

# The influence of local government policy on the cultural wisdom of noken use by civil servants (ASN) on the productivity and income of papuan women noken artisans in Mimika Baru District, Mimika Regency

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## Abstract

**Purpose:** This study examines the influence of local government policy mandating noken use among civil servants (ASN) on the productivity and income of mama-mama Papua artisans in Mimika Baru District, Mimika Regency. The policy aims to preserve cultural heritage while enhancing the economic empowerment of Papuan women through the traditional craft of noken, recognized by UNESCO as intangible cultural heritage

**Research/methodology:** The research employed a quantitative survey approach with 35 respondents selected through accidental sampling from a population of 350 artisans. Data were collected via questionnaires, interviews, and observations, and analyzed using Path Analysis supported by SPSS software

**Results:** The findings indicate that the *noken* use policy has a positive and significant effect on both artisan productivity (coefficient = 0.3524;  $p = 0.0379$ ) and income (coefficient = 0.2846;  $p = 0.0442$ ). The policy has increased demand, encouraging higher production, better product quality, and improved selling prices. However, 54% of artisans still fall within the low-income category, earning below IDR 1,450,000 per month.

**Conclusions:** While the policy supports cultural preservation and economic growth, artisans continue to face challenges such as limited market access, lack of regeneration among younger artisans, and inadequate training.

**Limitations:** The study is geographically limited to one district and focuses only on productivity and income.

**Contribution:** This research highlights the role of cultural wisdom-based policies in strengthening creative economies and suggests entrepreneurship training, digital marketing, and improved distribution facilities as complementary strategies.

**Keywords:** *Economic Empowerment, Income, Government Policy, Local Wisdom, Mama-Mama Papua, Noken, Productivity*

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## 1. Introduction

### 1.1 Background

The theory of community empowerment emerged as a response to the failure of development models implemented in developing countries. Habib (2021) explained that development focused on industrialization and the trickle-down effect failed to improve societal welfare evenly. Therefore, community empowerment was proposed as a more human-centered, participatory, enabling, and sustainable approach. This indicates the need to integrate social values into economic development.

Firnanda et al. (2025) emphasized that empowerment refers to steps taken by the community itself to improve quality of life, with or without external support. This shows that community independence in the empowerment process is essential, where government and external support can act as facilitators but are not the sole determinants. Empowerment functions to provide the community with the ability to create change toward a better life. Furthermore, according to Suharto (2010), empowerment focuses on vulnerable and marginalized groups.

Once empowered, these groups are expected to meet their basic needs, such as clothing, food, and shelter. Moreover, the community is expected to access productive resources that can increase their income. This underscores the importance of community participation in development and decision-making that affects their lives. Numerous studies have shown the influence of empowerment policies on productivity and income levels. A study conducted by Mashudi (2017) revealed that economic and social empowerment significantly improved the income of poor residents in Kediri Regency. His findings indicated that among these two forms of empowerment, economic empowerment had a greater effect on income enhancement, suggesting that productive economic efforts are key to improving community welfare.

Fitriana (2006) added that there is a significant relationship between productive economic empowerment programs and increases in farmers' production and income. This research highlighted factors affecting production, such as the quantity of seeds and feed provided, as well as factors influencing income, including formal education level, the amount of credit received, and production volume. These findings suggest that empowerment based on capacity building and resource access can strengthen farmers' economic position.

Suryana et al. (2022) extended this analysis by showing a strong and positive relationship between government-led community empowerment and economic improvement in Rejasari Village, Langensari Subdistrict, Banjar City. With a correlation value of 0.77, the results indicate a highly positive relationship, where 64% of measured empowerment contributed to economic growth. This emphasizes the importance of government intervention in empowerment programs that can stimulate community economic development. Leuhery et al. (2023) also noted that community economic empowerment has a positive and significant effect on poverty alleviation. This research suggests that the empowerment process should be conducted gradually to achieve optimal results, allowing the community to develop skills and improve their capacity sustainably.

Overall, empirical studies show that economic empowerment not only increases productivity but also directly impacts community income and welfare. These studies highlight the importance of targeted empowerment policies to achieve sustainable and inclusive development goals. Hasan (2018) identified the creative economy as a key element in community economic empowerment. This is primarily because the creative economy utilizes local potential, such as ideas, talents, and skills, enabling communities to create unique products and services. This not only increases the value of existing resources but also allows communities to participate actively in the economy. Moreover, the creative economy is often more inclusive and accessible to various social groups, including vulnerable populations.

By leveraging creativity, individuals can start small businesses without requiring large capital, opening opportunities for more people to engage in entrepreneurship. Equally important, the creative economy contributes to the preservation of local culture. Through products reflecting cultural identity, communities can maintain their cultural heritage while strengthening the economy. This is particularly important in the context of globalization, where local cultures are often threatened by foreign influences. Therefore, the

creative economy functions not only as a driver of economic growth but also as a tool to empower communities and improve their welfare.

One significant creative economic endeavor in Mimika Regency is the production of noken, which serves not only as a cultural symbol but also as a source of income for many artisans. Recognized by UNESCO as a cultural heritage, noken offers opportunities to improve local community welfare through sales and product promotion. Through creative economic empowerment, noken artisans can meet their basic needs, create new employment opportunities, and increase income. This aligns with broader community empowerment goals, where communities act as active subjects rather than mere objects of development. Consequently, creative economic empowerment in noken production is crucial to achieving sustainable welfare and enhancing the living standards of Papuan communities overall.

Based on the Papua Governor's circular No. 000.8.6.1/0554/SET regarding the use of Papua batik shirts and noken bags every Thursday and Friday, the Papua Provincial Government mandates all civil servants (ASN) to use noken bags and batik shirts on these days. This policy aims to highlight the cultural identity of the Land of Cenderawasih and preserve UNESCO-recognized cultural heritage. According to the Papua Provincial Government, the policy is expected to support the economy of craft practitioners, with approximately 8,000 civil servants expected to own two shirts each, thereby increasing economic value. Additionally, the policy is expected to preserve local culture and raise awareness of Papuan products, especially amid growing Western cultural influence (Pratiwi, 2025).

In Mimika, noken serves as a household tool used for carrying garden harvests, sales products, babies, and hunted animals. Noken craftsmanship is generally undertaken by women, commonly called mama-mama Papua. Most of these women are over 30 years old, while girls under 30 rarely weave noken. Generally, noken woven for sale by these artisans uses materials such as bark, poliseri, manila, and wool. It is estimated that there are around 300 noken artisans who also sell their products in Timika City, mostly in markets and along busy streets. Currently, there is no gallery, showroom, or art market specifically selling noken made by mama-mama Papua.

As a result, noken sales remain limited due to low demand, which also restricts artisans' income. Therefore, to boost noken sales, the Mimika Regional Government requires local government employees to wear noken every Monday. The Deputy Regent of Mimika emphasized that this measure appreciates global recognition of noken as a cultural heritage. The policy reflects local commitment to preserving culture while supporting noken artisans' economy (Zapapua, 2015).

Based on the above theoretical, empirical, and practical considerations, it is essential to conduct research on **"The Effect of Noken Usage Policy for Civil Servants on the Business of Noken Artisans in Mimika Baru District, Mimika Regency."** This study is not only relevant for understanding the impact of current policies but also for providing recommendations for better policy development in the future to improve community welfare, particularly for noken artisans' families, and to preserve local culture in Mimika Regency.

## ***1.2 Research Questions***

Based on the theories, empirical studies, and phenomena presented above, the research questions are as follows:

1. To what extent is the productivity and income of mama-mama Papua noken artisans in Mimika Baru District, Mimika Regency?
2. Does the local government policy on noken usage by civil servants (ASN) affect the productivity of mama-mama Papua noken artisans in Mimika Baru District, Mimika Regency?
3. Does the local government policy on noken usage by civil servants (ASN) affect the income of mama-mama Papua noken artisans in Mimika Baru District, Mimika Regency?

## **2. Literature review**

### ***2.1. Community Economic Empowerment***

The term “empowerment” originates from the root word “daya” (power/ability), with the prefix “ber-” meaning “having.” “Daya” is equivalent to energy or strength, so “berdaya” means to have energy or strength (Dedeh & Ruth, 2019). Empowerment comes from the word power, which refers to authority or ability. In the Oxford English Dictionary, empowerment is derived from empower, which has two meanings: (a) to give power to (grant authority or delegate power from another party), and (b) to give ability to, enable (effort to provide capability) (Maskuri, 2012).

Community empowerment is a developmental process that enables communities to take initiative in starting social activities to improve their own conditions. Community empowerment can only occur if the community actively participates (Dedeh & Ruth, 2019). The main goal of community empowerment is to enhance community welfare by utilizing existing potential to improve quality of life through self-help activities (Fauzi, 2012). To achieve success in community empowerment programs, several scholars have proposed four principles: equality, participation, self-reliance and independence, and sustainability (Dedeh & Ruth, 2019).

## ***2.2 Community Empowerment Strategies***

In implementing empowerment processes and achieving objectives, the approach is generally collective, meaning a group works together toward a specific goal. However, in certain situations, empowerment strategies can be implemented individually, although they still relate to collectivity in terms of management between clients (beneficiaries) and external resources or systems. In social work, empowerment can be approached through three levels: micro, mezzo, and macro.

- a) Micro Approach: This strategy targets individuals through guidance, counseling, stress management, and crisis intervention. The main goal is to mentor and train clients to perform their duties properly.
- b) Mezzo Approach: This approach targets a group of clients. Empowerment is conducted using the group as an intervention medium, involving interactions between individuals and clients. Education and training are strategies to enhance awareness, knowledge, skills, and attitudes to solve problems faced.
- c) Macro Approach: This is a large-system strategy, where changes are directed at a broader scope. Strategies include social planning, formulation of social action policies, organization, and conflict management (Mardikanto, 2019).

## ***2.3 Production and Income***

Production refers to increasing the utility or value of goods. Production factors in economics include labor (L), capital (initial investment or capital goods like machinery = K), work experience (measured through a worker’s creativity = E), and working hours (time constraints = H). The main concept of production theory revolves around these production functions. Production factors are abstractions used to describe production processes. The production process involves technical challenges faced by companies when production outcomes may not meet quality standards.

## ***2.4 Noken***

Noken is a traditional bag carried on the head and made from materials such as bark, rattan, orchids, pandan leaves, and marsh grass. Noken holds significant meaning in the social structure of Papuan communities. Traditionally, only women are allowed to make Noken. A woman who cannot make Noken is considered not yet mature, whereas mastering Noken-making indicates maturity. Only mature women are allowed to marry. Men, in contrast, are prohibited from making Noken, as it symbolizes female fertility.

## ***2.5 Conceptual Framework***

Economic empowerment policies often include training and education for communities. By enhancing skills and knowledge, individuals can manage creative businesses more effectively. For instance, training in production techniques, marketing, and business management can help small entrepreneurs improve product quality and manage operations efficiently. With improved skills, communities can increase productivity, produce higher-quality products, and meet growing market demand.

As a government effort to preserve Papuan culture, civil servants (ASN) are encouraged to use Noken to work every Thursday and Friday. If all ASN in Mimika comply, it could create demand for 6,241 Noken units, corresponding to the total number of ASN recorded in 2024 at the Regional Office IX BKN Jayapura. Income can increase through enhanced production and sales. Support programs, such as access to capital and business training, can help artisans improve earnings.

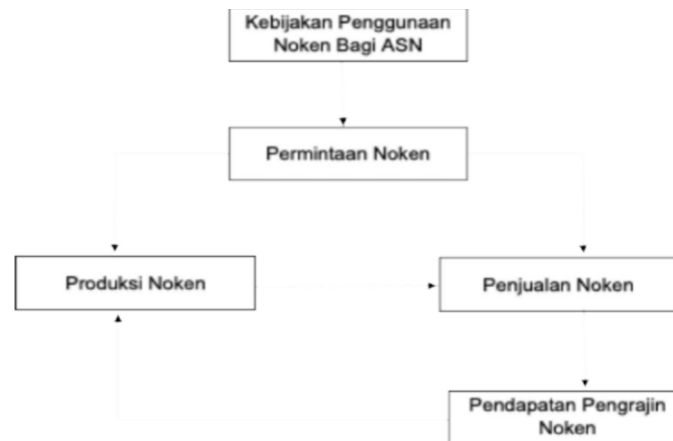


Figure 1. Conceptual Framework  
Source: Processed Data (2025)

## 2.6 Hypothesis

A hypothesis is a temporary statement proposed to explain a phenomenon. Based on the conceptual framework described above, this study proposes two verbal hypotheses:

1. The regional government policy mandating ASN to use Noken is presumed to have a strong and significant effect on the productivity of Papuan women Noken artisans in Mimika.
2. The regional government policy mandating ASN to use Noken is presumed to have a strong and significant effect on the income of Papuan women Noken artisans in Mimika.

## 3. Research methodology

The study was conducted in Mimika Baru District, as this area has the largest population of Papuan women Noken artisans and sellers, for example, in Central Market, SP2 Market, and Timika Indah. The total population of Noken artisans in this study is estimated at 350. Various sampling methods can be used, such as random sampling, stratified sampling, purposive sampling, and accidental sampling. One method to determine sample size is Slovin's formula (Sevilla et al., 1960:182):

$$n = \frac{N}{1 + Ne^2}$$

Where:

n = Sample size

N = Population size

e = Tolerable error.

Two types of data are used: primary and secondary. Primary data come from the observed subjects, i.e., the Papuan women, while secondary data are obtained from Bappeda, BPS, the Department of MSMEs, and relevant books and articles. Data collection methods include interviews, questionnaires, observations, and document studies. Analysis methods include Likert scale analysis, descriptive statistics, path analysis, and hypothesis testing. The path analysis model developed is as follows.

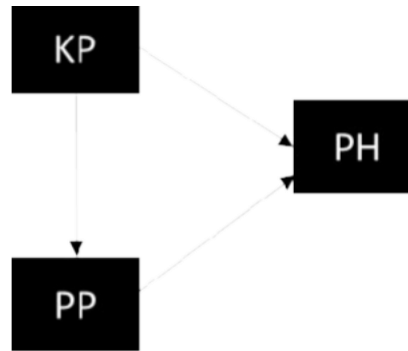


Figure 2. Path Analysis Model of the Effect of ASN Noken Policy on Productivity and Income of Noken Artisans

Where:

KP : ASN Noken policy

PP : Productivity of Noken artisans

PH : Income from Noken sales

The model includes three variables: one exogenous variable (KP), one predetermined endogenous variable (PP), and one endogenous variable (PH).

## 4. Results and Discussion

### 4.1 Analysis

#### 4.1.1 Productivity and Income Levels

The productivity and income levels of Papuan women who craft noken in Timika City show significant development, particularly in the context of the local economy and cultural preservation. These Papuan women not only produce noken as handicraft products but also contribute to household and regional economic growth.

The average productivity per Papuan noken artisan per month provides information on three types of noken based on the raw materials used, namely noken made from bark, polyester, and manila/wool. Each type has a different production rate, sales volume, and selling price.

For bark noken, each artisan produces an average of six units per month, with four units sold on average. The average price for one noken of this type is IDR 130,000. Meanwhile, polyester noken is produced at five units per person per month, with an average of four units sold, at a price of IDR 123,000 per piece. Noken made from manila or wool show production levels equivalent to bark noken, namely six units per month, with four units sold. The price of this type is slightly lower, at IDR 100,000 per unit. From these three types, it can be calculated that the average production per person per month is 17 noken, with around 12 units sold. This indicates a difference of five units per person per month between production and sales, which may suggest challenges in marketing, limited market demand, or difficulties in direct selling.

Table 1. Average Productivity of Papuan Women Noken Artisans per Person per Month

No.	Type of Noken	Average Units Produced per Month per Person	Average Units Sold per Month per Person	Average Price per Noken (IDR)
1	Bark	6	4	130.000
2	Polyester	5	4	123.000
3	Manila/Wool	6	4	100.000
	Total	17	12	118.000

Source: Processed data (2025)

The average price of noken overall is approximately IDR 118,000 per piece, which represents an estimated value across all types produced. Assuming sales of 12 units per month, the potential gross

income per artisan per month could reach around IDR 1,416,000. Although modest in the formal economic context, this is significant for local households in terms of household economy and women's empowerment. Noken not only provides economic value but also represents a unique and strong cultural identity.

Based on the observation of the income frequency distribution of Papuan noken artisans, it can be concluded that the majority of noken artisans in Mimika still have relatively low income levels. Out of 35 respondents, 19 people (54.29%) earn a monthly income below IDR 1,450,000. This shows that more than half of the artisans earn an income below the typical regional minimum wage, reflecting the economic vulnerability of most noken artisans who rely on handicraft activities as their main source of income.

Meanwhile, 10 people (28.57%) earn a monthly income ranging from IDR 1,450,000 to IDR 1,800,000. This is the second-largest group, showing a slight increase in income but still categorized as low-income. Only a small portion of artisans, two people (5.71%), earn between IDR 1,800,000 and IDR 2,150,000, and four people (11.43%) earn above IDR 2,150,000. This last group likely has better market access, higher production output, or noken with higher selling prices.

The existence of this small group earning above IDR 2,150,000 demonstrates that the economic potential of noken handicrafts is considerable if supported by appropriate strategies. Strengthening artisan capacity through product design training, packaging, simple technology use, and expansion of both local and digital marketing networks will significantly improve their income. Support from local governments and NGOs is also essential to facilitate access to capital and partnerships with broader market actors.

Table 2. Income Frequency Distribution of Papuan Women Noken Artisans

Income Interval (IDR)	Absolute Frequency (people)	Relative Frequency (%)
< 1,450,000	19	54.29
1,450,000 - 1,800,000	10	28.57
1,800,000 - 2,150,000	2	5.71
> 2,150,000	4	11.43
<b>Total</b>	<b>35</b>	<b>100</b>

Source: Processed data (2025)

The analysis of production cost frequency distribution indicates that most noken artisans in Mimika incur relatively low production costs each month. Out of 35 respondents, 17 people (48.57%) spend between IDR 559,500 and IDR 855,000 per month. This suggests that nearly half of the artisans operate on a small scale with controlled expenses, generally covering raw materials, simple production tools, and possibly minor transportation or distribution costs.

Additionally, 14 people (40%) spend below IDR 559,500 per month, likely representing very small-scale artisans or those using locally sourced, inexpensive materials, such as natural fibers. This may also indicate that some artisans treat noken production as a side activity rather than a primary business.

Only a small fraction of artisans, three people (8.57%), spend between IDR 855,000 and IDR 1,150,500, while only one person (2.86%) spends above IDR 1,150,500. This small number may represent larger-scale operators or semi-commercial production with higher quantity or quality output.

Table 3. Production Cost Frequency Distribution of Papuan Women Noken Artisans

Production Cost Interval (IDR)	Absolute Frequency (people)	Relative Frequency (%)
< 559,500	14	40.00
559,500 - 855,000	17	48.57
855,000 - 1,150,500	3	8.57
> 1,150,500	1	2.86

<b>Total</b>	35	100
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Source: Processed data (2025)

Finally, analysis of net income frequency distribution provides a clear picture of the net profit levels obtained by noken artisans in Mimika after production costs are deducted. The table below shows that the majority still fall within the low net income category. Out of 35 respondents, 16 people (45.71%) earn a net monthly income below IDR 774,250. Meanwhile, 15 people (42.86%) earn between IDR 774,250 and IDR 1,128,500.

Table 4. Net Income Frequency Distribution of Papuan Women Noken Artisans

<b>Net Income Interval (IDR)</b>	<b>Absolute Frequency (people)</b>	<b>Relative Frequency (%)</b>
< 774,250	16	45.71
774,250 - 1,128,500	15	42.86
1,128,500 - 1,482,750	2	5.71
> 1,482,750	2	5.71
<b>Total</b>	35	100

Source: Processed data (2025)

This second-largest group still falls under the low-to-middle-income category. Although their income is slightly higher than the first group, it indicates that noken production has not yet maximized financial returns for most artisans. Only a small number, two people (5.71%), earn net income above IDR 1,128,500, one within the range of IDR 1,128,500 to IDR 1,482,750 and another above IDR 1,482,750. These artisans likely have higher productivity, better skills, or wider market access, such as selling products outside the region or through digital channels.

#### 4.1.3 Perceptions of Papua “Mama-Mama” Noken Artisans on the Policy of Noken Usage for Civil Servants (ASN)

The perceptions of Papua “mama-mama” noken artisans regarding the policy of noken usage for civil servants (ASN) are generally positive and full of hope. They view it as an opportunity to improve welfare, preserve culture, and strengthen their existence as an important part of Papuan society. The artisans also experience an increase in self-confidence and self-esteem when their creations are worn by civil servants, officials, and even agency leaders. This impact is not only economic but also provides psychological and moral encouragement for them to continue their craft. The use of noken in government offices or formal events generates a sense of pride and involvement in broader social life, as if they are part of the development and governance process.

The policy of noken usage for civil servants is welcomed very positively by the noken artisans in Papua, particularly among the “mama-mama” artisans. This is shown in the results of the frequency distribution analysis of the artisans’ perceptions, where all respondents strongly agreed with several key statements reflecting the successful implementation and direct impact of the policy.

Firstly, there is full confidence that the government has communicated the noken usage policy to civil servants through an official circular. None of the artisans doubted this information. This is important because it indicates that the policy socialization process was comprehensive and reached the target group, namely the noken artisans themselves. Officially delivered information builds trust and a sense of ownership toward the policy.

Furthermore, artisans reported that civil servants are seen wearing noken at official government events. All respondents strongly agreed with this statement, meaning the policy has been implemented concretely and not just at the level of discourse or formal documents. When civil servants, as representatives of the state, wear noken at formal events, it not only serves as moral support for local culture but also reinforces the social legitimacy of noken’s value and role in Papuan society.



A similar view was expressed regarding the origin of the noken used by civil servants. All respondents strongly agreed that the noken worn by civil servants were purchased directly from the “mama-mama” artisans. This demonstrates trust that the policy is not merely symbolic but also directly contributes to the local economy of the artisans. The economic impact is further reflected in that 94.29% of respondents strongly agreed that the policy increased noken sales, with the remaining 5.71% agreeing. This indicates that artisans have felt tangible economic benefits from the policy implementation.

Table 5. Frequency Distribution of Papua “Mama-Mama” Artisans’ Perceptions on the Policy of Noken Usage for ASN

<b>Noken Usage Policy for ASN</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Total</b>
Government has communicated the noken usage policy for civil servants via official circulars to all Papua noken artisans	100.00	-	-	-	-	100.0
Civil servants are always seen wearing noken at official government events	100.00	-	-	-	-	100.0
Noken worn by civil servants are purchased directly from Papua “mama-mama” artisans	100.00	-	-	-	-	100.0
The policy of noken usage for civil servants increases the sales of noken from Papua artisans	94.29	5.71	-	-	-	100.0
Government supports noken artisans with empowerment programs to improve the quality and quantity of noken produced for civil servants	11.43	85.71	2.86	-	-	100.0
Artisans receive regular training to improve skills in making noken, both in technique and design	100.00	-	-	-	-	100.0
Artisans receive managerial training on managing production, marketing, and finances to be competitive in the market	2.86	-	97.14	-	-	100.0
Government provides easily accessible sales facilities for artisans, such as markets or cultural centers	100.00	-	-	-	-	100.0

Regarding empowerment, 85.71% of artisans agreed and 11.43% strongly agreed that the government has provided support through programs to improve production quality and quantity. In addition, all respondents strongly agreed that technical training in noken-making skills was provided regularly. This reflects the consistency of government programs in strengthening technical capacity, considered beneficial and relevant to the artisans’ needs.

However, there is an important note regarding managerial training. 97.14% of artisans only moderately agreed that training in production, marketing, and financial management was provided, with only 2.86% strongly agreeing. This indicates that while technical training has been carried out widely, managerial training is still considered insufficient or not fully accessible to all artisans. This is important because entrepreneurial development is key to building a sustainable business capable of competing in the market.

Finally, all respondents strongly agreed that the government has provided easily accessible sales facilities for artisans, such as markets or cultural centers. These facilities not only serve as a meeting point between products and consumers but also as a space for artisans to build business networks and expand market reach.

Overall, the analysis of these perceptions shows that the policy of noken usage by civil servants has had a broadly positive impact on artisans. They feel culturally valued and economically empowered. Trust in government support for local products has significantly increased. Nevertheless, there remains a need to strengthen managerial training so that artisans can not only excel in production but also manage their businesses efficiently, professionally, and sustainably.

#### 4.1.5 Perceptions of Papua “Mama-Mama” Noken Artisans on Noken Productivity

The perceptions of Papua “mama-mama” noken artisans on noken productivity show a positive picture across various aspects of the production process. Firstly, many artisans felt an increase in production capacity, with 74.29% agreeing that their output had increased. This indicates progress in techniques or tools used, enabling them to produce more noken in less time.

Regarding completion speed, 77.14% of respondents stated that artisans are faster at completing a single noken. This reflects increased efficiency, possibly due to training or experience that accelerates the work process. The ability to manage production costs also received positive feedback, with 71.43% agreeing that artisans could manage costs more economically. This is important for improving profitability, allowing artisans to gain better profits. Regarding craftsmanship, 57.14% felt artisans had become more skilled, indicating improvements in product quality, which can attract more consumers.

Meanwhile, 60% agreed that artisans are capable of introducing new, attractive products that appeal to the market. This innovation is crucial to maintain product relevance in a competitive market. However, regarding promotion through social media, 57.14% felt that artisans have not fully utilized digital platforms, showing opportunities to enhance marketing strategies effectively. In terms of sustainability, 34.29% strongly agreed that artisans use environmentally friendly raw materials, reflecting awareness of eco-friendly production practices.

Table 6. Frequency Distribution of Papua Mama-Mama Perceptions on Noken Productivity Levels

Productivity Level	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Total
The noken production by Papua mama-mamas is currently increasing	5.71	74.29	20.00	-	-	100.00
Noken artisans are now faster in completing one noken	14.29	8.57	77.14	-	-	100.00
Noken artisans are now able to manage production costs more efficiently to gain profit	20.00	71.43	8.57	-	-	100.00
Noken artisans are increasingly skilled in making noken	25.71	17.14	57.14	-	-	100.00
Noken artisans are able to introduce new and appealing products favored by the market	22.86	60.00	17.14	-	-	100.00
Some noken artisans are currently promoting their products through social media and online sales	-	8.57	57.14	34.29	-	100.00
Noken artisans currently use raw materials that are environmentally friendly	34.29	22.86	42.86	-	-	100.00
Noken artisans have formed	37.14	25.71	37.14	-	-	100.00

associations or groups for Papua mama-mamas						
Noken artisans increasingly utilize local raw materials and production tools optimally	2.857	94.286	2.857	-	-	100.00
Noken artisans are able to introduce new and appealing designs favored by the market	11.43	71.43	17.14	-	-	100.00

Regarding the formation of associations or groups, 37.14% of respondents agreed that there are organizations supporting the artisans. This is important for collaboration and knowledge sharing among them. Finally, 94.29% of respondents agreed that artisans increasingly utilize local raw materials and production tools. This shows support for the local economy and reduces dependence on external resources. Overall, the perceptions of Papua mama-mamas show a positive trend toward productivity, emphasizing skill improvement, efficiency, and innovation in design. However, there is a need to strengthen digital promotion so that noken products are better recognized in a broader market.

#### 4.1.6 Perceptions of Papua Mama-Mama Noken Artisans on Noken Sales Income

The perceptions of Papua mama-mamas regarding noken sales income show a positive and optimistic attitude toward the development of their business. Most respondents, 97.14%, agreed that their average income is increasing. This indicates significant growth in financial aspects, possibly driven by increased market demand or production efficiency.

Regarding sales volume, 91.43% of respondents felt that the number of noken sold is increasing and faster. This reflects the rising appeal of noken products, which could be due to better quality or design innovation. Demand for noken also appears to be growing, with 74.29% of respondents acknowledging that demand continues to rise each year.

Table 7. Frequency Distribution of Papua Mama-Mama Perceptions on Noken Sales Income

Income Aspect	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Total
Average income of noken artisans is increasing	-	97.14	2.86	-	-	100.00
Number of noken sold is increasing and faster	91.43	2.86	5.71	-	-	100.00
Demand for noken continues to grow annually	25.71	74.29	-	-	-	100.00
Noken selling price is affordable in the local market	-	91.43	8.57	-	-	100.00
Many people purchase noken every year	5.71	94.29	-	-	-	100.00
Profits of noken artisans are consistently increasing	2.86	25.71	71.43	-	-	100.00
Noken artisans can manage income to ensure business sustainability	57.14	40.00	2.86	-	-	100.00

The increase in demand indicates that noken products remain relevant and desired in the market, which is important for business continuity. Buyer satisfaction is also high, with 65.71% of respondents feeling that customers are satisfied with the quality of noken offered. This satisfaction level is essential to encourage loyalty and repeat sales.

Regarding the selling price, 91.43% of respondents agreed that noken prices are affordable in the local market. This can attract more buyers, but it is important to ensure artisans still gain adequate profit

margins. Most respondents, 94.29%, agreed that many people buy noken every year. This shows a stable and sustainable market for noken products, giving artisans confidence in production planning.

However, when asked about profits, 71.43% of respondents felt their profits always increase. This indicates that despite challenges in managing costs, most artisans are optimistic about profit potential. Lastly, 57.14% agreed that they can manage income to ensure business sustainability. This reflects a good understanding of financial management and the importance of strategies to maintain business continuity.

Overall, noken artisans' perceptions show a positive trend in sales income, with increases in sales volume, customer satisfaction, and income management. This reflects good health and prospects for the noken craft industry in Mimika City.

#### 4.1.7 Hypothesis Testing

##### 1) Linear Regression Analysis 1

To test the influence of the policy on noken use for ASN (civil servants) on noken artisan productivity, a simple linear regression analysis was used. In this model, partial testing (t-test) and determination coefficient ( $R^2$ ) were conducted.

Significance and t-test criteria:

Reject  $H_0$ : if t-count > t-table and probability ( $p$ )  $\leq 0.05$ , meaning the policy on noken use for ASN has a significant partial effect on noken artisan productivity.

The summary of the simple linear regression analysis is as follows:

Table 5.8. Linear Regression Analysis 1 Result

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.352 <sup>a</sup>	.1242	.0970	3.5847

a. Predictors: (Constant), KP

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60.1172	1	60.1172	4.6783	.038 <sup>b</sup>
	Residual	424.0542	33	12.8501		
	Total	484.1714	34			

a. Dependent Variable: PP

b. Predictors: (Constant), KP

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-84.5422	57.7548		-1.4638	0.1527
	KP	3.5602	1.6460	.3524	2.1629	0.0379

a. Dependent Variable: PP

Based on Table 4.13 above, the results obtained from the calculations are as follows:

$$Y_1 = -84.5422 + 3.5602X + e$$

- The constant of -84.5422 indicates that if variable X (policy on noken use for ASN) is absent or other variables are zero, then  $Y_1$  (noken artisan productivity) equals the constant value, i.e., -84.5422.
- The regression coefficient of X (policy on noken use for ASN) is 3.5602. This indicates a positive relationship between the policy and noken artisan productivity. Meaning, an increase of 1 unit in

the policy variable will increase productivity by 3.5602 units.

## 2) Coefficient of Determination ( $R^2$ )

The  $R^2$  test shows that the influence of the policy on noken use for ASN on artisan productivity is 0.1242 or 12.42%, meaning 12.42% of productivity variation can be explained in this study.

## 3) F-Test

The F-test (simultaneous test) shows that the policy on noken use for ASN affects artisan productivity with  $F = 4.6783$  and  $p\text{-value} = 0.038$ , which is lower than  $\alpha = 0.05$ . This indicates that the regression model is significant, and there is a clear difference between the regression model and the residual. It suggests that the policy on noken use for ASN and productivity significantly contributes to noken artisans' income.

## 4) t-Test

The effect of the policy on the use of noken by civil servants (ASN) on the productivity of noken artisans. Based on Table 4.13, the partial regression test yielded a calculated t-value of  $2.1629 > 1.965$  with a probability ( $p$ ) =  $0.0379 < 0.05$ . Therefore, it can be concluded that the policy on the use of noken has a positive and significant effect on the productivity of noken artisans. This indicates that H1, "The local government policy regarding the obligation for civil servants (ASN) to use noken has a strong and significant effect on the productivity of Papua mothers who are noken artisans in Mimika," is accepted. Implementing the obligation for civil servants to use noken can increase the productivity of Papua mothers who craft noken in Mimika.

## 5) Linear Regression Analysis 2

Based on the statistical test results of the effect of the noken usage policy for civil servants (ASN) and productivity on the income of Papua mothers who are noken artisans using SPSS and a Path Analysis approach, it can be explained as follows:

Reject  $H_0$ : if  $t\text{-calculated} > t\text{-table}$  and probability ( $p$ )  $\leq 0.05$ , it means that the policy on the use of noken for ASN and productivity, partially, has a significant effect on the income of noken artisans.

The summary of the simple linear regression analysis conducted is as follows:

Table 5.9 Linear Regression Test Results 2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695 <sup>a</sup>	0.482	0.450	1.03897

a. Predictors: (Constant), PP, KP

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.200	2	16.100	14.915	.000 <sup>b</sup>
	Residual	34.543	32	1.079		
	Total	66.743	34			

a. Dependent Variable: PH

b. Predictors: (Constant), PP, KP

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-12.0612	17.2742		-0.6982	0.4901
	KP	1.0678	0.5098	0.2846	2.0946	0.0442
	PP	0.2009	0.0505	0.5412	3.9825	0.0004

a. Dependent Variable: PH

Based on Table 4.13 above, the calculation results are as follows:

$$Y_2 = -12.0612 + 1.0678X + 0.2009X_2 + e$$

- a) The constant of -12.0612 indicates that if variable X1 (policy on the use of noken for ASN) and variable X2 (productivity of noken artisans) are absent or other variables equal zero, then variable Y2 (income of noken artisans) is equal to the constant value, which is -12.0612.
- b) The regression coefficient of X1 (policy on the use of noken for ASN) is 1.0678. It can be concluded that the policy variable positively relates to the productivity of noken artisans. This means that for each one-unit increase in the noken usage policy, it will result in an increase in the income of noken artisans by 1.0678.
- c) The regression coefficient of X2 (productivity of noken artisans) is 0.2009. It can be concluded that the productivity variable is positively associated with the income of noken artisans. This means that for each one-unit increase in productivity, it will result in an increase in the income of noken artisans by 0.2009.

#### 1) Coefficient of Determination ( $R^2$ )

The  $R^2$  test is 0.695, indicating a strong positive relationship between the independent variables (policy and productivity) and the dependent variable (income). An  $R^2$  value of 0.482 or 48.2% of the variation in income can be explained by these two variables.

#### 2) F-Test

The F-test (Simultaneous Test) shows that the effect of the noken usage policy for ASN on noken artisan productivity is 4.6783, with a p-value of 0.038, lower than  $\alpha = 5\%$  or 0.05. This value indicates that the regression model used is significant and that there is a notable difference between the regression model and the residuals. It shows that the noken usage policy for ASN and productivity significantly contribute to the income of noken artisans.

#### 3) t-Test

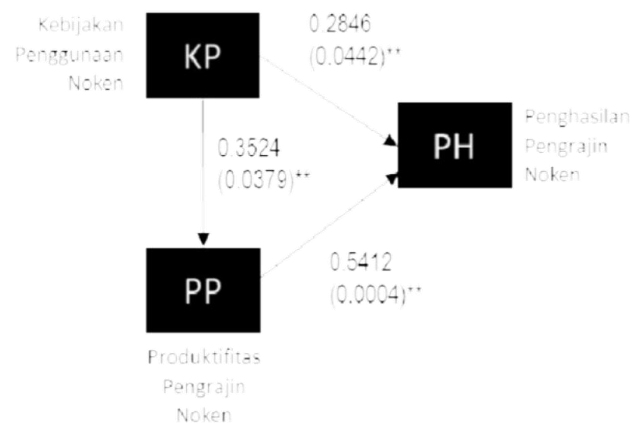
The effect of the noken usage policy for ASN on the income of noken artisans. Based on Table 4.14, the partial regression test yielded a calculated t-value of  $2.0946 > 1.965$  with a probability ( $p$ ) =  $0.0442 < 0.05$ . Therefore, it can be concluded that the noken usage policy has a positive and significant effect on the income of noken artisans. This indicates that H2, "The local government policy regarding the obligation for civil servants (ASN) to use noken has a strong and significant effect on the income of Papua mothers who are noken artisans in Mimika," is accepted. Implementing the obligation for ASN to use noken can increase the income of Papua mothers who craft noken in Mimika.

#### 5) Mediation Test

Mediation, or intervening variable, functions to mediate the relationship between the independent and dependent variables. To test the effect of the mediating variable, path analysis is used. The path analysis of the effect of the noken usage policy for ASN (X) on productivity (Y2), mediated by the income of noken artisans (Y1), shows indirect and total effects.

Based on the statistical test results of the path analysis shown in Figure 4.2, the path coefficient for the noken usage policy (KP) on the productivity of noken artisans (PP) is 0.3524, with a p-value of 0.0379, indicating that the policy significantly affects artisan productivity. Each increase in policy implementation potentially increases productivity by 0.3524. Furthermore, the direct effect on artisan income (PH) is also significant, with a coefficient of 0.2846 and a p-value of 0.0442. This suggests that the policy not only increases production but also enables artisans to sell noken at better prices.

Figure 5.1 Path Analysis Model Results of the Effect of the Noken Usage Policy for ASN on Productivity and Income of Papua Mothers Who Are Noken Artisans



The policy effect is not only direct. Some noken usage policies also have indirect effects, such as cultural legitimacy obtained from ASN wearing noken. When ASN wear noken, the product gains greater recognition as a local cultural symbol. This can increase public awareness of its value, stimulating consumer interest and purchases, which positively impacts artisan income.

Overall, the path analysis shows that the noken usage policy for ASN has significant direct and indirect effects on both productivity and income of noken artisans. The policy not only promotes production and income growth directly but also creates a supportive environment through cultural legitimacy, training access, infrastructure development, and community support. Therefore, it is crucial for the government to continue supporting and developing policies related to noken craftsmanship to improve artisan welfare and preserve local culture.

#### 4.3. Discussion

Based on the research results, it is evident that the policy on the use of noken for ASN in Timika City has a very significant impact on both the productivity and income of Papua mothers who craft noken, as indicated by the significance levels:  $p\text{-value} = 0.0379 < 0.05$  for the effect on productivity (PP) and  $p\text{-value} = 0.0442$  for income (PH), with respective path coefficients  $KP \rightarrow PP = 0.3542$  and  $KP \rightarrow PH = 0.2846$ . Several reasons explain this outcome.

First, the policy increases demand for noken. When ASN are expected to use noken in daily activities, it raises awareness of local products. ASN wearing noken not only makes it a symbol of cultural identity but also encourages others to follow suit. The increased demand motivates mothers to produce more noken, thereby improving their productivity.

Second, government support through this policy provides recognition and legitimacy for noken craftsmanship. Active promotion by the government increases the value and market price of noken. Mothers producing noken can sell their products at higher prices, directly contributing to higher income. Additionally, higher selling prices encourage improvements in product quality, creating a positive cycle that enhances competitiveness.

Third, this policy also creates opportunities for collaboration and networking between artisans and other institutions, such as educational institutions or non-governmental organizations. With support in the form of training and access to resources, the mama-mama noken artisans can develop their skills, learn new techniques, and improve production processes. This contributes to increased productivity and, ultimately, their income.

Fourth, this policy serves as a means to promote economic empowerment. When the mama-mama noken artisans earn better income from noken sales, they can use the earnings to improve family welfare, children's education, and invest in larger-scale ventures. Therefore, this policy impacts not only individual noken artisans but also the wider community.

Essentially, the policy mandating noken usage for civil servants (ASN) in Timika City creates an ecosystem that supports increased productivity and income for Papua's mama-mama noken artisans. Through heightened demand, recognition of product value, effective collaboration, and economic empowerment, this policy demonstrates tangible and positive effects on community welfare.

The implications of the noken usage policy for ASN in Timika City provide important insights for the government in formulating more effective development strategies. This policy has the potential to increase the income of mama-mama noken artisans, which in turn can strengthen the local economy. Therefore, the government needs to design economic development programs supporting noken artisans, such as business management and marketing training, as well as encouraging collaboration between artisans and the private sector to create new market opportunities.

This policy also helps preserve Papua's traditions and cultural heritage. By promoting noken as part of cultural identity, the government can implement educational programs in schools on the importance of noken and its craftsmanship. Organizing cultural festivals highlighting noken can increase public awareness and attract tourists, providing a positive impact on the local economy.

Women's empowerment is another important aspect. Mama-mama noken artisans, who are mostly women, gain opportunities to contribute economically. In this context, the government can formulate policies that support women's empowerment in the economic sector, such as access to capital and training, while encouraging women's participation in decision-making at community and government levels.

Increasing income from noken sales can improve the quality of life for the mama-mama and their families. Therefore, the government needs to provide better access to healthcare and education to support improved living standards. Developing social assistance programs for underprivileged families involved in noken production would also be highly beneficial.

Adequate infrastructure is essential to support noken production and distribution. The government should invest in local infrastructure, such as markets and transportation routes, to facilitate artisans in selling their products. Additionally, facilitating access to raw materials needed for noken production will help improve efficiency.

To ensure the effectiveness of this policy, a good monitoring and evaluation system is required. The government should form an evaluation team to periodically monitor the policy's impact and collect data on artisan productivity and income. This data will help assess policy effectiveness and make adjustments as needed.

Collaboration between institutions is also critical in this context. This policy requires cooperation among various stakeholders, including government, community, and non-governmental organizations. Building partnerships with other institutions to support training, marketing, and product development will be highly beneficial. Coordinating existing programs is also important to avoid overlap and maximize resources.

Overall, the implications of the noken usage policy for ASN in Timika City are extensive and diverse. By formulating appropriate strategies, the government can utilize this policy to enhance the local economy, preserve culture, and empower women. The success of this policy's implementation will heavily depend on the government's commitment to supporting noken artisans and ensuring integration of this policy into broader development plans.

## **5. Conclusions**

### **5.1 Conclusions**

The productivity of Papua's mama-mama noken artisans in the Mimika Baru District has shown a significant increase, with an average production of 17 units and sales of 12 units per month, generating gross income of around IDR 1,416,000, although most are still below the minimum wage. The low



production costs indicate small-scale operations, yet the income potential can still be increased if challenges such as market access and capital are addressed. The regional government policy mandating noken usage by ASN has been proven to positively affect productivity and artisan income, supported by regression tests showing statistically significant results. This policy increases demand, selling prices, and public awareness of local products, while also promoting cultural legitimacy and economic welfare of artisans. Government support through training, resource access, and marketing is crucial so that noken craftsmanship is not only preserved as a cultural heritage but also provides greater and sustainable economic benefits for the Papuan community.

## 5.2 Recommendations

In research on the policy of noken usage by ASN and its impact on productivity and income of Papua's mama-mama in Mimika Baru District, it is recommended that future studies expand the variables examined, including factors such as training access, technology, and markets. Longitudinal studies are also important to monitor changes in artisan productivity and income over time, as well as to assess the sustainability of policy impacts. Methodologically, a qualitative approach through in-depth interviews can be used to explore artisans' experiences, challenges, and perceptions regarding government support. Practically, local governments are advised to provide structured training that focuses not only on technical skills but also on business management and marketing. Collaboration between government and non-governmental organizations in developing digital platforms will help artisans reach wider markets. Additionally, investment in market development and transportation infrastructure should be increased to strengthen distribution and enhance the competitiveness of noken products, thereby contributing to the welfare of Papua's mama-mama noken artisans.

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