tests whether causal-process observations (CPOs) show that each part of a hypothesized causal mechanism is

present in the case study and functions as expected. The process tracing to be applied here is theory-testing process tracing in which both X and Y are identified, so the existing conjectures about the potential tool for logical reasoning are formulated.

Process tracing implementation involves test strength. The degree of the test's power falls into two basic terms: certainty and uniqueness (Van Evera, 1997). Tests of predicted evidence with high certainty and uniqueness are the strongest. Furthermore, in combinations of strength and weakness, Van Evera proposes four types of tests of predictions: (i) hoop tests, (ii) smoking-gun tests, (iii) doubly-decisive tests, and (iv) straw-in-the-wind tests, predictions with low uniqueness and low certainty. As doubly-decisive tests are ideal and almost impossible in real-world social science research and straw-in-the-wind tests are never decisive, hoop tests and smoking-gun tests become two main kinds of empirical tests in process tracing (Mahoney, 2012).

The logic of process tracing tests proposed by Mahoney (2012) is practical and will be adopted in this study as follows.

1. For the hypothesis that X is necessary for Y, the hoop test requires that X must be necessary for one or more intervening mechanisms (M) which is sufficient for Y.
2. For the hypothesis that X is sufficient for Y, the hoop test requires that X must be sufficient for one or more intervening mechanisms (M) which is necessary for Y.
3. For the hypothesis that X is necessary for Y, the smoking-gun test requires that X must be necessary for one or more intervening mechanisms (M) which is necessary for Y.
4. For the hypothesis that X is sufficient for Y, the smoking-gun test requires that X must be sufficient for one or more intervening mechanisms (M) which is sufficient for Y.

In the context of process tracing, this study is not examining whether poor government performance tends to covary with slow poverty reduction in a population but whether poor government performance is either a necessary and/or sufficient cause of slow poverty reduction (Beach & Pedersen, 2016). Differing from the mechanism in the statistical method, the quality of evidence in process tracing is not judged by sample size. In other words, the amount of evidence does not matter; it depends on how a piece of evidence contributes to adjudicating in a context-sensitive manner (Bennett, 2010).

The evidence in this study is collected through two sources: documentation and archival records conducted in districts with the highest monetary poverty rate in Maluku Province (Maluku Barat Daya) and Maluku Utara Province (Halmahera Timur). Various data used in this study primarily using the year 2016-2019, referring to the 5-year medium-term development plans called the *RPJMD (Rencana Pembangunan Jangka Menengah Daerah)* used in Maluku Barat Daya and Halmahera Timur.

Discussion

Evidence of Existence

1. Existence of Slow Reduction of Poverty

This study uses the official poverty rate published by *BPS-Statistics of Indonesia* to obtain evidence of poverty. The poverty rate of districts in Maluku Province and Maluku Utara Province continued to decrease between 2010 and 2019 but at a low reduction rate. In these last ten years, even though all districts have a similar pattern, the poverty rates of Maluku Barat Daya and Halmahera Timur are the highest in each province. Between 2010 and 2014, there was a noticeable fluctuation in the poverty rate in Halmahera Timur, while for Maluku Barat Daya, it was from 2010 to 2016. Afterward, the pattern reached a

plateau, indicating that poverty reduction in those areas is not promising. Hence, we can say that slow poverty reduction exists in both places.

2. Existence of Poor Government Performance

The approach to justifying the quality of government performance in this study is by considering the government's responsibility to provide essential services the people need to have a decent life.

a) Limited qualified civil servants

It is often indicated that problems facing Indonesia in the civil service are the low expected levels of educational attainment in terms of skills and competence, stakeholder awareness, and insufficient information (Asian Development Bank [ADB], 2021; Bawono, 2015). The Organisation for Economic Co-operation and Development (OECD) developed a framework to assess the skills needed to provide a professional, strategic, and innovative civil service (OECD, 2017). For the dimension of professional, one of the qualities set up there is qualified civil servants. On the other hand, much literature on human capital identifies educational attainment as a useful proxy (ADB, 2021).

The ratio of civil servants-population in Maluku Barat Daya and Halmahera Timur is less than 50 percent. Yet, more than half of Maluku Barat Daya and Halmahera Timur's civil servants have graduated only from senior high school, which generally represents the low quality of their human resources—the funding required to finance their civil servants, in general, more than one-fifth of total expenditure. A low university-graduated civil servant-population ratio with quite a considerable financing reveals the incompetency in designing their necessity of qualified employees. The limited skilled civil servants affected the development

process, as shown by the government's inability to provide appropriate data and good accountability. To this point, we can say that Maluku Barat Daya and Halmahera Timur have a problem with qualified civil servants, which may hamper the essential principles of governance, such as competence and accountability.

b) Lack of good-quality data

One of the essential duties of a democratic government is to make available information about its activities involving budgetary development programs (National Research Council, 2007). Indonesia's civil service regularly collects data to equip the government with information needed for policy-making decisions. Still, it is not standardized and used adequately (ADB, 2021).

The total area of Maluku Barat Daya in Maluku Barat Daya in Figure 2020 (BPS-Statistics of Maluku Barat Daya Regency, 2020) differs from what was published in Maluku in Figures 2020 (BPS-Statistics of Maluku Province, 2020). This inconsistency also occurred in the publication of Halmahera Timur in Figures 2020 and Maluku Utara in Figures 2020. The provincial and district offices of BPS annually compile a ton of data from almost all stakeholders in a province/district/subdistrict and publish it as "province/district/subdistrict in figure." Yet sometimes, the content is inconsistent between time and when the lower administration's information data is accumulated to the higher level. One example of those inconsistencies is the length of roads and education information. This data inconsistency and incompleteness occurred in Halmahera Timur and Maluku Barat Daya. They conclusively hindered the implementation of governance principles such as effectiveness and efficiency, transparency, accountability, and performance evaluation.

c) Non-optimal budget management

The Government of Indonesia has implemented the Fiscal Decentralization Policy since 2001. The regional autonomy policy aims to delegate executive power from the central government to local government to (1) raise efficiency on the national allocation and the provincial/district government, (2) improve the overall fiscal structure, (3) increase transparency, and (4) expand constituent participation in decision making at the regional level. In both districts, we found that the budget realization for the education sector for the total budget was small. Even much smaller than the budget realization of public works, which cover the development of roads, irrigation, and networks. The proportion of the education sector budget realization in Maluku Barat Daya was less than 10 percent. The situation is similar in Halmahera Timur, except for 2016 and 2018 when the budget percentage was 10 percent.

The tiny realization of the education budget in Maluku Barat Daya was explained by its relatively small absorption, while in Halmahera Timur, not all of the budget was absorbed. Therefore, we can conclude that inefficiency in budget management occurred in Maluku Barat Daya and Halmahera Timur, which represented the existence of poor government performance and failure to fulfill what was mandated by the regional autonomy policy when delegating executive power to local government.

d) Lack of accountability

One of the essential duties of a democratic government is to make available information about its activities involving budgetary development programs (National Research Council, 2007). In line with that, the Minister of Finance of the Republic of Indonesia rules

that financial information should be publicly available.² Regarding good government performance in a local tier of administration, it is vital to ensure that national development objectives are met and that the uniqueness or locality of its people is accommodated in the whole development process. Moreover, information on the “why, how, what, and how much” regarding local government activities should be well-documented and comply with national standards (Shoesmith, et.al., 2020). Unfortunately, in Maluku Barat Daya and Halmahera Timur, the annual Regent’s Statement and Accountability Reports were not publicly available, even though both areas have official websites.

Based on the recapitulation of examination results recommendation given by the Audit Board of the Republic of Indonesia (*Badan Pemeriksa Keuangan* - abbreviated as BPK) 2016-2019, Maluku Barat Daya and Halmahera Timur have either the quantity or amount of improvement recommendations. Several significant corruption cases in Maluku Barat Daya, as reported by the online media, are as listed below.

- a. corruption of airport construction project in 2012 with a value of IDR 25 billion with detrimental to the country as much as IDR 1.3 billion³;
- b. corruption of speedboats in 2015 with a value of IDR1.5 billion⁴;
- c. corruption of the ferry boat management fund in 2016 that caused detrimental amounting to IDR 1.3 billion⁵; and

- d. corruption of the cold storage development project renders state losses amounting to IDR 1.7 billion⁶.

A similar situation also occurred in Halmahera Timur, where its Regent was guilty of receiving gratification worth IDR 6.3 billion from the Head of the Maluku Utara Province’s National Road Construction Board.⁷

One of the pitfalls of the decentralization mechanism is the limitation of central government control and capacity to oversee how the local government conducts its role. This disadvantage increases corruption (ADB, 2021; Arifin, et.al., 2015), which may significantly hinder the government’s effectiveness in redistributive programs in developing countries. Afterward, the government’s ineffectiveness means that goals to enhance people’s welfare may not be fully achieved (Olken, 2006), as in Maluku Barat Daya and Halmahera Timur. The misused funds found by BPK and many corruption cases have represented a lack of accountability, so we can conclude that poor government performance existed in both regions.

3. Existence of Poor Educational Performance

As the world has become more globalized and digitalized, technological advances in educational institutions have become more critical than ever. Advances in technology are necessary for success in the future.⁸ On the other hand, examination results are still one of the universal indicators of student and school quality, which, to some extent,

2 Minister of Finance Regulation Number 74/2016 chapter 10 verse 1

3 <https://www.antaraneews.com/berita/1795209/kejagung-ciduk-dpo-korupsi-konstruksi-runway-bandara-moa-tiaku-maluku>

4 <https://regional.kompas.com/read/2022/01/04/181704578/korupsi-anggaran-speedboat-adik-wagub-maluku-divonis-14-tahun-penjara>

5 <https://regional.kompas.com/read/2021/11/05/182552778/2-tersangka-kasus-korupsi-kmp-marsela-ditahan?page=all>

6 <https://regional.kompas.com/read/2021/11/12/090037778/3-tersangka-kasus-korupsi-proyek-cold-storage-di-maluku-barat-daya-ditahan>

7 <https://nasional.kompas.com/read/2018/09/26/20133811/bupati-halmahera-timur-divonis-45-tahun-penjara>

8 <https://soeonline.american.edu/blog/technology-in-education>

is represented by the school's accreditation. These three variables explain the educational performance due to poor government performance, which in due time influences the effectiveness of poverty reduction.

a) Low technological advances

The Educational Assessment Center of the Ministry of Education and Culture of the Republic of Indonesia published the Diagnosis of 2019 National Examination Results for middle school, differentiated into paper-based and computer-based. Maluku Barat Daya has not conducted a computer-based examination yet, while its counterpart has. This implies Maluku Barat Daya's education system is less developed and advanced than its counterparts, representing a less reliable educational performance. On the other hand, the examination result in Halmahera Timur, which has already conducted the computer-based examination, is far from satisfactory.

Until 2019, Maluku Barat Daya was one of two districts in Maluku Province that did not conduct a computer-based national examination for the middle school level. All districts in Maluku Utara Province have performed it. Naturally, the ability to drive computer-based national examinations results from computer-based learning. The evidence that Maluku Barat Daya cannot obtain computer-based education, especially in their effort to make students digitally literate, was proof of their poor quality of education. Moreover, this evidence strongly indicates the poor technological advances in the primary education institution Maluku Barat Daya. Similarly, the poor quality of the computer-based examination in Halmahera Timur also presents the same picture.

b) Low examination results

Considering that the grading system in Indonesian education uses the interval of 0-100, Maluku Barat Daya and Halmahera

Timur's middle school performance in 2016-2019 was mediocre. Logically speaking, in a regular cycle, the low examinations resulting in the middle school level in 2016 will influence high school performance in the next three years – the typical duration for completing high school in Indonesia is three years. Supporting that logic, the high school national exam results in 2019 were less satisfactory than the middle school national exam results in 2016, which existed both in Maluku Barat Daya and Halmahera Timur. In this case, to some extent, poor performance in education at a certain level accumulates to the next level.

The educational development policy in Maluku Barat Daya and Halmahera Timur regarding qualified teacher recruitment is flawed. Regarding the percentage of Maluku Barat Daya and Halmahera Timur university-graduated teachers, the number of teachers with university education at the middle school level is higher than at the elementary level, indicating that elementary schools have poorer quality teachers than middle schools. The university-graduated teachers were not absorbed appropriately, especially in elementary education, impacting the students' performance, as indicated by the low examination results. As the low quality of teachers prompts students' poor performance (Tchoshanov, 2011; Akinsolu, 2010), we presumed that the poor quality of elementary school graduates might have resulted in the poor quality of middle school students.

c) Few good accreditation schools

Following Law Number 20 of 2003 concerning the National Education System, the Government of Indonesia regulates the mechanism for assessing the feasibility of programs in academic units based on specific criteria or accreditation. Its ratings from the best are A, B, C, and not accredited; a good accreditation school has at least a "B"

classification. Data tells us that until 2019, over half of the schools in Maluku Barat Daya at the elementary and middle school levels were accredited with a “C” classification or less, indicating poor-quality primary educational institutions. Halmahera Timur presents a better picture regarding middle schools’ accreditation, yet the percentage of elementary schools with a “C” classification until 2019 is higher than 30 percent. It convincingly proves the poor performance of its education sector.

4. Existence of Inadequate Infrastructure

Increasing access to clean water, electricity, and transport will positively impact poverty reduction, especially in rural areas, and simultaneously significantly enhance the standard of living (Budiono & Purba, 2022; Sambodo & Novandra, 2019; Cook et al., 2005).

a) Limited clean water service by the government

Until 2019, Maluku Barat Daya only had three subdistricts with clean water access provided by the district-owned water company (BPS-Statistics of Maluku Barat Daya Regency, 2020). No information regarding this matter exists in the official statistics published in Halmahera Timur. The Indonesia National Socio-economic Survey (*Susenas*) presents information that since 2010, almost half of the households in both districts have access to clean water. However, regarding the public service availability of clean water, only about 10 percent of households can access it. Even though a significant portion of Maluku Barat Daya and Halmahera Timur have access to clean water, the service provided by the local governments is limited, revealing the inadequate clean water infrastructure in both areas.

b) Low electrification

Access to electricity is crucial in meeting basic social needs for households, operating domestic appliances, and providing essential services such as education. Electricity in Maluku Barat Daya is not widely available in all subdistricts. Between 2015 and 2019, electricity services were not significantly expanded. Only about 40 percent of the total subdistricts have been electrified in Maluku Barat Daya (BPS-Statistics of Maluku Barat Daya Regency, 2020). Halmahera Timur’s electrification rate is adequate.

c) Low connectivity

According to Maluku Province’s National Road Construction Board (*Balai Pelaksanaan Jalan Nasional* - BPJN), in 2019, the national road class was built on seven islands. Still, only three islands have more than 50 percent good-quality roads. In addition, according to Maluku Barat Daya in Figures 2019, the total length of the district road class of four subdistricts in Wetar Island – 345.92 km, is the longest in Maluku Barat Daya. Road density measurement (road length versus total land area) is better for acquiring more weighted information. Yet, we do not have valid subdistrict information for the entire land area.

Maluku Barat Daya has a slow growth of land mass transport. The stagnancy of passenger transportation numbers in Maluku Barat Daya reflects the local government’s insufficient attention to providing public transport for the people. These statistics should be interpreted carefully, considering that areas with vast seas may have different public transport needs compared to the mainland.

Using seaport samples of Sea Freight Statistics 2019 obtained by BPS-Statistics of Maluku and BPS-Statistics of Maluku Utara, we find that the average monthly unloaded/loaded goods, unloaded goods dominated

the loading-unloading process in Maluku Barat Daya, indicating dependence on supply outside the region. In contrast, the loaded ones had the highest activity in Halmahera Timur, implying that the part has higher productivity and can export goods to fulfill other areas' needs. In addition, as container seaports are highly dependent on road transport (Chen, et.al., 2016), the low-loaded goods in Maluku Barat Daya's seaports could also indicate low land connectivity in that area.

Evidence of Causal Mechanism

As stated in the beginning, this study aims to examine that poor government performance causes the slow reduction of the poverty rate through poor educational performance and inadequate infrastructure development as the intervening mechanisms. In terms of process tracing, that aim may be formulated as hypotheses as follows.

1. Poor government performance is necessary for slow poverty reduction.
2. Poor government performance is sufficient for slow poverty reduction.

The following explanation links poor government performance and slow poverty reduction with poor educational performance and inadequate infrastructure performance as the mechanism in between.

As quoted by Schneider, Bangladesh's case mentioned the public officers' inadequate capacity as one of the obstacles to poverty reduction (1999). At the same time, Banerjee and Duflo (2011) suggest that addressing poverty must focus on broad institutions and carefully understand the motivations of the elements of those comprehensive institutions, including civil servants. In Maluku Barat Daya and Halmahera Timur, a ratio of less than 50 percent of university-graduated civil servant populations impacts how the local government makes regulations, implements them, and then controls and enforces them.

In this digital era, data access and sharing are needed to enhance public service delivery and to identify emerging governmental and societal needs.⁹ Access to and sharing public service data are necessary for improving the quality of public services, supporting innovation, and redesigning and evaluating new service delivery approaches. In other words, the government's good performance in any poverty reduction should be revealed by information-based policies (Schneider, 1999). Therefore, the lack of valid data in Maluku Barat Daya and Halmahera Timur represents the existence of poor government performance.

A non-optimal budget absorption left unmet needs on some issues that should be covered in case the local government manages the budget effectively. This occurred in Maluku Barat Daya and Halmahera Timur, where educational development program funds were not fully absorbed. The existence of non-optimal budget management makes it pass the hoop test. Learning from an experience in rural India (Fan et al., 2000), when it comes to poverty alleviation, the unabsorbed funding would provide a better achievement in overall district performance as it could be switched to other sectors such as public works.

Accountability refers to the situation in which government officials deliver services within an effective administrative system and are supported by efficient managerial practices and procedures (Mumvuma, 2016). By having accountability, a development process is supposed to yield the optimal result, which aims to provide good-quality basic infrastructure to the people. On the contrary, a lack of accountability deviates the development process from its intended goal. A study in Nigeria found that corruption due to lack of accountability is enormous and has a significant relationship with poverty (Idehen & Oriazowanlan, 2020).

⁹ <https://www.oecd.org/digital/ieconomy/enhanced-data-access.htm>

Impacts of the presence of poor quality of government's performance, such as improper planning and budgeting prompted by the limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability of local governments led to inaccuracy in the planning, monitoring, and evaluation process of the development programs, especially the pro-poor programs. In due time, those circumstances hampered poverty reduction. This causal inference implies the existence of a mechanism between poor government performance and the slow reduction of poverty.

1. The Causal Mechanism between Poor Government Performance and Poor Educational Performance

Research on the relationship between education expenditure and poverty in 20 Asian countries by Akbar, et.al. (2019) concludes that the more the government allocates funds to education, the less poverty there is. Maluku Barat Daya and Halmahera Timur have a sizeable fund for the education sector, yet not all of it was absorbed well. The incapacity of the civil servants could prompt the fact that Maluku Barat Daya and Halmahera Timur lacked good-quality data and good-quality schools to obtain adequate information on problems and challenges faced by each school in delivering good-quality educational institutions.

Inefficiency in educational funding management, lack of good quality data, and limited qualified teachers lead to poor educational performance. This mechanism reveals the condition that poor government performance is necessary and sufficient for the existence of poor educational performance. If poor government performance does not exist, poor educational performance may not happen. At the same time, if poor government performance exists, poor educational performance will occur.

Applying this logic to Indonesia's situation, we can say that in Maluku Barat Daya and Halmahera Timur, government-performance-related variables such as limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability may have most likely caused poor educational performance related variables such as low technological advances, low examination results, and few good accreditation schools considering that limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability are shown as necessary and sufficient conditions to low technological advances, low examination results, and few good accreditation schools.

2. The Causal Mechanism between Poor Government Performance and Inadequate Infrastructure

Strategic planning capacity positively influences the public sector's performance (Jung & Lee, 2013; Boyne, 2001), considering that strategic planning and management are approaches to identifying and addressing government challenges. Good planning, monitoring, and evaluation are not accessible when a lack of resources and expertise exists, considering that problems in that process are mainly technical, managerial, and institutional rather than political (Boyne, et.al., 2004; Awortwi, 2016; Conroy & Berke, 2004). In addition, almost three-quarters of infrastructure investment in developing countries is funded by governments regardless of the source (ADB, 2003), which also happened in both areas in question.

Problems facing Maluku Barat Daya and Halmahera Timur in terms of infrastructure that should be provided by the government, as shown by data, are limited clean water service, low electricity, and low connectivity. On the other hand, poor government performance occurred in both areas: limited

qualified civil servants, lack of good-quality data, non-optimal management, and lack of accountability. These facts reveal the condition that poor government performance is necessary and sufficient for the existence of inadequate infrastructure. If poor government performance does not exist, inadequate infrastructure may not happen. At the same time, if poor government performance exists, inadequate infrastructure will occur.

Applying this logic to Indonesia's situation, we can say that in Maluku Barat Daya and Halmahera Timur, government-performance-related variables such as limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability may have most likely caused inadequate-infrastructure-related variables such as limited clean water services, low electrification, and low connectivity. Considering that limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability are necessary and sufficient conditions for limited clean water services, low electrification, and low connectivity.

3. The Causal Mechanism between Poor Educational Performance and Slow Reduction of Poverty

Poor government performance has resulted in many challenges in the education sector. Low technological advances, low examination results performance, and the few good accreditation schools in Maluku Barat Daya and Halmahera Timur are evidence of the government's inability to provide a good education for its people. Due to the inadequate implementation of technology in the learning process, students have less access to many new opportunities to increase their digital citizenship skills.¹⁰ Fairlie, Beltran, and Das also found that having computers at home in the U.S. has a strong positive relationship with grades and

¹⁰ <https://www.gesdubai.com/news-center/articles/effectiveness-technology-education>

a strong negative relationship with school suspension (2010), such that they suggest that disparity in access to technology could be the gate of future disparities in the labor market and other economic outcomes.

Low examination results and the few good-accredited schools indicate poor educational performance. South Africa's case will be a good learning example. South Africa's production of high-level skills was insufficient, and education failed. Teachers allocate less than their work time to teaching and learning and have high absenteeism (Hoadley, 2008). About 65 percent of school leavers are illiterate (Sayed, 2008). Many students graduated from formal education without the basic minimum skills. So they have limited capacity once they enter the labor market, which in due time limits the gain they may have as compensation in the workplace. A study that estimated the effect of education on poverty in Pakistan pointed out that educational attainment boosts people's earning potential, resulting in a higher probability of being out of poverty (Awan, et.al., 2011). Conversely, lower educational attainment will lessen the likelihood of living above the poverty line.

The failure to provide a good-quality primary education, which occurred in both areas in question, impacted the quality of their future workforce and their low competitiveness in the job market and, in due time, for a decent life. These situations reveal that poor educational performance is necessary and sufficient for the slow reduction of poverty. The absence of poor educational performance prevents a slow reduction of poverty. At the same time, if poor educational performance exists, a slow reduction of poverty will take place.

Applying this logic to Indonesia's situation, we can say that in Maluku Barat Daya and Halmahera Timur, poor-educational-performance-related variables such as low technological advances, low examination results, and few good accreditation schools

may have most likely caused slow poverty reduction. Considering that low technological advances, low examination results, and few good accreditation schools are shown as necessary and sufficient conditions to slow down poverty.

4. The Causal Mechanism between Inadequate Infrastructure and Slow Reduction of Poverty

A study by Budiono and Purba involving cross sections of 501 districts in 2018 reveals that besides education, access to clean water significantly reduces poverty disparities (2022). So, the reality that many households in Maluku Barat Daya and Halmahera Timur have access to clean water is good news. However, the adequate service delivered by the local government is limited. If they did better, it might boost the percentage of people who can access clean water at a more affordable price and spend more money on other fundamental issues such as education. The higher availability of clean water is also crucial for sanitation by improving health and environmental quality. In the long run, as people get healthier and live in more decent neighborhoods, the local government may use its health spending for more than merely providing primary health care needs.

The low electrification rate, especially in Maluku Barat Daya, indicates the government's incapability to provide for people's basic needs. The total percentage of households as consumers of state-owned enterprises in Maluku Barat Daya until 2019 reached 60 percent but is still available in limited areas. This situation aligns with the findings of a previous study, which stated that regions with a lower electrification rate are identified as having higher poverty rates (Diallo & Moussa, 2020). Besides its effect on poverty reduction in the short run, proper electrification rate prompts an increase in non-food spending (Ikhsan & Amri, 2022).

Transportation access opens the way

to more accessible economic transactions in markets, education and health services, labor opportunities, and any isolation facing poor people in developing their capabilities. Still, transport infrastructure improvement alone cannot bring the expected impact of poverty reduction without proper policy links to other sectors (Njenga & Davis, 2003). In Maluku Barat Daya, Wetar Island has the most extended road length and, simultaneously, the highest number of 1st Deciles of the 40% of the population with the lowest welfare. That fact aligns with a study by Gachassin et al. (2010) that found that road infrastructure opens a broader way to increase economic activity. However, if road development does not come along with affordable public transport, it cannot significantly improve the quality of life. The fact that public transportation service is limited while people need to travel for various reasons, in due time, will force people to spend more money than in the situation if the government provided mass transport. Under those circumstances, poor people are thus at a disadvantage.

This study finds that inadequate infrastructure is necessary and sufficient for the existence of a slow reduction of poverty. The absence of inadequate infrastructure prevents a slow reduction of poverty. At the same time, if inadequate infrastructure exists, a slow poverty reduction will take place.

Applying this logic to Indonesia's situation, we can say that in Maluku Barat Daya and Halmahera Timur, inadequate-infrastructure-related variables such as limited clean water services, low electrification, and low connectivity may have most likely caused slow poverty reduction. Considering that limited clean water services, low electrification, and low connectivity are shown as necessary and sufficient conditions to slow down poverty.

The relationship between variable X (poor government performance), variable Y (slow reduction of poverty), and the M (mechanisms) in between (poor educational

performance and inadequate infrastructure) is as follows.

1. Poor government performance is necessary for poor educational performance and inadequate infrastructure, while poor educational performance and inadequate infrastructure are sufficient to slow poverty reduction.

Applying this logic to Indonesia's situation, we can say that the presence of limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability in Maluku Barat Daya and Halmahera Timur prompted low technological advances, low examination results, and few good accreditation schools as a reflection of poor educational performance; and limited clean water services, low electrification, and low connectivity as the reflection of inadequate infrastructure, to occur, while low technological advances, low examination results, few good accreditation schools, limited clean water services, low electrification, and low connectivity are the condition for slow poverty reduction to occur.

Because poor educational performance (low technological advances, low examination results, and few good accreditation schools) and inadequate infrastructure (limited clean water services, low electrification, and low connectivity) existed in Maluku Barat Daya and Halmahera Timur, slow reduction of poverty took place. In this situation, poor government performance (limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability) is necessary for slow poverty reduction and makes it pass the hoop test.

2. Poor government performance is sufficient for poor educational performance and inadequate infrastructure, while poor educational

performance and inadequate infrastructure are necessary to slow poverty reduction.

Applying this logic to Indonesia's situation, we can say that because limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability existed in Maluku Barat Daya and Halmahera Timur, low technological advances, low examination results, and few good accreditation schools as a reflection of poor educational performance; and limited clean water services, low electrification, and low connectivity as the reflection of inadequate infrastructure, occurred. Afterward, the presence of low technological advances, low examination results, few good accreditation schools, limited clean water services, low electrification, and low connectivity in Maluku Barat Daya and Halmahera Timur prompted a slow reduction of poverty. In this situation, poor government performance (limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability) is sufficient for a slow poverty reduction and makes it pass the hoop test.

3. Poor government performance is necessary for poor educational performance and inadequate infrastructure, while poor educational performance and inadequate infrastructure are necessary to slow poverty reduction.

Applying this logic to Indonesia's situation, we can say that because limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability existed in Maluku Barat Daya and Halmahera Timur, low technological advances, low examination results, and few good accreditation schools as a reflection of poor educational

performance; and limited clean water services, low electrification, and low connectivity as the reflection of inadequate infrastructure, may occur. The presence of low technological advances, low examination results, few good-accredited schools, limited clean water services, low electrification, and low connectivity in Maluku Barat Daya and Halmahera Timur prompted a slow reduction of poverty. In this situation, poor government performance (limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability) is necessary for a slow poverty reduction and makes it pass the smoking-gun test.

4. Poor government performance is sufficient for poor educational performance and inadequate infrastructure, while poor educational performance and inadequate infrastructure are sufficient to slow poverty reduction.

Applying this logic to Indonesia's situation, we can say that because limited

qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability existed in Maluku Barat Daya and Halmahera Timur, low technological advances, low examination results, and few good accreditation schools as a reflection of poor educational performance; and limited clean water services, low electrification, and low connectivity as the reflection of inadequate infrastructure, occurred. Because of the presence of low technological advances, low examination results, few good accredited schools, limited clean water services, low electrification, and low connectivity, the slow reduction of poverty took place in Maluku Barat Daya and Halmahera Timur. In this situation, poor government performance (limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability) is sufficient for a slow poverty reduction and makes it pass the smoking-gun test.

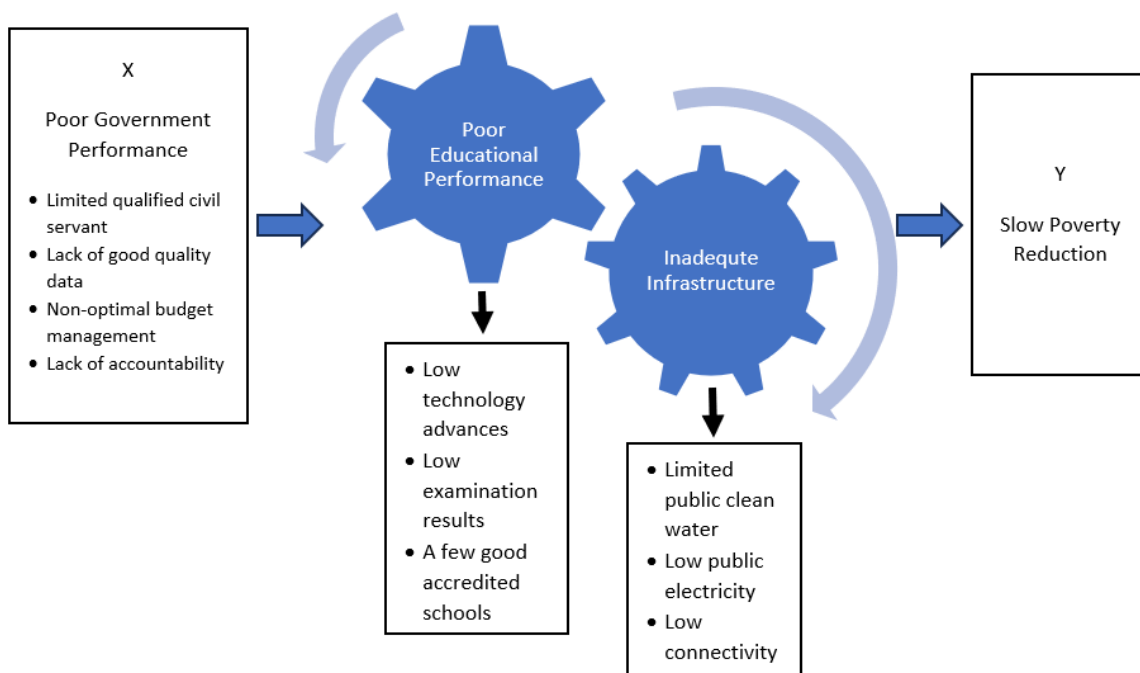


Figure 1. The Mechanism between Government Performance and Poverty

Therefore, this study proves that limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability (poor government performance) pass the hoop test and smoking-gun test, which is necessary and sufficient to cause slow poverty reduction in Maluku Barat Daya and Halmahera Timur, with low technological advances, low examination results, and few good accreditation schools as a reflection of poor educational performance; and limited clean water services, low electrification, and low connectivity as the reflection of inadequate infrastructure, as the intervening mechanisms. The limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability resulted in low technological advances, low examination results, few good accreditation schools, limited clean water services, low electrification, and low connectivity, in due time slow down the poverty reduction as occurred in Maluku Barat Daya and Halmahera Timur.

Conclusion

Governments worldwide are working hard to make more public facilities adequately available, particularly to people experiencing poverty. Yet, the question is: "How adequate is it?" This question should be answered by not forgetting that poverty is a situation where people lack essential things they may need or access uniquely according to their background. For instance, when it comes to basic transportation, it should be differentiated between a mainland area and an archipelagic one. Maluku Barat Daya and Halmahera Timur are a very good sample of it.

Civil servants are one of the cores of any government. The government needs qualified human resources to operate and implement the development programs, so their quality is uncompromising. Another obstacle popped

up: how do you measure the civil servant's quality? Is the ratio between the population and the number of civil servants enough? The population-civil servant ratio in Maluku Barat Daya is higher than in Halmahera Timur, but it has a lower percentage of university-graduated civil servants. Even to this point, is having more well-educated civil servants enough for a good government's performance? Of course not. We can have many sophisticated theories about education and good government performance, but the next challenge comes. We need data to measure it, which is still lacking in Maluku Barat Daya and Halmahera Timur.

Lack of good-quality data leads to inefficiency in planning and discrepancy with the community's actual needs. However, it occurred in Maluku Barat Daya and Halmahera Timur, even from the basic information about the total area. Unfortunately, this is a prevalent problem all regions are dealing with. Clear proof is the Regulation of the Minister of Home Affairs of The Republic of Indonesia Number 72/2019 regarding the Amendment to Regulation of the Minister of Home Affairs Number 137/2017 concerning Code and Data of Government Administrative Area. That official legal product of the central government provides the administrative level name until the village level, yet the information on the total area is only available until the district. That lack of good-quality data might be the reason for budget management's inefficiency, resulting in an excess budget that could be absorbed into other strategic development programs. The not-so-qualified civil servant finally affected the government's budget utilization and accountability. Throughout 2016-2019, there were many recommendations from the Audit Board in both districts due to budget utilization.

Amid the pros and cons of how students' capabilities were measured through a national examination, to some extent, national exam results are still valuable for understanding

students' performance regarding how they enhance their knowledge and skills. Sadly, the results were not promising in both areas of study, especially in Maluku Barat Daya. This district was even among two districts in Maluku that had not conducted a computer-based national examination in 2019. That was not encouraging, considering current students will soon be in the following workforce. Furthermore, their limited human resources will be their main obstacle to being competitive in the job market, leading to a severe challenge for having a better quality of life. We may be tempted to ask what the government's contribution is to improve this situation, while on the other hand, the accreditation of public schools the government provides is mediocre. In this issue, it was likely that Maluku Barat Daya suffered more than Halmahera Timur.

Maluku Barat Daya and Halmahera Timur struggle to provide clean water for all people in infrastructure development. Regarding electrification, Maluku Barat Daya is more under coverage. As an archipelagic district, Maluku Barat Daya deals with more hardships, providing public electricity to dispersed people on more islands than in Halmahera Timur. The state-owned enterprise responsible for electricity needs more resources to ensure all areas in Maluku Barat Daya are electrified. One of many things they need to work on is good connectivity, which Maluku Barat Daya lacked.

Regarding connectivity and its impact on the outflow of goods, Maluku Barat Daya also has poor performance. People in Maluku Barat Daya depend highly on sea transportation to travel within the district and inter-district in Maluku, which takes a relatively higher price and more time than the land transportation dominant in Halmahera Timur. Maluku Barat Daya outnumbers Halmahera Timur in terms of the number of seaports. Yet, it is contrary to the average monthly traffic of goods. In 2019, the average monthly loaded goods in all seaports of Maluku Barat Daya were

fewer than one seaport in Halmahera Timur, indicating the low interconnectivity within Maluku Barat Daya – considering this area's geographic constraints – and also a higher economic activity in Halmahera Timur. On the other hand, a higher economic activity implies a more qualified labor market. This situation aligns with the Gross Regional Domestic Product (GRDP) per capita 2019 of Halmahera Timur (BPS-Statistics of Halmahera Timur Regency, 2022), which is higher than Maluku Barat Daya (BPS-Statistics of Maluku Barat Daya Regency, 2022). In contrast, the unemployment rate in the same year in Halmahera Timur (BPS-Statistics of Maluku Utara Province, 2020) is higher than in Maluku Barat Daya (BPS-Statistics of Maluku Province, 2020). To some extent, having more people absorbed in jobs with a lower value-added implies low productivity and high hidden unemployment in Maluku Barat Daya.

This study does not discuss a very new concept in poverty regarding government, yet it provides another perspective on its relationship. Governance is about a system that ensures that all people live decent lives and have all necessities fulfilled, such that good government performance would impact the lives of poor people. However, government performance does not directly influence poverty reduction, and how the relationship was constructed could vary between regions and highly depend on the available information. This study reveals how poor quality of government performance, as shown by limited qualified civil servants, lack of good-quality data, non-optimal budget management, and lack of accountability, affects education quality and infrastructure performance. These situations influenced the quality of planning, monitoring, and evaluation processes in delivering public services to the people. The educational performance affected by poor government performance was due to low technological advances, low examination results, and

few good accreditation schools. At the same time, in terms of infrastructure, the impacted areas had limited public clean water service, low electrification, and low connectivity. Those aspects of education and infrastructure performance are part of what governments worldwide are working on in poverty reduction.

The consequence of poor government performance in the form of poor educational performance and inadequate infrastructure directly influenced the quality of the labor force, leading to low competitiveness in the job market. It increases the likelihood of somebody being absorbed in informal jobs with low income and high insecurity. On the other hand, people with inadequate basic infrastructure, including the poor ones, are forced to afford essential services by themselves. They should spend more money to fulfill their basic needs; something should be accessed at a lower cost, assuming the government provides it with more affordable prices. The government's goodwill to make radical changes is essential in this situation.

After having more detailed information about the way the government influences poverty reduction through the quality of education and infrastructure performance, the stakeholders can contribute to preparing the needed data to develop a more effective measurement of poverty. While making data available and improving the data quality at the district level, local government also needs to make the related data available at the sub-district and village levels to obtain more precise information for the planning, monitoring, and evaluating of the development process. By implementing these tasks down to the lowest level of government, stakeholders will have the appropriate poverty alleviation programs done and effectively reduce poverty levels in all sub-districts/villages.

Regardless of its generalization limitations and the supporting data in explaining the causal mechanism, this research provides deeper insight into the mechanism of an old-

known relationship between poor quality of government performance and high poverty at the district level. It also contributes to the incoming disparity analysis of what Indonesia is facing and is helpful to further research by elaborating on the variables used here. Rough but careful incident research can be a valuable input to governments, which often have little or no awareness of the possible distributional implications of their policies, especially for local governments in eastern Indonesia that have a lot of homework to do.

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Village-Owned Enterprise Strategy in Improving the Economic Welfare of Sustainable Farmers

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Abstract

This research analyzes the role of BUMDes and other multi-stakeholders in efforts to improve the welfare of farmers in rural areas. The research uses qualitative methods with explanation analysis techniques. The results of the research show that the problems faced by farmers are largely influenced by middlemen's play in determining prices which has an impact on farmers' losses, apart from that, it is also influenced by the lack of access to information related to the market. For this reason, the village government is trying to create an agricultural business unit under the auspices of BUMDes which provides assistance to farmers in the form of capital support, marketing and also providing market guarantees. This innovation is considered successful in improving farmers' livelihoods and welfare. The agricultural economic development process carried out by BUMDes is basically the result of collaborative work carried out jointly with farmers, the private sector and supra-villages. An institutional pattern built on trust, transparency and strong commitment is the key to their success in building collaborative governance.

Keywords: agriculture; BUMDes; farmers; welfare

Introduction

Big cities often have better infrastructure and better public services, and are centres of modern formal sector activities, such as manufacturing and services. In contrast, rural areas are greatly dependent on traditional economic activities which are less productive and are often not provided with the same level of facilities. These structural differences are reflected in per capita income and other welfare indicators (Hutchinson, 2016). Rural communities are the most marginalized group due to the insecurity of global issues, as they often face several challenges to achieving

economic equity and social sustainability, especially those who have inadequate financial resources (Rashid, et.al., 2019; Razali & Rashid, 2021). Marginalized households, especially those with socio-economic problems, face several challenges. On the other hand, different rural communities have different socio-economic backgrounds (Mohd Arshar & Shamsudin, 1997). Many governments in various countries focus on rural development plans and programs, including the development of public facilities and infrastructure, resettlement schemes, rural industrialization, modernization of the agricultural sector, community development,

and poverty alleviation through the utilization of rural people's livelihoods (Hutchinson, 2016; Ibrahim, 2012; Rashid, et.al., 2019).

In the context of Indonesia, the enactment of the Act of the Republic of Indonesia No. 6/2014 concerning Villages has become a breath of fresh air for rural communities to be able to leverage their backwardness with urban communities. The leverage which can move village communities to progress as regulated in the act is state recognition of villages based on the principles of recognition and subsidiarity as well as financial support for villages through the Village Fund (Dana Desa). Having provided with this authority and financial support, the villages will be better able to capitalize on their potential and assets to achieve prosperity. Recognition of this principle is very crucial for changing the social situation in the villages since it can create an influence for improving the welfare of the village communities. The depiction of village progress after the enactment of the act is the improvement of basic facilities in villages in the form of restoration of roads, bridges, reservoirs, irrigation, and early childhood development (Hadna, Agus Heruanto; Zamroni, Sunaji; Hidayana, Bambang; Purwanto, 2017; Rahayu, 2017; Smeru, 2018; Sofianto, 2017; Yudha, 2018) and reports from Kemenkeu (2017).

The purpose of village development as stated in Article 78 (1) of the Act of the Republic of Indonesia concerning Villages is to improve the welfare of rural communities and the quality of human life as well as poverty alleviation through the fulfillment of basic needs, development of village facilities and infrastructure, development of local economic potential, and utilization of natural resources and the environment sustainably. Therefore, it opens opportunities for villages to improve the economy and welfare of their communities by developing the potential of the village through the support of village funds. It is such direction of rural development which will be able to accelerate poverty alleviation and reduce

regional disparities between villages and cities (Hadna, Agus Heruanto; Zamroni, Sunaji; Hidayana, Bambang; Purwanto, 2017).

To maximize the use of village fund, the Ministry of Villages and Development of Disadvantaged Regions annually issue regulations related to the priority use of Village Funds. Based on the regulation of Ministry of Villages and Development of Disadvantaged Regions No. 22/2016 concerning Priority Determination of the Use of Village Funds in 2017, it is stated that the development of village economic infrastructure aims "to implement the village economic barn which includes: (a) productive-scale agricultural economic business for food security; (b) agricultural economic business productive scale which is focused on the policy of one village one superior product, including aspects of production, distribution and marketing; and (c) other productive-scale economic enterprises that are focused on the policy of one village one superior product, including aspects of production, distribution, and marketing.

Some efforts made by the Ministry of Villages and Development of Disadvantaged Regions for the development of the village economy is accommodated in the form of Village-Owned Enterprises (BUMDes) which are now starting to be established in all villages in Indonesia (Zuraya, 2018). BUMDes is one of the village's economic independence by moving strategic business units for collective economic efforts in the village (Putra, 2015). BUMDes has a great opportunity to be developed as part of people's economic development agenda, especially the agricultural sector which is mostly involved by rural communities. The strategic role of BUMDes in agricultural businesses can be a partnership among farmers in an integrated farming system. Such concept is commonly referred to as an agricultural corporation (Cook, 1995).

Farmers have been economically and politically disadvantaged by the government (Suseno & Suyatna, 2007). Several problems

in policy which do not favor farmers are classified as structural problems which need to be addressed to improve farmers' welfare (Elizabeth, 2007). The policies which have existed so to date are a development strategy error which must be changed by fairly giving control and management of domestic resources to farmers and the community (Sajogyo; Sajogyo, 2002).

The trading system which so far has emerged is also not in favor of farmers. The high price of food is not only influenced by the law of supply and demand but is also caused by the length of the distribution chain of agricultural products. Supposedly when food prices increase, farmers should have benefited from the yields, but the reality does not show the same way. The ones who are benefited the most from the length of the distribution chain are middlemen (Abebe, et.al., 2016).

Every actor in the distribution chain takes advantage. The impact is an increase in prices, i.e., the farmers and consumers are the most disadvantaged parties in the distribution chain. Farmers get low prices for their products, while consumers get very high prices. Therefore, the presence of BUMDes is expected to be able to shorten the distribution chain of goods, thus avoiding the actions of middlemen who are difficult to control by the government (Fernandez, 2016). BUMDes has a role as the vanguard of the village economy while maintaining the food price stability (Sudjatmiko, 2016).

This study aims to examine the role of BUMDes to improve the welfare of farmers from an economic aspect. BUMDes as a unit which is rapidly growing after the establishment of the Act of the Republic of Indonesia concerning Villages is the hope of village communities to improve their welfare. This study specifically becomes an effort to show the smart practices carried out by the village communities in supporting farmers' economies. This study was conducted in Sardonoarjo, Ngaglik Sub-district, Sleman Regency, which is one of the villages that have BUMDes with an agricultural

business unit. The agricultural featured product of BUMDes is the *timun bayi* (baby cucumber)" commodity. For this reason, this study aimed to find out to what extent the role of BUMDe can contribute to improving the welfare of farmers in the village.

Literature Review

Collaborative Governance in Farmer Economic Development

The agricultural sector is still the main driver of the economy in D.I. Yogyakarta. The agricultural sector's contribution to Gross Domestic Income (GDP) ranks at the top compared to other industries (BPS Provinsi D.I. Yogyakarta, 2019). The magnitude of this contribution shows that economic development in the agricultural sector must be the main priority for economic development in Indonesia. So far, government intervention in the agricultural sector (especially food) has been very intensive. Even the planting process up to determining prices, including organizing farmer groups, is carried out entirely by the government. However, changes in the fate of farmers have not shown significant improvement. Therefore, village initiatives through their BUMDes efforts which make breakthroughs by collaborating with many parties need to get the support of all parties.

Collaborative governance carried out by many parties (BUMDes, farmer groups, village government) in advocating for farmers in Sardonoarjo Village is carried out in five stages. The five stages are (1) Face to Face Dialogue, (2) Trust Building, (3) Commitment to Process, (4) Shared Understanding, and (5) Intermediate outcome (Ansell & Gash, 2008). All collaborative governance is built on consensus in order to obtain mutually beneficial opportunities (Ansell & Gash, 2008).

Agricultural Structural Policy

Structural policies in the agricultural sector are intended to improve the production structure, for example the size of land ownership, the introduction and exploitation of new agricultural equipment and the improvement of agricultural infrastructure in general, both physical and socio-economic infrastructure. This policy can only be implemented if there is good cooperation from several government institutions. This is due to the nature of farming which is not only an economic business unit but also a part of farmers' lives in all its aspects. Therefore, economic measures alone will not be able to encourage structural changes in the agricultural sector. The introduction of new technology through intensive education is an example of structural policy (Mubyarto, 1989).

Research Methods

The method used in this study is a qualitative approach with descriptive analysis techniques. Data collection techniques were carried out by conducting in-depth interviews with key village figures, such as the village head, village secretary, Village Consultative Board (BPD), village farmer group (Gapoktan), BUMDes management, and community leaders. The interviews were also conducted with farmers, both those who joined BUMDes and those who did not. The purpose of the in-depth interviews was to obtain information about the extent of the role of BUMDes as one of the economic drivers of rural communities, particularly in the agricultural sector. Besides, the data collection was also performed by conducting field observations to observe village conditions as well as the secondary village data studies.

Data analysis was carried out by reducing data, presenting data, and making a conclusion. Data reduction was performed by summarizing the data, coding, tracing themes, and making data grouping (Miles, B. Mathew dan Huberman, 1992). Meanwhile,

the data were presented by grouping a set of activity information when the information was collected. The last step was to draw a conclusion (Moleong, 2007).

Results and Discussion

Affirming the Sense of Berdesa Tradition through BUMDes

The Indonesian government has sustainably encouraged the establishment of BUMDes in every village as one of the village economic institutions and a key driver of rural communities' economy (Prabowo, 2014; Srirejeki, 2018; Zuhdiyaty, et.al., 2019). The main purpose of BUMDes is to drive the village's economic turnaround by optimizing its potential of the village. In addition to the economic benefits, BUMDes also has social and non-economic benefits by strengthening a sense of togetherness among villagers, strengthening cooperation, fostering a sense of pride in the residents towards their village, accommodating the entrepreneurial community in the village, and encouraging the growth of initiatives and movements to develop villages independently (Larasdiputra, et.al., 2019).

BUMDes is a new approach to improving the village economy based on the needs and potential of the village (Tarmidzi dan Arismiyati, 2018). For this reason, the management of BUMDes is fully implemented by the village community (Prasetyo, 2017). The presence of BUMDes in the village is a manifestation of the independence of a village because the village can capitalize on its assets and potential to increase village income and also bring prosperity to the community through the presence of BUMDes (Kurniawan, 2015).

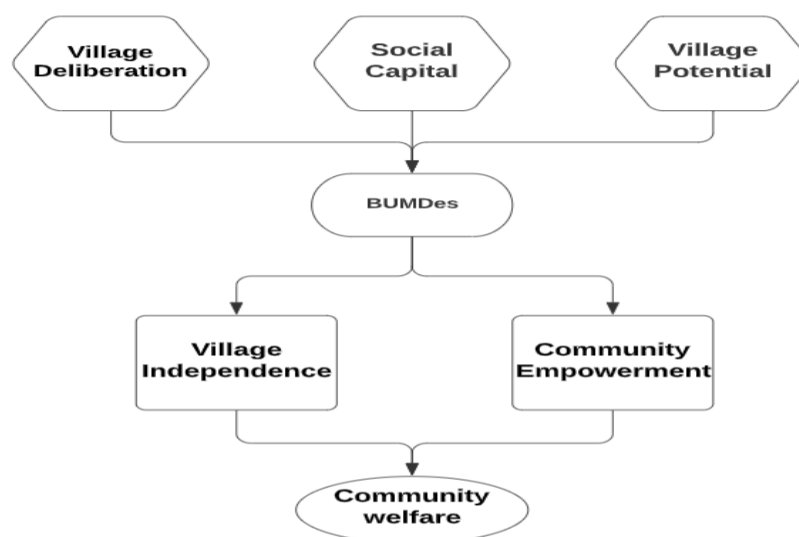
The way BUMDes works, as what was found in Sardonoharjo, is carried out by accommodating the economic activities of the community in an institution or enterprise which has been managed professionally. This may make community businesses more productive

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and effective. The direction of the goal and the grand vision confirm the concept of *Berdesa* tradition, which becomes one of the fundamental ideas in advocating the running of BUMDes (Putra, 2015). *Berdesa* tradition will be in line with the wealth of village social capital, economic capital, and political capital. As the wealth of capital is established, it is expected that BUMDes will have resistance to BUMDes sustainability (Putra, 2015).

The main idea of *Berdesa* (village) Tradition in establishing BUMDes is that: 1) BUMDes needs a social capital (cooperation, solidarity, trust, and communication) for enterprise development that reaches out to more inclusive social networks; 2) BUMDes develops in inclusive politics through the Village Deliberation (*Musyawahar Desa/Musdes*) mechanism as the highest forum for the development of village economic enterprises driven by BUMDes; and 3) BUMDes is a form of village economic enterprises that is collective between the village government and community. Collective village economic efforts performed by BUMDes have social business and economic business elements (Eko, et.al., 2014).

The spirit which must be fostered in the management of BUMDes is the spirit of kinship and cooperation (social capital). Social capital refers to a conceptual framework for understanding the theoretical orientation of social action by linking components from sociological and economic perspectives (Coleman, 1988). BUMDes is an enterprise which capital is the whole or most of the capital owned by the village through direct participation from the village wealth (Putra, 2015). Social capital is an important element that must be owned by the village in establishing BUMDes. Social capital is the most productive capital in achieving a common goal (Putnam, 1993). Social capital is a framework which covers aspects of social structure and facilitates people to do things within this framework. The BUMDes will grow through various channels through the existence of social capital, such as empowering social networks (Prayitno, 2020), capacity building, and training programs (Roxas & Azmat, 2014), and empowering women (Haugh & Talwar, 2016; Saadi, et.al., 2016). The *Berdesa* tradition is closely related to the establishment of its social capital. Therefore, the presence of social capital can easily move the economic dimensions which exist in society (Doh & Mcneely, 2012).



Source: Eko et al., 2014; Putnam, 1993; Putra, 2015; Doh & Mcneely, 2012

Figure 1. *Berdesa* Tradition in BUMDes Establishment

The cooperation between farmers and BUMDes must not prioritize profit-oriented but rather increasing benefits to the wider community, in this case, farmers. Such orientation must be embedded in the mind of village policy makers, thus the direction and purpose of establishing BUMDes are truly able to empower communities.

In the process of establishing BUMDes, community involvement is very important. The community must be positioned as both the subject and the object of the presence of BUMDes. The community has a very strategic role starting in this approach, from the preparation and planning stages of BUMDes, implementation of activities to follow-up activities of the BUMDes enterprises. Community involvement in the process of formulating BUMDes will make it easier to make agreements in promoting BUMDes in the future.

BUMDes as a Potential Partner in Promoting Farmers' Economy

BUMDes Bintang 18 of Sardonoharjo was established in January 2018. The name "Bintang 18" philosophically means that BUMDes Sardonoharjo comprises 18 stars representing 18 hamlets in the village. Its potential which can be used as a support for the establishment of BUMDes is the agricultural sector. The area of agricultural land in the form of rice fields and non-rice fields is 607,31 ha of the total village area of 938 ha (Badan Pusat Statistik Kabupaten Sleman, 2019).

The problems faced by the Sardonoharjo farmers based on problem screening in the Sardonoharjo Village Development Planning Consultation (Musrenbang) in 2018 are access to capital for farmers, an agricultural institutional capacity which has not been optimized, poor agribusiness management, post-harvest management capabilities, lack of marketing of agricultural products, unstable prices of production, very limited and unaffordable agricultural production

facilities and infrastructure for farmers, as well as problems with information networks on agricultural product markets which are not yet optimal.

Having provided with various problems faced by farmers, the village government then provided an advocacy for farmers by forming BUMDes, which specifically engaged in agricultural businesses. The village government's alignment with farmers is driven by the desire to create new optimism and hope for farmers, i.e., future prosperity that will be implemented through BUMDes.

BUMDes Bintang 18 encourages farmers to plant baby cucumber as a superior product. This is carried out under two considerations: 1) the high market demand for this commodity and 2) the agricultural product in the form of baby cucumber has a clear market with a daily production target of 1 ton. The selection of the baby cucumber plant is based on the fact that the plant has a high economic value with a low failure. In addition, this plant is also very suitable to be developed in Sardonoharjo Village where the majority of the population are farmers. In addition to encouraging farmers to plant baby cucumber, other enterprises run by BUMDes are mechanic agricultural equipment rent and organic fertilizer production.

The relationship between BUMDes and farmers is carried out through a cooperation contract system for one planting period. Several requirements for farmers who wish to cooperate with BUMDes are that they must have land, either their land or leased land. Through the contract system, the benefits obtained by farmers include capital assistance, production process assistance, and agricultural product marketing.

Capital assistance for farmers who collaborate with BUMDes in the form of production inputs includes fertilizers, seedlings, pesticides, and agricultural production support facilities with a total assistance per farmer of IDR 2,400,000/1,000 m². The capital assistance package can be

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used in whole or in part by farmers depending on the ownership of production equipment, fertilizers, or seedlings. The package must meet the agreed requirements made by BUMDes.

“Farmers are given with loan capital, such as seedlings, plastics, fertilizers, and so on, including pesticides. Then they can cultivate the fields. The loan is cut from their agricultural production, so there is an agreement. The agreement rules that in carrying out the program, the farmers must comply with BUMDes SOP and may not sell products other than the BUMDes provisions, and they can repay the loan” (HR, Sardonoarjo Village Head).

There are 30 farmers currently who have collaborated with BUMDes. Of the total farmers, not all of them have an area of 1,000 m², but some farmers have a land area of 500 m². For those who own half of the land area of the agreed rules, the amount of assistance packages they received is also half. In principle, each farmer may only apply for the assistance of a maximum of 1,000 m² of land. This is stated by one of the farmers as below.

“Capital assistance is different for each farmer, depending on the farmer’s needs, but we are provided with 500-square-meter and 1000-square-meter land. Thirty farmers are now collaborating with BUMDes and one farmer for one land only” (SM, BUMDes Bintang 18 administrator).

Based on the provisions of BUMDes, farmers’ loan repayments are made in installments for each harvest period so as not to burden the farmers. The BUMDes does not provide the amount limit of installment at each harvest period which must be paid by farmers but is left entirely to the farmers. However, in one planting period contract, all of the capital

assistance had been repaid. This is stated by one of the farmers, “There is no profit sharing. So, each harvest is sold to BUMDes, and the total amount will be counted later. BUMDes will ask if they can pay installment according to their ability, so there are a lot of extents” (AT, farmer/member of BUMDes Bintang 18).

Another benefit of joining BUMDes is to get capital assistance during the planting process. Farmers will get information and knowledge related to baby cucumber plants. The agricultural instructor is an employee from BUMDes whose job is to assist farmers if farmers face obstacles in the planting process. To simplify the production process carried out by the farmers, BUMDes made a breakthrough by making standard operating procedures (SOP) which farmers must obey, so they do not experience failure. during the planting period. The SOP contains information on how to plant, how to fertilize and administer pesticides, and how to do the plant treatment. The Chairman of BUMDes said as below.

“The BUMDes is currently facilitating agricultural production facilities, such as fertilizers and pesticides. We (the BUMDes administrators) facilitate, and then it is the farmers who cultivate the land, making the treatment, and the yields must be sold to all BUMDes and may not be sold to other parties. The reason is that BUMDes has a guaranteed supply. BUMDes does not set the fixed price but follows the market conditions. BUMDes also recruits agricultural assistants who must assist, advocate, and monitor farmers’ activities in collaboration with BUMDes. The assistants must fill out a monitoring form as the result of observing farmers’ activities which contains information, such as planting schedule, fertilization, and treatment.” (HY, Chairman of BUMDes Bintang 18).

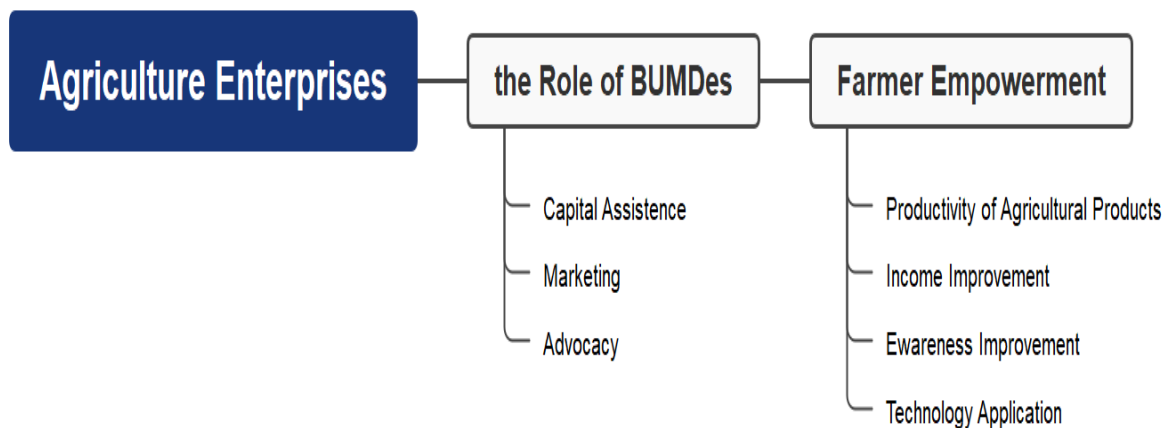
The statement of the chairman of BUMDes was strengthened by the statement of one of the informants "... There is already the SOP and the assistance by Mr. Marsono as well. If the farmers follow the SOP, Insha Allah (God willing), it will work, but so far no one has ever failed to harvest" (WD, farmer/member of BUMDes Bintang 18).

The strategy performed by BUMDes as an effort to market their superior products is to form collaboration or partnership with traders/collectors. Also, BUMDes recruits marketing staff in charge of marketing the baby cucumber. With the presence of marketing staff, farmers do not need to think about marketing problems because BUMDes will ensure to accommodate their yields to be later sold to the market (stocking point). Such method can reduce the "price game" carried out by the middlemen because the middlemen do not directly have contact with the farmers.

Middlemen will generally buy agricultural products in large quantities when the price of the commodity falls, while when the price goes down, they no longer buy it from farmers. Besides, many farmers have no bargaining power over the commodity they produce due to their ignorance of market information (price). However, by the presence of stocking points carried out by BUMDes, whatever the amount of baby cucumber produced by farmers is, it will be accepted by the market with competitive selling prices.

BUMDes also guarantees the quality of the products. This quality guarantee is stated in the contract with the farmers with the provision that each baby cucumber must weigh 60-75 grams. If the physical shape of the cucumber is too small, too big, or bent, it will be valued at half of the agreed price. The agreed price of cucumber is currently Rp 3,000/kg. The village head said, "To sell the yields to BUMDes, there are several requirements, so the length and weight of the cucumbers must be suitable to those determined by the BUMDes, otherwise the BUMDes will buy them at a low price" (HR, Head of Sardonoarjo). In one planting period, the net profit of farmers is around 4-6 million per month with 1000 m² of land. It has been deducted by a capital loan provided by BUMDes. If this is compared to other crops, the benefits that farmers get by planting this commodity are more profitable. The Head of Sardonoarjo Farmers said as below.

"... I think it's more profitable for baby cucumbers than other plants, but thank God, the risk of harvest failure for baby cucumbers is little, but if they are too big, they can be sold at a different price or cheaper." (HD, head of Sardonoarjo farmer). The statement is the same as another informant "Baby cucumbers are more profitable. This is just one harvest, maybe 3-4 harvests will only be lucky. I planted chilies at first, but the risk of disease is higher." (WDD, BUMDes Bintang 18 farmer).



Source: Primary Data

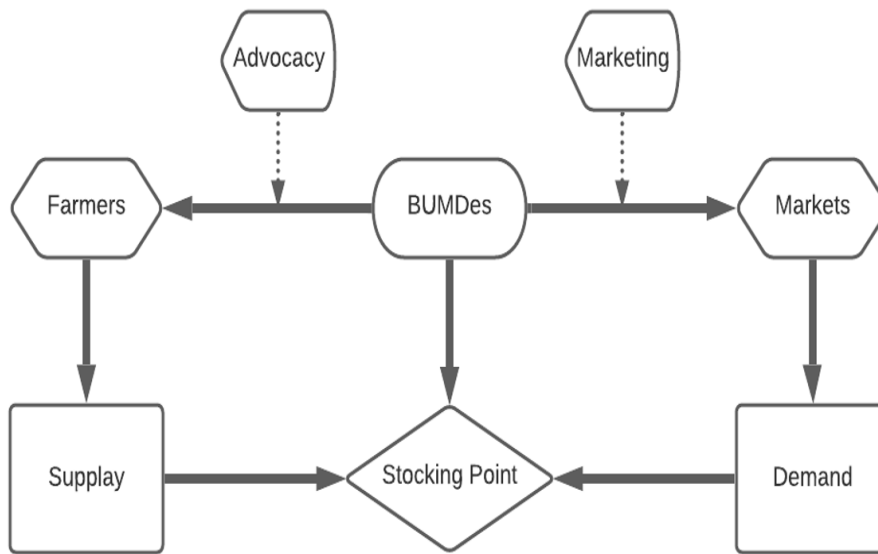
Figure 2. The Role of BUMDes in Improving Farmers' Economy

The management performed by BUMDes applies the concept of value chain management (VCM). The basic characteristic of the value chain is market-oriented cooperation, where different business units work together to produce and market products and services effectively and efficiently (Bank Indonesia, 2015). Farmers as the producers of agricultural commodities only need to think about how to produce good commodities with quality-oriented products, so they do not need to think about post-harvest marketing, whether it can be accepted by the market or not. With VCM management, BUMDes plays a crucial role in connecting producers and market players, including logistics management.

Such system requires strict market intervention in which the demand for commodities must match the supply. The occurrence of excess and shortage of products is an indication of market failure. Excess product results in a decrease in

product or commodity prices, while product shortages will have an impact on increasing prices. Therefore, the role of BUMDes as price controller must ensure the production capacity of farmers and the level of commodity needs of market actors. Therefore, there will be a balance between production and market needs. The value chain management in the agricultural sector is fundamentally designed to increase competitive advantage ((Bank Indonesia, 2015).

The purpose of BUMDes involvement in agricultural business in Sardonoarjo, such as providing capital assistance, advocating farmers so that they do not experience harvest failure, and ensuring marketing guarantees through stocking points, is to minimize any possible risk. With the VCM management approach, failure in one value chain will affect other chains and cause a total loss of all value chain processes (Wang, et.al., 2013).



Source: Primary Data

Figure 3. Business Value Chain of BUMDes Bintang 18

To minimize the failure, the synergy between all elements involved in the value chain is needed. The synergy can be formed in terms of human resources and mastery of technology so that the risks which may occur can be minimized from an early stage (Ritchie, Robert, Brindley, Clare S. and Armstrong, 2008). Besides, the role of intensive communication between all value chains must be well developed, thus problems in one value chain can be found out by others.

The Role of BUMDes in Building Farmer Economic Institutions

BUMDes as the main actor begins communication with farmers. This communication is carried out in an informal way. Usually, BUMDes come to farmers to negotiate sales and purchases. The negotiations carried out resulted in a consensus where the results were agreed upon by both parties with minimal losses. This is very different from the buying and selling activities carried out by farmers and middlemen. Usually, farmers do not get maximum profits. Middlemen, in carrying out buying and selling activities, have no concern

for the welfare of farmers. The middleman's concern is to only get goods as cheaply as possible in order to make as much profit as possible.

Communication carried out by BUMDes is also assisted by Gapoktan in the village. Several Gapoktan members recommended farmers to sell their products to BUMDes. This is due to the good relationship which Gapoktan and BUMDes have. Apart from that, Gapoktan understands the presence of BUMDes in the village. Meanwhile, communication between BUMDes and the market is carried out in a more formal way. MoUs and trade agreements are created as the legal basis for buying and selling agricultural products. Building collaboration with new partners must have obstacles. One of them is building trust. As explained by Ansell and Gash, a lack of trust between stakeholders is a common starting point for collaborative governance (Ansell & Gash, 2008).

BUMDes in building the trust of farmers cannot be separated from the help of Gapoktan in the village. In building trust, Gapoktan is quite an important supporting actor. Considering the existence of Gapoktan in the village, it is quite

respected not only by the farmers but also the wider community in the village. Meanwhile, in building trust with the market, BUMDes does not have any significant obstacles. This is because the Village Government is the official agency behind BUMDes. Apart from that, because BUMDes strives to be a credible and professional trading partner. After gaining the trust of the farmers. BUMDes' next task is to maintain this trust so that it does not fade in the future. As previously stated by Arianti and Satlita, building trust in forming collaboration is not an easy thing and needs to be done continuously (Arianti & Satlita, 2018).

The efforts made by BUMDes are to become consistent partners for farmers and markets. Making payments in cash and on time, in accordance with the agreed agreement, and distributing agricultural products in accordance with the agreed MoU is one of the practices for maintaining and even increasing trust if carried out continuously. Apart from that, guaranteeing market access that is always there for farmers is an effort to increase their trust. This guarantee creates a sense of security and comfort for farmers. Farmers are no longer confused when the harvest time arrives. Because farmers have confidence that their harvest will reach the BUMDes well. Trust can also be formed from the results of shared understanding. Ansell and Gash say that at some point in the collaboration process, stakeholders must develop a shared understanding of what they can collectively achieve together. Still in the same article, Ansell and Gash say that Shared understanding itself has many variations in the literature, namely, 'common mission', 'common ground', 'common purpose', 'common aims', 'common objectives', 'shared vision', 'shared ideology', 'clear goals', 'clear and strategic direction', and 'alignment of core values' (Ansell & Gash, 2008). The shared understanding that BUMDes strives for with farmers is to improve the welfare of village communities through economic development. Shared understanding with farmers is then translated into the practice of payments made

by BUMDes in cash and directly with maximum profits. On the part of the farmers themselves, they produce good quality and quantity of products which meet standards. The trust which has been built creates legitimacy. BUMDes as a new partner strives to be professional and as a regional institution which has a good shared understanding for the village community. Apart from that, the existing legitimacy has also given rise to a new spirit of economic development in the agricultural sector in the village.

This sense of trust creates a sense of interdependence. Ansell and Gash say that a high sense of interdependence among stakeholders is likely to increase commitment to collaboration (Ansell & Gash, 2008). This commitment will not only create sustainable trade relations but strengthen relations between the actors involved, specifically farmers, Bumdes and markets.

Conclusion

This study confirms that after the enactment of the Act concerning Village, many villages have breakthroughs to make their villages independent by utilizing their potential and assets for the welfare of the community. At this rate, BUMDes has a crucial role as an economic enterprise which provides advocacy to the community on economic mechanisms which tend to be detrimental to rural communities in which most of them are engaged in agricultural enterprises.

The role of BUMDes, as what has been established in Sardonoharjo, can provide advocacy to farmers through agricultural capital loans and assistance. Also, BUMDes presents new market opportunities for agricultural product commodities which provide added value to farmers to increase the value of profits gets by the farmers compared to agricultural products that were initially planted by farmers.

With the existence of a market mechanism, BUMDes can be a bridge

between producers and consumers with a more balanced relationship. Its role is to be able to cut the long distribution chain of an agricultural product that has been detrimental to farmers. Therefore, BUMDes must be able to become a stocking point for commodities produced by farmers that can be directly accepted by the market.

The efforts made by BUMDes are a form of innovation in structuring and developing the agricultural economy in rural areas. The BUMDes Innovation Model is a new perspective process in increasing the added value of agricultural businesses. Even though the profit is very small, in terms of benefits it has positive implications for increasing farmers' livelihoods and economic welfare. The collaborative governance process in an effort to improve the welfare of farmers can run effectively and sustainably between the village government, BUMDes, farmer groups and the farmers themselves. Each party must actively initiate and drive the collaboration process well and must be able to prove that the parties have commitment, integrity and capacity. So that successful collaboration will easily achieve the expected goals. The success of collaboration built by the parties is largely determined by the existence of a transparent process, clear basic rules as agreed and implemented by the parties and based on the existence of trust between them.

Recommendation

Most of the poor in rural areas have livelihoods as farmers, so the government needs to encourage agricultural revitalization and intensify farmer empowerment programs. develop BUMDes which have agricultural business units, optimize village assets, and village markets in order to accelerate the economic development of rural communities.

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Picture 1 Sceme of Social Assessment Channeling

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