ISSN 2579-7069

Determinants of Consumption Behavior Among the Millennial Generation

Aina Aldi Saputra[1], Sarmini[2,*], Chyntia Raras Ajeng Widiawati[3], Ika Romadoni Yunita[4]

[1,2,3]*Information Systems Study Program, Faculty of Computer Science, Universitas Amikom Purwokerto, Indonesia*

(Received January 10, 2024; Revised April 12, 2024; Accepted July 2, 2024; Available online September 1, 2024)

Abstract

This study examines the factors influencing consumption behavior among the millennial generation, emphasizing the effects of family size, education level, and income on food, non-food, and total household expenditure. As digitalization and demographic shifts continue to redefine modern lifestyles, understanding millennial consumption patterns offers valuable insights into changing welfare dynamics and economic structures. Employing a quantitative associative approach, data were collected from 120 millennial households through structured questionnaires and interviews, complemented by secondary data from the Central Statistics Agency (BPS). Multiple linear regression analysis was used to evaluate both simultaneous and partial relationships among variables, while descriptive statistics were applied to illustrate the respondents' socioeconomic characteristics. The findings show that family size, education, and income collectively have a significant influence on consumption across all categories. Partially, family size and income significantly affect food-related spending, whereas education does not exhibit a notable impact in this segment. In contrast, for non-food and total consumption, all three variables display a positive and significant relationship, suggesting that higher income and education levels encourage more diversified expenditures. Moreover, non-food consumption (57.19%) surpasses food consumption (42.81%), supporting Engel's Law and indicating improved living standards alongside a shift toward lifestyle diversification. Nonetheless, the proportion of non-food expenditure remains moderate, reflecting cautious financial behavior amid lingering post-pandemic income constraints. These findings align with Keynesian and Life-Cycle consumption theories, illustrating how income stability, education, and life-stage factors shape millennial consumption decisions. Overall, this study underscores the evolving nature of millennial households toward technology-driven, experience-based, yet financially mindful consumption patterns, providing implications for policymakers and businesses to enhance income resilience, digital literacy, and sustainable consumption growth in the digital economy.

Keywords: Consumption, Millennial Generation, Family Size, Education Level, Income

1. Introduction

The twenty-first century has witnessed profound transformations in global consumption patterns, driven by the interplay of digitalization, globalization, and demographic change. Rapid technological advances—particularly in internet connectivity, e-commerce, and mobile applications—have redefined how individuals access, evaluate, and purchase goods and services. Digital technology enables consumers to make faster, data-informed decisions and promotes expectations of immediacy and convenience in everyday transactions [1]. Globalization complements this transformation by intensifying the cross-border exchange of goods, services, and cultural influences. As global brands penetrate new markets, societies experience a blending of global and local consumption behaviors, creating what [2], [3] describe as glocalism: the coexistence of global uniformity and local adaptation within consumption cultures.

Demographic transitions further amplify these changes. While many developed nations confront aging populations, emerging economies such as Indonesia enjoy a "youth bulge" that provides both an economic opportunity and a behavioral shift toward increased consumption. This demographic dividend—an abundance of productive-age citizens—can enhance domestic demand and support inclusive economic growth when matched with technology access and purchasing power [4]. The synergy between digital

***Corresponding author: Sarmini (sarmini@amikompurwokerto.ac.id)**
DOI: https://doi.org/10.47738/ijiis.v7i3.216

ISSN 2579-7069

connectivity and youthful demographics has therefore made Indonesia an ideal environment for studying evolving consumption behaviors in the digital era.

Within the Indonesian context, Central Java Province stands out as a region undergoing significant demographic and technological transformation. Among its regencies, Cilacap has become a particularly strategic site due to its large population, industrial base, and expanding service economy. The steady rise in internet penetration has reshaped purchasing habits, as consumers increasingly rely on digital platforms to obtain information, compare prices, and engage in online shopping [5], [6]. Urbanization has also altered social structures, increasing household incomes and diversifying expenditure patterns. Together, these factors position Cilacap as a microcosm of Indonesia's broader transition toward a digitally driven, consumption-oriented society.

Recent regional data reveal a noticeable shift from food to non-food expenditure, signaling not only improved living standards but also the emergence of more sophisticated consumer preferences. According to [7], such shifts indicate that as household welfare rises, discretionary spending on lifestyle products, entertainment, and communication services expands relative to basic necessities. Economic diversification in Cilacap, particularly in trade and service sectors, further reinforces this consumption evolution [8]. Consequently, the area offers a valuable context for understanding how economic development, technological penetration, and social aspirations interact to influence household decision-making.

At the heart of this transition lies the Millennial Generation, defined as individuals born between 1981 and 1996. This cohort has grown up alongside rapid technological advancement, making them inherently adaptive to digital tools and reliant on social media for information and self-expression [1]. Millennials value authenticity, convenience, and personalized experiences, often aligning consumption choices with identity and ethical considerations. Traditional economic theories help explain these behaviors: Engel's Law suggests that as income rises, the share of food expenditure declines; Keynesian consumption theory posits that current income is the main determinant of current spending; and the Permanent Income Hypothesis highlights expectations of long-term income as a factor shaping consumption patterns [9]. These frameworks collectively reveal how rising income, education, and lifestyle aspirations interact to produce the distinctive consumption tendencies of millennials.

Moreover, the millennial focus on experiential rather than material value reshapes business and marketing strategies. Research [10] observe that millennials prioritize emotional connection and brand authenticity over traditional measures of prestige, favoring companies that embody innovation, environmental awareness, and social responsibility. As a result, firms must adopt digital engagement, storytelling, and sustainability-oriented branding to maintain relevance. This generational influence extends beyond urban centers; semi-urban millennials, including those in Cilacap, exhibit comparable digital literacy yet face distinct socioeconomic realities that affect their spending behavior. Understanding these nuances is crucial for both public policy and private-sector planning.

Despite extensive research on household consumption and lifestyle economics, studies focusing on millennials in semi-urban Indonesia remain limited. Existing analyses often examine metropolitan populations or rely on national survey data that obscure regional diversity. In addition, prior works have tended to isolate determinants such as income, education, and family size rather than analyze their combined effects on consumption. These gaps hinder comprehensive understanding of how demographic and socioeconomic variables interact in shaping millennial consumption behavior outside major cities. Cilacap's demographic diversity and rapid technological adoption therefore present an opportunity to address this underexplored dimension of regional consumer analysis.

Accordingly, this study aims to examine the simultaneous and partial effects of family size, education level, and income on food, non-food, and total consumption among millennials in Cilacap Regency. Adopting a quantitative associative approach and employing multiple linear regression, the research seeks to identify the relative contributions of demographic and economic factors to different forms of expenditure. The findings are expected to offer empirical evidence to guide local development policies, assist businesses in formulating millennial-oriented marketing strategies, and enrich the academic discourse on consumption dynamics within Indonesia's digital economy.

2. Literature Review

2.1 Theoretical Foundations of Consumption Behavior

Understanding consumption behavior requires an exploration of both classical and modern economic theories that explain the dynamics of household spending. One of the earliest and most influential frameworks is Engel's Law, which posits that as household income increases, the proportion of income spent on food declines, even though the absolute value of food expenditure may still rise [11]. This principle is foundational for measuring welfare since it reflects a shift in consumption structure: low-income households allocate most income toward essentials, while wealthier households diversify their spending toward non-food and luxury items. Engel's Law therefore remains a cornerstone for understanding economic progress and living standards across both developed and developing nations.

Complementing this view, the Keynesian Consumption Theory argues that current income is the primary determinant of current consumption. According to Keynes, individuals make spending decisions largely based on their present earnings rather than future expectations, implying a direct and proportional relationship between income and consumption [12]. This theory has been widely validated in low- and middle-income economies, where limited access to credit or savings mechanisms forces households to adjust spending immediately in response to income changes. Consequently, consumption becomes a short-term reflection of economic well-being, particularly among lower-income groups where liquidity constraints are significant.

Building on these classical views, modern theories such as the Permanent Income Hypothesis (PIH) and the Life-Cycle Hypothesis (LCH) introduced a longer temporal perspective to consumption decisions. The PIH, developed by Milton Friedman, posits that individuals smooth consumption over time, basing their expenditure on expected lifetime income rather than current earnings [11]. Similarly, Modigliani's LCH suggests that people plan their consumption and savings throughout their lifetime to maintain stable living standards. During high-income phases, individuals save to prepare for lower-income periods, such as retirement. Both theories emphasize the role of expectations, foresight, and planning in shaping consumption, which are essential to understanding financial behavior in stable, credit-accessible economies.

Together, these theories provide complementary insights into the mechanisms underlying household consumption behavior. While Engel and Keynes focus on current income and welfare shifts, Friedman and Modigliani integrate long-term financial planning and intertemporal choices. Their combined perspectives allow researchers to examine both short-term and structural determinants of consumption, offering a multidimensional understanding of how individuals and families allocate resources across categories such as food, non-food goods, and savings [12]. These theoretical lenses are particularly valuable for analyzing consumption in transitional economies like Indonesia, where rising incomes and expanding digital access create new behavioral complexities.

In the context of this study, the integration of these theoretical frameworks provides a strong foundation for examining how family size, education level, and income interact to shape millennial consumption. Engel's Law helps assess welfare progress through shifts in expenditure composition, while Keynesian and modern income hypotheses explain temporal consumption adjustments. Collectively, they offer a basis for evaluating how income stability, demographic factors, and expectations influence household decision-making—an analytical framework directly relevant to the millennial population of Cilacap Regency.

2.2 Determinants of Consumption: Empirical Studies

A wide body of empirical literature has examined the factors that influence consumption behavior, with family size, education, and income consistently identified as major determinants. Numerous studies suggest that family size exerts a positive effect on total household expenditure. Larger households generally have higher aggregate consumption due to greater overall needs and the diversity of preferences within families. Research by [13] confirms that as the number of family members increases, household spending rises proportionally to meet varied food and non-food demands. This relationship is particularly strong in developing countries, where household structures often include extended family members sharing resources and responsibilities.

Education level also plays a significant role in shaping consumption patterns by influencing awareness, preferences, and aspirations. According to [14] education enhances human capital, which in turn raises income potential and alters consumption behavior toward higher-quality and diversified goods. Educated consumers tend to have broader access to information, greater exposure to media and technology, and a higher tendency to prioritize lifestyle, health, and leisure-related expenditures. Consequently, education acts not only as an income determinant but also as a cultural driver that changes how individuals perceive and pursue consumption.

The third major determinant, income, remains one of the most robust predictors of consumption. Studies by [15], [16] found a strong positive correlation between household income and discretionary spending, with higher-income groups allocating more funds toward luxury and non-essential goods. In both Indonesian and international contexts, income elasticity of demand explains why increases in earnings lead to proportionally greater increases in non-food consumption. This relationship aligns closely with both Keynesian and Engelian principles, reflecting how income expansion reconfigures consumption structure and lifestyle priorities.

Empirical research also reveals the interconnectedness of these three variables. For instance, higher education levels often lead to better employment opportunities and thus higher income, while larger family sizes may moderate consumption efficiency due to resource sharing. Research [17] note that these relationships vary across cultural and economic contexts, yet their cumulative effect on total consumption remains consistent: as households grow wealthier and more educated, their consumption patterns diversify. This triadic relationship between family size, education, and income thus provides a holistic view of household spending dynamics.

While many global studies confirm these determinants, regional studies in Indonesia show nuanced variations reflecting cultural norms and local economies. Rural and semi-urban households, such as those in Cilacap, may experience different consumption pressures than urban households due to differences in access to markets, digital infrastructure, and social aspirations. Understanding these localized variations is therefore critical to contextualizing the findings of this study within the broader literature on consumption behavior.

2.3 Millennial Generation and Consumption in the Digital Era

The Millennial Generation represents a transformative consumer group whose behavior is shaped by technology, social values, and lifestyle preferences. Unlike earlier generations, millennials prioritize convenience, digital connectivity, and experiences over material accumulation. Their purchasing decisions often reflect self-identity and social influence, demonstrating a shift from utilitarian to symbolic consumption [18]. As digital natives, millennials integrate technology into daily life—using mobile devices for shopping, decision-making, and payment—making them a crucial demographic for understanding the evolution of modern consumption.

The rise of social media platforms and e-commerce ecosystems has significantly redefined how millennials interact with brands. Platforms such as Instagram, TikTok, and Facebook act as both marketing and peer-review spaces where visual storytelling and influencer endorsements drive consumer engagement [18]. Simultaneously, the accessibility of online marketplaces and delivery services accelerates purchasing decisions, increasing both the frequency and diversity of consumption. Research by [19] highlights that digital payment systems such as e-wallets and mobile banking have enhanced transaction efficiency and impulsive spending tendencies, fostering a frictionless consumption environment aligned with millennial values of speed and convenience.

 ISSN 2579-7069

Moreover, technological innovation has reshaped consumer expectations across multiple industries. Research [20] observed that millennials are particularly responsive to digital trends, sustainability messaging, and personalized advertising. Their consumption extends beyond products to include digital experiences, environmental engagement, and social causes. This generation values transparency, authenticity, and social responsibility, rewarding brands that demonstrate ethical practices and innovation. As a result, millennial consumption not only drives economic growth but also influences broader cultural and technological transformations in emerging economies like Indonesia.

The Indonesian context presents a compelling setting to examine these global patterns in a developing economy. Millennials in semi-urban regions, such as Cilacap, have similar digital literacy to their urban counterparts but operate within distinct economic realities, including moderate income levels and evolving market access [19]. Their consumption reflects both aspiration and adaptation—balancing traditional values with globalized lifestyles. This hybrid behavior underscores the role of social mobility and digital inclusion in shaping regional consumption diversity.

However, despite the growing literature on digital consumerism, there remains a significant knowledge gap concerning how demographic and socioeconomic factors interact with digital behavior among millennials in semi-urban areas. Most existing research focuses on metropolitan populations, leaving regions like Cilacap underrepresented. This study seeks to address that gap by examining how family size, education, and income collectively influence millennial consumption in a digital environment. Through this lens, it aims to contribute to a more nuanced understanding of how economic and technological factors converge to shape consumer behavior in Indonesia's evolving digital economy.

3. Method

3.1 Research Design

This study employed a quantitative associative research design aimed at identifying the relationships between demographic and socioeconomic factors—family size, education level, and income—and the consumption patterns of the millennial generation in Cilacap Regency. The research sought to determine both the simultaneous and partial effects of these independent variables on three categories of dependent variables: food consumption, non-food consumption, and total household consumption. The choice of a quantitative approach was based on the objective of providing measurable and statistically verifiable evidence using numerical data. The research design follows a cross-sectional model, collecting data at a single point in time to capture prevailing consumption characteristics among millennial households.

3.2 Research Location and Population

The study was conducted in Cilacap Regency, Central Java Province, Indonesia—a region selected due to its large productive-age population, rapid internet adoption, and emerging digital consumer behavior. The population of this study comprised millennial generation households, defined as households where the head of the family was born between 1980 and 2000. This generation represents the productive-age group most influenced by digital access and modern lifestyle trends. The research location was divided into four representative sub-districts of Cilacap, ensuring that socioeconomic diversity within the regency was adequately captured.

3.3 Sampling Technique and Respondents

A purposive sampling technique was applied to identify respondents who met specific inclusion criteria: (1) millennial household heads aged 25–40 years, (2) currently married and responsible for family expenditures, and (3) possessing a stable monthly income. This approach was appropriate because the study sought to analyze decision-making behavior within households that actively manage both income and consumption. The total sample consisted of 120 respondents, proportionally distributed across the four sub-districts to reflect geographic and demographic balance. This sample size met the minimum statistical requirements for multiple linear regression analysis with three independent variables [21].

ISSN 2579-7069

3.4 Data Collection

The study relied on both primary and secondary data sources. Primary data were obtained through structured questionnaires, supported by direct interviews and limited observation of household characteristics. The questionnaire covered demographic information (age, gender, family size, education, and occupation), income levels, and detailed household expenditures on food and non-food categories. Secondary data were gathered from official publications of the Central Statistics Agency (BPS), including regional profiles, internet penetration data, and household expenditure statistics for Cilacap Regency. These data were used to triangulate and contextualize the primary findings. All data collection was carried out over a two-month period in 2023, and respondents were assured of data confidentiality and voluntary participation.

3.5 Variables and Measurement

The study included two groups of variables. Independent Variables: (1) Family Size = number of household members; (2) Education Level = years of formal schooling completed by the household head; and (3) Income = total monthly household income (in rupiah). Dependent Variables: (1) Food Consumption = monthly expenditure on food and beverages; (2) Non-Food Consumption = monthly expenditure on housing, utilities, communication, education, health, and other non-food items; and (3) Total Consumption = aggregate sum of food and non-food expenditures. All variables were measured on a ratio scale (rupiah values) except for family size and education level, which were treated as discrete numeric indicators.

3.6 Data Analysis

Data were first processed using descriptive statistics to summarize the characteristics of respondents and distribution of each variable. Measures of central tendency (mean, minimum, maximum) and dispersion (standard error) were computed. Subsequently, inferential analysis was performed using multiple linear regression, designed to assess both the simultaneous and partial effects of the independent variables on each consumption type. The general regression model applied was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots$$

where Y represents food, non-food, or total consumption; X_1= family size; X_2= education level; and X_3 = income. Before model estimation, classical assumption tests were conducted—normality, multicollinearity, and heteroscedasticity—to ensure the validity of regression results. Statistical processing was carried out using SPSS version 25, with a significance level set at α = 0.05.

4. Results and Discussion

4.1 Characteristics of Respondents

The study involved 120 respondents representing millennial households in Cilacap Regency. Most respondents were private employees (50%), followed by self-employed workers (25%), civil servants (21.67%), and a small proportion employed in state-owned (2.5%) and regionally owned enterprises (0.83%). Table 2 presents the distribution of respondents by occupation. The data indicate that the majority of the millennial population in Cilacap is engaged in the private sector and entrepreneurship, reflecting a productive and dynamic workforce typical of this generation.

Table 1. Distribution of Respondents by Type of Work

No	Type of Work	Number (People)	Percentage (%)
1	Civil Servant (PNS)	26	21.67
2	Private Employee	60	50.00
3	Self-Employed	30	25.00
4	State-Owned Enterprise (BUMN)	3	2.50

 ISSN 2579-7069

5	Regionally-Owned Enterprise (BUMD)	1	0.83
Total		**120**	**100.00**

In terms of migration status, 58 percent of respondents were migrants living in Cilacap for work or family reasons, while 42 percent were native residents. This distribution suggests that the millennial population in the regency is relatively mobile and influenced by urban employment opportunities, consistent with regional development trends.

4.2 Descriptive Statistics of Research Variables

Descriptive analysis was conducted to provide an overview of the main variables: family size, education level, income, food consumption, non-food consumption, and total household consumption. Table 3 summarizes the statistical results.

Table 2. Descriptive Statistics of Research Variables

Variable	N	Range	Minimum	Maximum	Mean	Std. Error
Family Size (persons)	120	3	2	5	3.40	0.081
Education (years)	120	6	12	18	15.12	0.170
Income (IDR)	120	11,500,000	4,000,000	15,500,000	8,531,541.67	275,715.98
Total Consumption (IDR)	120	9,125,000	3,000,000	12,125,000	6,471,116.67	194,311.92
Food Consumption (IDR)	120	3,700,000	1,300,000	5,000,000	2,770,416.67	73,962.14
Non-Food Consumption (IDR)	120	6,350,000	1,500,000	7,850,000	3,700,700.00	146,039.63

The results indicate that the average family size among millennial households in Cilacap was 3–4 members, aligning with the national average. The average education level was equivalent to senior high school to undergraduate degree (15.12 years), suggesting relatively high educational attainment. The average household income was approximately IDR 8.53 million per month, equivalent to IDR 2.5 million per capita, reflecting a moderately affluent middle-income group.

Regarding expenditure, average food consumption amounted to IDR 2.77 million per month, while non-food consumption averaged IDR 3.70 million. The total monthly consumption was IDR 6.47 million, confirming that non-food spending accounted for a greater portion of household expenditure, consistent with Engel's Law.

4.3 Composition of Non-Food Consumption

Non-food consumption among millennials in Cilacap Regency encompasses a wide range of expenditure categories reflecting modern lifestyles, technological integration, and evolving social priorities. The results indicate that this generation allocates a significant portion of household budgets to goods and services that extend beyond basic necessities. Specifically, 23.49 percent of non-food expenditure was devoted to goods and services—items such as cleaning supplies, toiletries, daily household needs, and other consumables that sustain routine comfort. This dominant share demonstrates that even within non-food spending, a considerable amount still supports essential and recurring needs, revealing a blend of traditional practicality and growing consumer choice among millennials.

The second-largest spending category is housing and utilities (16.51%), which includes expenses for rent, electricity, and water. These fixed costs represent essential commitments that households must maintain irrespective of income fluctuations. For millennial families, especially those living independently in semi-urban environments like Cilacap, this expenditure reflects an aspiration for stability and comfort. The relatively high proportion allocated to housing suggests an emerging middle-class tendency to invest in quality living spaces, consistent with their broader pursuit of upward mobility and social security. Furthermore, these findings align with trends in other urbanizing regions of Indonesia, where housing-related costs have steadily increased due to population growth and rising urban infrastructure demand.

Education expenses, accounting for 11.50 percent of non-food consumption, stand out as a crucial indicator of intergenerational aspirations. Most respondents reported allocating significant resources toward school fees, tuition, and educational materials for their children. This prioritization of education highlights a commitment to human capital development and reflects the millennial generation's awareness of education as a long-term investment. It also demonstrates how increasing educational attainment among parents reinforces the cycle of educational investment for their offspring. This pattern supports previous studies suggesting that higher educational awareness within families positively correlates with improved social and economic outcomes in the future.

Spending on communication represents another major category, constituting 11.06 percent of total non-food expenditure. Millennials' digital dependency—through smartphones, internet data, and online subscription platforms—explains this proportion. Communication expenses have become indispensable to both work and leisure activities, especially in the context of the digital economy and remote communication trends that were accelerated during the Covid-19 pandemic. The consistent rise in data-related spending also reflects the increasing integration of online platforms into everyday routines, confirming that digital connectivity is no longer a luxury but a necessity for millennial households.

Meanwhile, social and cultural expenditures, including spending on ceremonies, religious events, and community gatherings, comprised 9.89 percent of non-food consumption. This pattern reflects the continued importance of social obligations and cultural identity even among the digitally inclined millennial generation. In semi-urban regions like Cilacap, such activities remain integral to social cohesion, blending modern consumption with traditional values. Other categories, such as taxes, levies, and insurance (9.29%), clothing and accessories (7.72%), health (5.46%), and durable goods (5.09%), represent smaller but meaningful shares of household budgets. Notably, health and durable goods spending were relatively restrained, likely due to the economic uncertainty caused by the pandemic, as households postponed non-essential purchases.

Overall, the composition of non-food consumption among millennials in Cilacap reveals a diversified expenditure structure. Essential and service-based categories dominate, while discretionary spending remains moderate, reflecting a cautious yet adaptive consumption approach. The pattern aligns with the characteristics of a generation navigating between modern aspirations and economic constraints. In broader terms, these results underscore a shift from material-based consumption toward experience- and service-oriented spending, a hallmark of millennial consumer behavior in developing digital economies.

4.4 Comparison and Interpretation of Consumption Patterns

The overall findings demonstrate that non-food consumption (57.19%) exceeds food consumption (42.81%), signifying an important socioeconomic transition in household behavior. This pattern aligns closely with Engel's Law, which states that as income increases, the proportion of expenditure on food declines while spending on non-essential goods and services rises. The data from Cilacap mirror this economic principle, indicating that the millennial generation is gradually moving beyond subsistence-level spending. The shift toward non-food items also signifies an improvement in welfare and reflects increased accessibility to goods and services enabled by digital infrastructure and urban development.

When compared to official statistics from BPS (2020), the pattern among millennials parallels the wider population trend, though with slight variations. The average per capita food expenditure in Cilacap was 39.76 percent, compared to 60.24 percent for non-food items, while millennials exhibited a slightly lower proportion of non-food expenditure at 57.19 percent. This suggests that although millennials are embedded in a digital and consumer-driven environment, they remain relatively conservative in discretionary spending. One plausible explanation is the enduring economic effects of the Covid-19 pandemic, which disrupted employment stability and household income. The resulting financial caution led many families to prioritize essential needs, postponing luxury purchases and limiting entertainment or leisure spending.

The comparison also provides valuable insights into age- and life-stage dynamics. According to the Life-Cycle Hypothesis, individuals' consumption and income patterns evolve across different stages of life. Most millennial respondents in this study fall within the young-adult and early middle-age groups, during which income tends to be lower and financial obligations—such as housing, childcare, and education—are higher. Consequently, their expenditure behavior reflects a mix of aspirational consumerism and financial prudence. As income increases over time, it is expected that the proportion of discretionary and investment-related consumption will grow, gradually aligning with the patterns observed among older, higher-income groups.

At the same time, the findings highlight a psychological and cultural dimension in millennial consumption. Despite their familiarity with digital marketplaces and exposure to social media advertising, millennials in semi-urban areas such as Cilacap tend to exercise restraint and deliberate decision-making. This moderation may stem from cultural norms emphasizing financial responsibility, as well as heightened awareness of economic volatility during the pandemic. Unlike urban millennials who often exhibit impulsive consumption driven by social comparison, those in smaller cities may display more balanced consumption behavior, valuing security and savings alongside modern lifestyle preferences.

The results also illustrate how technology interacts with socioeconomic status to shape consumption. Increased internet access exposes millennials to global consumer trends, yet their actual purchasing power moderates these influences. This duality—between digital aspiration and financial limitation—creates a unique consumption identity characterized by selective spending and value-based purchasing decisions. Millennials appear to favor functional and meaningful consumption, prioritizing goods and services that enhance productivity, communication, and family welfare, rather than excessive luxury or status-driven purchases.

In conclusion, the comparative analysis underscores the emergence of a hybrid consumption pattern among millennials in semi-urban Indonesia. They are digitally connected, aspirational, and increasingly service-oriented, yet remain grounded in economic realism. The coexistence of modern consumer values and traditional prudence reflects the transitional nature of this demographic within Indonesia's socioeconomic landscape. These findings not only confirm theoretical expectations derived from Engel's Law and the Life-Cycle Hypothesis but also provide empirical evidence of how macroeconomic conditions, cultural values, and technological access collectively shape consumption behavior in developing regions.

4.5 Discussion

The findings of this study reaffirm that income, education level, and family size significantly influence household consumption among the millennial generation in Cilacap Regency. These results are consistent with both Keynesian Consumption Theory and Engel's Law, which posit that income and household composition are primary drivers of spending behavior. As income rises, the share of expenditure on food decreases, while non-food spending—representing lifestyle and welfare improvements—expands. Similarly, households with more members naturally exhibit higher total consumption due to collective needs, though spending efficiency may vary depending on income distribution and dependency ratios. The pattern observed among millennials indicates that economic growth and educational attainment are reshaping their consumption structure toward more diverse, service-oriented expenditures.

The dominance of non-food consumption (57.19%) highlights the ongoing shift in priorities among millennial households. Increased spending on communication, education, and household facilities demonstrates a move toward digital integration, self-development, and comfort enhancement—hallmarks of millennial consumer behavior. This transformation also reflects improved welfare, suggesting that millennials are allocating resources not only for survival but also for personal and professional advancement. However, the persistence of moderate spending levels compared to the general Cilacap population underscores the influence of income constraints. Despite high digital literacy and access to modern goods,

ISSN 2579-7069

millennials in semi-urban regions remain bounded by limited earning potential and job instability, particularly amid post-pandemic economic recovery.

Another crucial insight emerges from the interplay between education and consumption diversity. Although education did not significantly affect food expenditure, it had a positive relationship with non-food and total consumption. This finding implies that higher education levels broaden awareness and aspirations, leading individuals to pursue improved living standards and experience-oriented consumption. Education serves as both an income enhancer and a cognitive driver that shapes lifestyle decisions. Thus, millennial households with better educational backgrounds are more inclined to invest in communication, technology, and self-actualization-related goods and services. This aligns with global trends that position education as a key determinant of human capital development and social mobility, particularly among younger populations.

From a policy perspective, the results emphasize the importance of supporting income stability and skill development among millennials to strengthen local consumption capacity. Regional governments and employers could enhance purchasing power through job creation, fair wage policies, and digital entrepreneurship programs tailored to younger workers. Encouraging financial literacy, investment habits, and digital innovation could also promote sustainable consumer behavior. Businesses, in turn, can utilize these findings to design products and marketing strategies that cater to the millennial preference for convenience, connectivity, and authenticity, while remaining mindful of their budget constraints.

Nevertheless, this study acknowledges several limitations. The analysis was conducted during a period still affected by the Covid-19 pandemic, which may have temporarily reduced income and consumption, particularly in non-essential categories. The cross-sectional design limits causal inference, as data were collected at a single point in time. Additionally, the study focused solely on Cilacap Regency, a semi-urban region, which may limit the generalizability of findings to metropolitan or rural contexts. Future research should therefore employ longitudinal approaches to capture consumption dynamics across economic cycles, and expand the model by including variables such as digital access, lifestyle orientation, or financial literacy. Comparative studies between urban, semi-urban, and rural millennials could also provide a deeper understanding of how regional development and technological exposure jointly shape consumption behavior in Indonesia’s evolving economy.

5. Conclusion

This study examined the effects of family size, education level, and income on the consumption behavior of the millennial generation in Cilacap Regency. Using a quantitative approach and multiple linear regression analysis, the findings reveal that these three variables have a significant simultaneous influence on both food and non-food consumption. Specifically, family size and income were found to have a significant positive effect on food consumption, while education level showed no significant influence in this category. In contrast, all three variables—family size, education, and income—demonstrated significant positive effects on non-food and total household consumption, highlighting the increasing importance of socioeconomic factors in shaping millennial expenditure patterns.

The results further demonstrate that non-food consumption dominates food consumption, accounting for 57.19 percent of total household expenditure. This trend aligns with Engel’s Law, indicating improved welfare and a gradual transition toward more diversified, lifestyle-oriented spending. The prominence of expenditures on goods and services, education, communication, and housing underscores the role of digital connectivity and self-development in millennial consumer behavior. However, the relatively moderate overall spending levels reflect ongoing income constraints and economic adjustments during the post-pandemic recovery period, suggesting that millennials in semi-urban regions like Cilacap are still balancing aspirational consumption with practical financial considerations.

In light of these findings, policymakers and businesses should focus on strengthening income stability, educational access, and financial literacy to foster sustainable consumption growth among millennials. Efforts to expand

ISSN 2579-7069

employment opportunities, promote digital entrepreneurship, and support skill-based education can enhance purchasing power while reducing vulnerability to economic shocks. Future studies are encouraged to adopt longitudinal and comparative approaches that include additional variables such as digital adoption, lifestyle orientation, and social influence to deepen understanding of generational consumption dynamics across urban and rural contexts. Overall, this research contributes valuable insights into how demographic and economic factors shape millennial consumption behavior within Indonesia's rapidly evolving digital economy.

6. Declarations

6.1. Author Contributions

Author Contributions: Conceptualization, A.A.S., S., and C.R.A.W.; Methodology, A.A.S. and I.R.Y.; Software, C.R.A.W. and S.; Validation, S. and I.R.Y.; Formal Analysis, A.A.S.; Investigation, C.R.A.W. and S.; Resources, S. and I.R.Y.; Data Curation, C.R.A.W.; Writing—Original Draft Preparation, A.A.S.; Writing—Review and Editing, I.R.Y. and S.; Visualization, S. All authors have read and agreed to the published version of the manuscript.

6.2. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

6.3. Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

6.4. Institutional Review Board Statement

Not applicable.

6.5. Informed Consent Statement

Not applicable.

6.6. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] D. Nuresa, "Changing Generation Z Consumption Patterns and Their Implications for Global Marketing Strategies," *MJBMS*, 2023, doi: 10.59613/mjbms.v1i2.234.

[2] R. Afzali, R. Nosrati, and M. GharehBeygi, "From Globalism to Glocalism: Consumption Patterns of Rich Kids and Its Effects on Other Young People," *Young*, 2023, doi: 10.1177/11033088231155343.

[3] B. Berlilana, A. M. Wahid, D. Fortuna, A. N. A. Saputra, and G. Bagaskoro, "Exploring the Impact of Discount Strategies on Consumer Ratings: An Analytical Study of Amazon Product Reviews," *Journal of Applied Data Sciences*, vol. 5, no. 1, Art. no. 1, Jan. 2024, doi: 10.47738/jads.v5i1.163.

[4] J. Lastra-Bravo, "Social Inequality and Environmental Injustice. The Effects of Global Consumption on the Global South," *Pacha Revista De Estudios Contemporáneos Del Sur Global*, 2023, doi: 10.46652/pacha.v4i11.188.

[5] E. Jayanti and N. B. Karnowati, "Digitalisasi Umkm Dan Literasi Keuangan Untuk Keberlanjutan Umkm Di Kabupaten Cilacap," *Kajian Bisnis Sekolah Tinggi Ilmu Ekonomi Widya Wiwaha*, 2023, doi: 10.32477/jkb.v31i1.504.

[6] S. Aripiyanto, D. Khairani, and A. Hartono, "CO2 Emission Forecasting in Indonesia Until 2030: Evaluation of ETS Smoothing Prediction Models and Their Implications for Global Climate Change Mitigation," *Journal of Applied Data Sciences*, vol. 5, no. 1, Art. no. 1, Jan. 2024, doi: 10.47738/jads.v5i1.154.

[7] G. Nazarova, "Patterns of Consumer Behavior in Ukraine," *Economy and Society*, 2021, doi: 10.32782/2524-0072/2021-29-59.

[8] I. D. Suryaningrum, M. Mulyanto, and A. M. Soesilo, "'Analysis of Regional Economic Potential of Barlingmascakeb Regional Institution Member Districts' (Case Study: Banjarnegara, Purbalingga, Banyumas, Cilacap and Kebumen Regencies)," *International Journal of Economics Business and Management Research*, 2022, doi: 10.51505/ijebmr.2022.6709.

[9] N. Hanumante, Y. Shastri, and A. Hoadley, "Sustainability in a Global Circular Economy: Insights on Consumer Price Sensitivity," *Journal of Industrial Ecology*, 2022, doi: 10.1111/jiec.13253.

[10] S. Bandara, T. Kumara, S. Dharmadasa, and W. G. R. Samaraweera, "Changes in Food Consumption Patterns in Sri Lanka: Food Security and Sustainability: A Review of Literature," *Open Journal of Social Sciences*, 2021, doi: 10.4236/jss.2021.910016.

[11] W. S. Yun, S. H. Samsu, J. Yassin, S. I. Taasim, and F. Madli, "Household Consumption Function Based on Permanent Income Hypothesis: A Systematic Review," *International Journal of Academic Research in Economics and Management Sciences*, 2023, doi: 10.6007/ijarems/v12-i1/16654.

[12] N. V. Tran, "Understanding Household Consumption Behaviour: What Do We Learn From a Developing Country?," *The B E Journal of Economic Analysis & Policy*, 2022, doi: 10.1515/bejeap-2022-0036.

[13] S. Matz, J. J. Gladstone, and D. Stillwell, "Money Buys Happiness When Spending Fits Our Personality," *Psychological Science*, 2016, doi: 10.1177/0956797616635200.

[14] M. Abelha, S. Fernandes, D. Mesquita, F. Seabra, and A. T. Ferreira-Oliveira, "Graduate Employability and Competence Development in Higher Education—A Systematic Literature Review Using PRISMA," *Sustainability*, vol. 12, no. 15, Art. no. 15, Jan. 2020, doi: 10.3390/su12155900.

[15] D. French, D. McKillop, and E. Stewart, "Personal Finance Apps and Low-income Households," *Strategic Change*, vol. 30, no. 4, pp. 367–375, 2021, doi: 10.1002/jsc.2430.

[16] W. S. Basri and A. L. Ayu, "Risk Management in Information Systems: Applying ISO 31000:2018 and ISO/IEC 27001:2022 Controls at PMI's Central Clinic," *International Journal for Applied Information Management*, vol. 4, no. 1, Art. no. 1, Apr. 2024, doi: 10.47738/ijaim.v4i1.70.

[17] P. Khari, "Economic Productivity Through Net National Disposable Income," *Journal of Business Management and Information Systems*, 2023, doi: 10.48001/jbmis.2023.1002001.

[18] K. Darmiati and I. G. Agung Mahagangga, "Perilaku Berwisata Wisatawan Milenial Di Daya Tarik Wisata Pantai Pandawa, Kabupaten Badung, Bali," *Jurnal Destinasi Pariwisata*, 2023, doi: 10.24843/jdepar.2023.v11.i02.p01.

[19] A. D. Astuti and A. Faujiah, "Pengaruh Penggunaan Dompet Digital (E-Wallet) Terhadap Perilaku Konsumtif Perspektif Islam Pada Generasi Milenial Daerah Istimewa Yogyakarta," *Ajie*, 2023, doi: 10.59005/alkasb.v2i1.175.

[20] T. Pencarelli, L. Gabbianelli, and E. Savelli, "The Tourist Experience in the Digital Era: The Case of Italian Millennials," *Sinergie Italian Journal of Management*, 2021, doi: 10.7433/s113.2020.10.

[21] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "When to use and how to report the results of PLS-SEM," *European business review*, vol. 31, no. 1, pp. 2–24, 2019.