Daoist Sufficiency and the Governance of Economic Anxiety: Inflation, Buy-Local Attention, and Financial Inclusion in the Philippines

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Abstract
Inflation is not only a macroeconomic condition; it is also a public-administration problem because public institutions shape price communication, consumer protection, market access, social assistance, and support for local enterprise. This study examines the relationships among inflation, economic anxiety, and buy-local search interest in the Philippines and interprets them through a Daoist public-administration framework centered on knowing sufficiency (zhizu), reduced desire (shaosi guayu), simplicity (pu), naturalness and local adaptation (ziran), and non-coercive action (wuwei). A quarterly national data set for 2018Q1-2025Q4 combined Philippine headline inflation, Google Trends search-interest indicators, and Bangko Sentral ng Pilipinas consumer-confidence data. Correlation, ordinary least squares regression, robust standard errors, lag models, first differences, and Newey-West corrections were used. The baseline model explained 57.0% of the variance in buy-local search interest. Search-based and survey-based economic anxiety were positively associated with buy-local attention, whereas inflation was not significant after anxiety indicators were included. To strengthen the governance interpretation, the article also incorporates aggregate findings from a separate mixed-methods study of 373 women micro-entrepreneurs in Kalinga. That study reported moderate financial inclusion, strong dependence on institutional accessibility, stronger benefits for household and socio-economic empowerment than for employment creation, and persistent barriers involving requirements, costs, digital capability, trust, and care responsibilities. The article does not treat Daoism as a measured variable or claim that buy-local behavior is inherently Daoist. Instead, it proposes a public-administration ethic of sufficient, simple, locally adaptive, and enabling governance: monitor anxiety without manipulating it, reduce administrative burden, protect proportionate choice, and build accessible financial and market institutions that strengthen household and MSME resilience.

Keywords: Daoism; public administration; economic anxiety; inflation; buy-local attention; financial inclusion; administrative burden; women micro-entrepreneurs; wuwei; zhizu; Philippines

1. Introduction

Inflation is usually treated as a macroeconomic problem of prices, purchasing power, and aggregate demand. For public administration, however, inflation is also experienced through institutions. Citizens encounter price shocks through official information, market regulation, assistance programs, financial services, and the procedures required to obtain support. These encounters can reduce uncertainty, or they can add learning, compliance, and psychological costs to households already under pressure (Herd & Moynihan, 2018; Moynihan et al., 2015). Economic anxiety is therefore not merely a private emotional response. It is also a governance-relevant condition that can influence attention, trust, information seeking, and the perceived accessibility of public and financial institutions.

Behavioral public administration emphasizes that citizens do not interact with government as perfectly informed and emotionally neutral decision makers. Feelings, cognitive limits, trust, framing, and institutional design shape how people understand and use public programs (Grimmelikhuijsen et al., 2017). During inflationary periods, anxiety may intensify searches for prices, budgeting strategies, savings, and more manageable consumption options. Such search behavior can function as an early signal of public concern, although it does not reveal motives or actual purchases.

The present study brings this governance problem into conversation with Daoist scholarship. The Daodejing questions the political and social consequences of proliferating desire, competitive striving, excessive distinction, and the inability to recognize sufficiency. Its vocabulary of knowing sufficiency (zhizu, 知足), having fewer self-centered desires (shaosi guayu, 少私寡欲), simplicity or the uncarved state (pu, 樸), naturalness or being-so-of-itself (ziran, 自然), and non-coercive action (wuwei, 無為) offers a distinctive framework for evaluating how governments respond to disturbance (Ames & Hall, 2003; Miller, 2003; Slingerland, 2003).

This use of Daoism is interpretive and normative rather than causal. The study does not measure Daoist identity, belief, or practice, and it does not claim that Filipino consumers search for local products because they consciously follow Daoist teachings. Nor does it assume that local consumption is inherently virtuous. Daoist concepts are kept analytically distinct from the measured economic variables. Their role is to help evaluate whether public responses calm disorder, reduce unnecessary forcing, and support proportionate choice, or instead exploit fear, multiply procedures, and intensify desire.

The Philippine setting makes this question especially important. Micro, small, and medium enterprises are embedded in local livelihoods, while many low-income households and women micro-entrepreneurs depend on accessible finance, nearby markets, and relational forms of support. When anxiety rises, consumers may search for affordable, familiar, or locally identified products. Yet local enterprises can benefit only when public institutions also address supply reliability, market information, digital visibility, credit access, consumer trust, and the administrative burden of participating in formal programs.

A companion mixed-methods study of women micro-entrepreneurs in Kalinga provides a local governance lens for interpreting the national digital evidence (Labbutan, 2026). It found that financial inclusion was present but incomplete: women were more connected to basic accounts and loans than to insurance and other protective products, and the benefits appeared more strongly in household welfare and socio-economic empowerment than in employment creation. The study also documented barriers involving documentation, collateral, service costs, digital capability, fear, trust, and unpaid care responsibilities. These findings show that a policy can formally exist while remaining difficult to use in practice.

Methodologically, the national analysis uses Google Trends alongside official inflation and consumer-confidence data. Digital traces can reveal shifts in public attention at a higher frequency than many surveys, but they must be used with restraint because searches are not equivalent to motives, identities, or transactions (Choi & Varian, 2012; Jun et al., 2018; Vosen & Schmidt, 2011). In public administration, such data are most defensible when used to improve information, simplify access, and anticipate service needs rather than to manipulate behavior.

Accordingly, the study asks five questions: (1) How is inflation associated with economic anxiety as reflected in search behavior and consumer confidence? (2) Is economic anxiety associated with increased buy-local search interest? (3) How can the observed pattern be interpreted through Daoist concepts of sufficiency, simplicity, naturalness, and non-coercive action without treating Daoism as a measured variable? (4) What do the financial-inclusion experiences of women micro-entrepreneurs reveal about administrative accessibility and household resilience? and (5) What public-administration principles follow for consumer protection, MSME support, and financial inclusion? The quantitative hypotheses remain empirical: H1, higher inflation is associated with higher economic anxiety; H2, economic anxiety is positively associated with buy-local search interest; and H3, once anxiety indicators are included, inflation has a weaker direct association with buy-local search interest than the anxiety indicators themselves.

2. Daoist Public Administration Framework: Sufficiency, Simplicity, and Non-Coercive Governance

This study develops a Daoist Sufficiency and Enabling Governance Framework. It is not presented as a timeless or uniform account of all Daoist traditions. Daoism includes diverse philosophical texts, religious institutions, practices, ritual lineages, and interpretive communities (Kohn, 2009; Miller, 2003). The framework draws primarily on themes associated with the Daodejing and selected scholarly interpretations, with limited reference to the Zhuangzi. Its purpose is to establish a disciplined vocabulary for public administration under economic disturbance.

Zhizu (知足), knowing what is enough, provides the framework's public-value orientation. In administrative terms, sufficiency asks whether institutions secure the practical conditions needed for people to live, decide, and recover with dignity. It shifts evaluation away from growth-only indicators toward affordability, continuity, household stability, access to essential services, and the capability to manage shocks. This does not reject enterprise growth; it places growth within a wider conception of public value and human welfare (Moore, 1995).

Shaosi guayu (少私寡欲) and pu (樸) provide principles of institutional restraint and procedural simplicity. Daoist critiques of proliferating desire are not rejections of ordinary needs; they question socially intensified wants and unnecessary distinctions that produce disorder (Ames & Hall, 2003; Seok, 2021). In public administration, pu can be translated cautiously into plain information, fewer duplicative requirements, comprehensible eligibility rules, and services designed around the capacities of users. This parallels the administrative-burden literature's concern with learning, compliance, and psychological costs, while remaining philosophically distinct from it (Moynihan et al., 2015).

Ziran (自然), naturalness or being-so-of-itself, supports locally adaptive administration. It cautions against rigid, one-size-fits-all interventions that ignore how communities, markets, gender roles, and trust relationships actually operate. A ziran-oriented program works with local conditions through consultation, accessible intermediaries, and context-sensitive implementation. It does not romanticize locality; rather, it recognizes that effective policy often emerges through adaptation instead of uniform imposition.

Wuwei (無為) is the framework's central principle of action. It does not mean governmental absence or literal inaction. It refers to effective action that avoids excessive forcing and does not generate secondary disorder (Slingerland, 2003; Liu, 2001). In contemporary public administration, wuwei implies enabling conditions: credible price information, consumer protection, simple access to programs, dependable infrastructure, responsive frontline service, and financial products people can use without humiliation or avoidable complexity. It also rejects fear-based campaigns and intrusive use of behavioral data.

The framework therefore proposes an integrated sequence. Macroeconomic disturbance can intensify anxiety and scarcity-focused attention. Anxiety can redirect search toward manageable consumption and financial options. Citizens then encounter institutions through rules, information, frontline discretion, digital systems, and market structures (Lipsky, 1980). Public institutions can amplify disturbance through opacity, coercion, and burden, or reduce it through sufficiency-oriented, simple, adaptive, and enabling governance. The first relationships are examined statistically; the companion Kalinga evidence illustrates institutional accessibility; and the Daoist concepts organize the normative evaluation of administrative response.

3. Materials and Methods

3.1. Research Design and Unit of Analysis

The study used a quantitative secondary-data design. The unit of analysis was the Philippines quarter from 2018Q1 to 2025Q4. The study period was selected to cover pre-pandemic, pandemic, reopening, and recent inflationary periods while maintaining consistent monthly Google Trends data and official CPI-related inflation data. The final merged data set contained 32 quarters. Models including BSP Consumer Expectations Survey variables used 31 quarters because 2020Q2 was unavailable in the BSP series.

3.2. Data Sources

Headline inflation was taken from the Philippine Statistics Authority (PSA) Statistical Tables on May 2026 CPI for All Income Households, specifically the year-on-year change in the Consumer Price Index for all items (Philippine Statistics Authority, 2026). Monthly inflation values were extracted for January 2018 to December 2025 and converted to quarterly averages.

Search-interest data were exported from Google Trends using the Philippines, Web Search, all categories, and 1 January 2018 to 31 December 2025 filters (Google, 2026). Following prior use of Google Trends as a secondary behavioral data source (Jun et al., 2018), economic-anxiety terms included inflation, presyo, price increase, tipid, and budget. The low-volume term mahal bilihin was retained only for robustness because it produced many zero values. Buy-local terms included buy local, support local, local products, and Philippine products. The low-volume term gawang pinoy was retained only for robustness. Google Trends values marked as "<1" were coded as 0.5 before aggregation.

Consumer confidence variables were taken from the Bangko Sentral ng Pilipinas (BSP) Consumer Expectations Survey (Bangko Sentral ng Pilipinas, 2026). The current-quarter consumer confidence index was reverse-coded so that higher values represented greater economic anxiety. This variable is referred to as the BSP economic anxiety index.

3.3. Variable Construction

The dependent variable was the main buy-local search index, computed as the quarterly mean of Google Trends search interest for buy local, support local, local products, and Philippine products. The primary search-based independent variable was the main economic anxiety search index, computed as the quarterly mean of inflation, presyo, price increase, tipid, and budget. The all-term versions of the indices included sparse terms and were used in robustness models. Headline inflation was measured as the quarterly average of PSA monthly year-on-year headline inflation. The BSP economic anxiety index was calculated by multiplying the BSP current-quarter consumer confidence index by -1.

3.4. Analytical Strategy

The analysis proceeded in four stages. First, descriptive statistics summarized the central tendency and dispersion of the main variables. Second, Pearson correlations examined bivariate associations. Third, ordinary least squares (OLS) regression estimated the baseline relationship between buy-local search interest, inflation, search-based economic anxiety, and BSP-based economic anxiety, following standard applied econometric practice (Wooldridge, 2016). Fourth, robustness checks assessed the stability of the results using alternative index definitions, a time-trend control, one-quarter lagged predictors, exclusion of the 2020Q2-2021Q2 pandemic disruption window, first differences, and Newey-West heteroskedasticity- and autocorrelation-consistent standard errors (Newey & West, 1987).

The baseline model was specified as:

$$BLq = \beta 0 + \beta 1\ Inflationq + \beta 2\ EA\_Searchq + \beta 3\ BSP\_Anxietyq + \varepsilon q$$

where BLq is buy-local search interest, Inflationq is headline inflation, EA_Searchq is the Google Trends-based economic anxiety index, BSP_Anxietyq is the reverse-coded BSP consumer-confidence measure, and epsilonq is the error term. Because the quarterly sample was small, coefficient tables report heteroskedasticity-consistent HC3 robust standard errors (White, 1980; MacKinnon & White, 1985), and the time-series robustness model reports heteroskedasticity- and autocorrelation-consistent standard errors (Newey & West, 1987). All analyses were conducted using Python 3.11 with pandas 2.2.3, numpy 2.3.5, scipy 1.17.0, statsmodels 0.14.6, and matplotlib 3.10.8.

3.5. Complementary Policy-Context Evidence from Kalinga

To connect the national time-series findings with administrative accessibility at the local level, the article incorporates aggregate findings from an independently completed embedded mixed-methods study of women micro-entrepreneurs in Kalinga (Labbutan, 2026). That study selected 373 respondents through stratified random sampling from 5,625 active clients across three Association for Social Advancement Philippines Foundation operational clusters. Its questionnaire reported an Aiken's V coefficient of 0.9515 and a Cronbach's alpha of 0.8919, while focus-group discussions generated anonymized themes concerning access, costs, capability, trust, care responsibilities, and livelihood resilience.

The two data sources were not pooled. The Kalinga study is used as a bounded policy-context case to assess whether the national association between anxiety and local consumption attention is consistent with the practical conditions facing micro-entrepreneurs. Only aggregate results and anonymized thematic findings reported in the companion manuscript are used. The present article does not reproduce its full analysis or treat it as a second test of the national hypotheses.

3.6. Ethical Considerations

The national analysis used publicly available aggregate data and did not involve recruitment, intervention, or identifiable personal information. The present article did not access participant-level records from the Kalinga study or conduct additional participant contact; it used only aggregate statistics and anonymized themes from the completed companion manuscript. No new human-participant data were collected for this article.

4. Results

4.1. Descriptive Statistics

The final quarterly dataset covered 2018Q1 to 2025Q4. Descriptive statistics were computed for 32 quarters, except for the BSP economic anxiety index, which had one missing quarter. Mean quarterly headline inflation was 3.833% (SD = 1.883), with values ranging from 1.367% to 8.300%. The mean Google Trends-based economic anxiety index was 21.792 (SD = 3.916), while the mean buy-local search index was 26.234 (SD = 10.635). The BSP economic anxiety index had a mean of 14.335 (SD = 13.866), indicating substantial variation in consumer outlook conditions.

Table 1. Descriptive statistics for the main variables.

Variable	N	Mean	Std. dev.	Min	Median	Max
Inflation (%)	32	3.833	1.883	1.367	3.700	8.300
EA search index	32	21.792	3.916	15.800	21.167	32.600
BSP anxiety index	31	14.336	13.866	-4.600	12.900	54.500
Buy-local index	32	26.234	10.635	11.583	23.833	52.000

Note. N differs for the BSP economic anxiety index because 2020Q2 was unavailable in the BSP Consumer Expectations Survey data.

Figure 1 shows that inflation, economic anxiety search interest, and buy-local search interest moved unevenly across the study period. The highest inflation quarter was 2023Q1, while the highest economic anxiety and buy-local search-index values occurred in 2022Q1. This pattern suggests that buy-local search interest did not simply mirror inflation but was more closely aligned with anxiety-related search behavior.

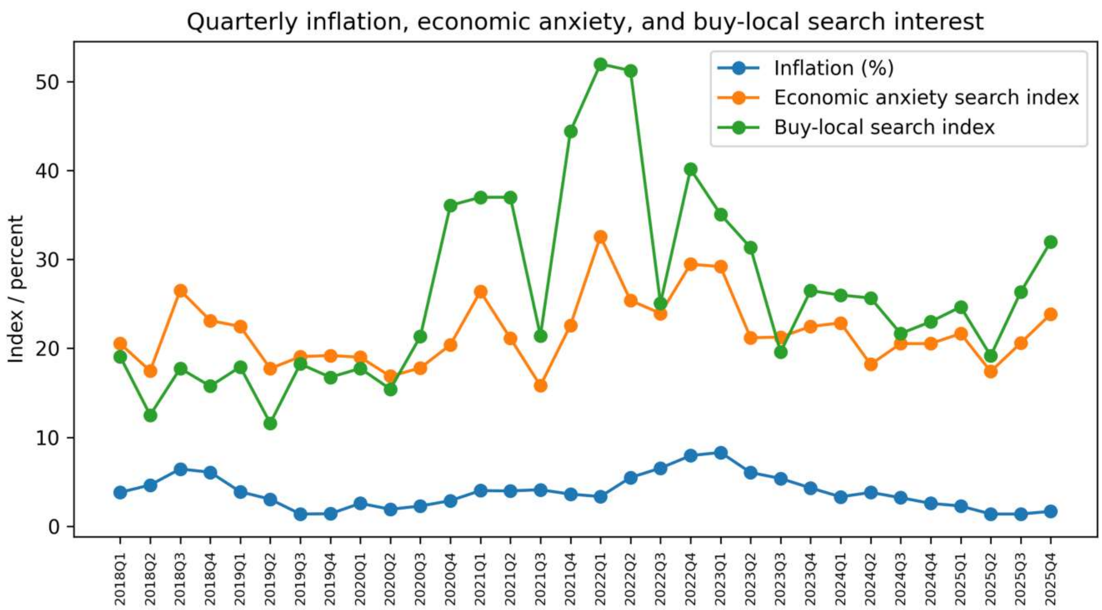

Figure 1. Quarterly trends in inflation, economic anxiety search interest, and buy-local search interest, Philippines, 2018Q1-2025Q4.

4.2. Correlation Analysis

The correlation matrix provided initial evidence of association among inflation, economic anxiety, and buy-local consumption interest. Headline inflation was positively correlated with the Google Trends-based economic anxiety index ($r = 0.561$, $p = 0.0008$), supporting the expectation that inflationary periods were accompanied by higher anxiety-related search interest. However, the direct correlation between inflation and buy-local search interest was positive but not statistically significant ($r = 0.262$, $p = 0.1479$).

The Google Trends-based economic anxiety index was strongly and positively correlated with buy-local search interest ($r = 0.680$, $p < 0.001$). The BSP economic anxiety index was also positively correlated with buy-local search interest, although the association was more moderate ($r = 0.359$, $p = 0.0472$).

Table 2. Pearson correlation matrix for selected variables.

Variable	Inflation	EA search	BSP anxiety	BL search
Inflation	1.000	0.561***	-0.048	0.262
EA search	0.561***	1.000	0.038	0.680***
BSP anxiety	-0.048	0.038	1.000	0.359*
BL search	0.262	0.680***	0.359*	1.000

*Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Pairwise N ranged from 31 to 32 depending on BSP data availability.*

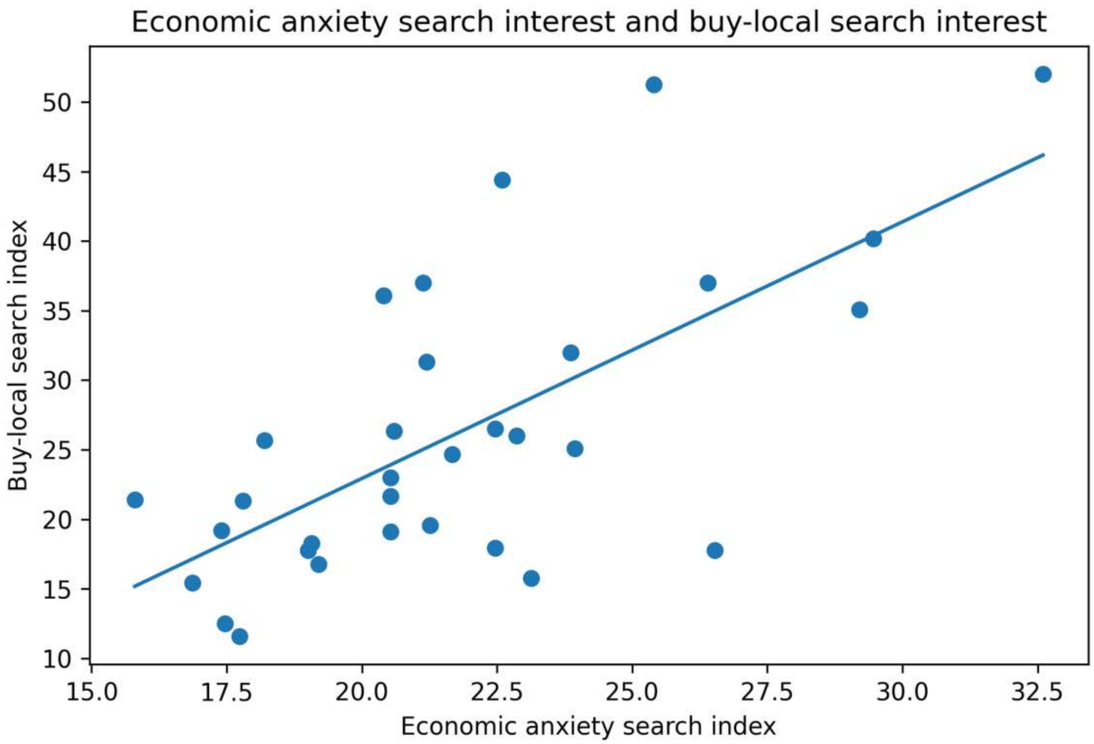

Figure 2. Association between the economic anxiety search index and the buy-local search index.

4.3. Baseline Regression Model

The baseline OLS model estimated buy-local search interest as a function of headline inflation, the Google Trends-based economic anxiety index, and the BSP economic anxiety index. The model used 31 quarterly observations. Overall, the model was statistically significant, $F(3, 27) = 11.936$, $p < 0.001$, and explained 57.012% of the variance in buy-local search interest, with an adjusted R^2 of 52.236%. The Durbin-Watson statistic was 1.502, indicating possible positive serial dependence; this concern was addressed in the robustness checks.

The Google Trends-based economic anxiety index was positively and significantly associated with buy-local search interest ($B = 2.009$, $SE = 0.413$, $p < 0.001$). This relationship remained significant using HC3 robust standard errors (robust $p < 0.001$). The BSP economic anxiety index was also positively associated with buy-local search interest ($B = 0.248$, $SE = 0.097$, $p = 0.016$), and remained significant with HC3 robust standard errors (robust $p = 0.040$). In contrast, headline inflation was not statistically significant once the two anxiety indicators were included ($B = -0.825$, $p = 0.341$; robust $p = 0.261$). Variance inflation factor values were low, indicating no serious multicollinearity.

Table 3. Baseline OLS regression predicting buy-local search interest.

Predictor	B	SE	t	p	HC3 SE	HC3 p	VIF
Intercept	-17.863	7.929	-2.253	0.033	6.387	0.009	
Inflation	-0.825	0.851	-0.970	0.341	0.720	0.262	1.425
EA search	2.009	0.413	4.867	<0.001	0.373	<0.001	1.424
BSP anxiety	0.248	0.097	2.558	0.017	0.115	0.040	1.008

Note. Dependent variable: main buy-local search index. HC3 standard errors are reported as a robustness adjustment. VIF = variance inflation factor.

4.4. Robustness Checks

Robustness models generally supported the baseline finding. When the dependent variable was replaced by the broader all-term buy-local index, the economic anxiety search index remained positive and significant. When the main economic anxiety search index was replaced by the broader all-term economic anxiety index, the positive association also remained significant. Adding a linear time trend did not remove the significance of the search-based anxiety coefficient. Excluding the 2020Q2-2021Q2 pandemic disruption window also left the main search-based anxiety association significant.

The one-quarter lag model produced a more mixed result: lagged search-based economic anxiety was positive but not statistically significant under robust standard errors, while lagged BSP anxiety remained significant. The first-difference model showed that quarter-to-quarter changes in search-based economic anxiety were positively associated with quarter-to-quarter changes in buy-local search interest. The Newey-West HAC version of the baseline model again supported the search-based anxiety and BSP anxiety results. Across these checks, inflation itself remained statistically insignificant after anxiety indicators were included.

Table 4. Robustness model summary.

Model	N	R^2	Adj. R^2	Anxiety B	Anxiety robust p	Inflation robust p	Conclusion
M1 Baseline	31	0.570	0.522	2.009	<0.001	0.261	Supported
M2 Alt. DV	31	0.575	0.528	1.659	<0.001	0.282	Supported
M3 Alt. EA	31	0.574	0.526	2.409	<0.001	0.249	Supported
M4 Trend	31	0.600	0.538	1.894	<0.001	0.469	Supported
M5 Lag	30	0.408	0.340	1.113	0.311	0.648	Not supported
M6 No surge	27	0.576	0.520	1.981	<0.001	0.218	Supported
M7 Diff.	29	0.346	0.267	1.230	0.010	0.576	Supported
M8 HAC	31	0.570	0.522	2.009	<0.001	0.193	Supported

Note. M2 uses an alternative buy-local dependent variable; M3 uses an alternative economic-anxiety index; M4 adds a time trend; M5 uses one-quarter lags; M6 excludes 2020Q2-2021Q2; M7 uses first differences; M8 uses Newey-West HAC standard errors. All models are associational.

4.5. Financial Inclusion and Administrative Accessibility in Kalinga

The companion Kalinga study provides governance-relevant evidence that formal access does not necessarily produce deep or usable inclusion. Overall financial inclusion was moderate (mean = 4.79 on a seven-point scale). Account ownership was the strongest dimension (5.39), whereas insurance utilization was the weakest (4.23). Accessibility of financial institutions had the strongest reported relationship with financial inclusion ($r = 0.67$, $p < 0.001$), and the composite set of inclusion determinants was similarly strong ($r = 0.68$, $p < 0.001$). These patterns indicate that proximity, understandable services, and usable institutional arrangements matter alongside the nominal availability of products (Labbutan, 2026).

The reported outcomes also favored socio-economic stabilization over immediate enterprise expansion. Overall business performance was moderate (4.53), while socio-economic empowerment was stronger (5.30), particularly in household income, education and healthcare access, and quality of life. Qualitative themes identified difficult requirements and collateral, interest and penalty burdens, limited digital confidence, relational fear and distrust, unpaid care responsibilities, and the use of savings and credit primarily for survival and gradual empowerment. For public administration, these findings point to a distinction between formal inclusion and administratively usable inclusion.

Table 5. Governance-relevant findings from the Kalinga financial-inclusion study.

Indicator	Reported result	Public-administration interpretation
Overall financial inclusion	4.79/7; moderate	Basic access exists, but depth and usability remain limited.
Account ownership	5.39; highest dimension	Entry into the formal system is stronger than sustained use of protective products.
Insurance utilization	4.23; lowest dimension	Households remain exposed to shocks despite formal financial contact.
Institutional accessibility	$r = 0.67$, $p < 0.001$	Location, procedures, approachability, and service design are central governance conditions.
Business performance	4.53; moderate	Finance supports continuity and revenue more readily than job creation.
Socio-economic empowerment	5.30; strong	Household welfare, education, healthcare, and resilience are major public-value outcomes.
Qualitative barriers	Requirements, costs, digital capability, trust, care burden	Inclusion is constrained by learning, compliance, psychological, relational, and time costs.

5. Discussion

5.1. Economic Anxiety as an Administrative Signal

The national results show a consistent contemporaneous association between economic anxiety and buy-local search interest. Inflation was positively correlated with search-based anxiety, but it did not remain a significant direct predictor of buy-local attention after search-based and survey-based anxiety indicators were included. The strongest relationship was between active anxiety-related search and local-product search. This suggests that macroeconomic pressure becomes administratively relevant partly through attention, uncertainty, and information seeking rather than through the inflation rate alone.

For public administration, this distinction matters. Inflation statistics describe the economic environment, while anxiety indicators reveal how that environment is being experienced and searched. Digital traces can therefore complement surveys and administrative records as an early-warning signal. However, a signal is not a mandate for manipulation. Public agencies should use it to identify information gaps, service bottlenecks, and emerging affordability concerns, not to micro-target fear or engineer consumer compliance.

A Daoist reading treats anxiety as disturbance in the relation between need, attention, and action. Zhizu directs attention to the question of what is sufficient under constrained conditions, while pu asks whether the choice environment and institutional response can be made more intelligible. The rise in buy-local search interest may represent a search for manageable, familiar, or proximate options, but the data do not reveal whether the motive was affordability, solidarity, identity, quality, or convenience.

5.2. Sufficiency, Locality, and Public Value

Buy-local interest should be interpreted as attention rather than demonstrated purchasing behavior. The study does not measure transactions, product origin, household budgets, or firm revenue. It therefore cannot establish that local consumption increased or that MSMEs benefited financially. The defensible finding is that anxiety-related search and local-product search moved together across quarters.

Within the Daoist framework, locality has conditional rather than automatic value. Local options may support sufficiency when they reduce friction, improve trust, shorten information chains, strengthen livelihood continuity, or provide affordable alternatives. Yet a local product may also be expensive, exclusionary, environmentally harmful, or status-driven. A sufficiency-oriented administration should evaluate usefulness, affordability, reliability, and welfare effects rather than turning geographic origin into a moral command.

This reframes MSME policy around public value. The objective is not merely to increase sales or employment counts, but to strengthen household stability, enterprise continuity, access to essentials, and resilience to shocks. The Kalinga findings reinforce this wider view: women micro-entrepreneurs reported stronger socio-economic empowerment than employment creation, indicating that welfare and capability gains may precede business scaling.

5.3. Wuwei as Enabling Governance under Economic Anxiety

Wuwei sharpens the distinction between enabling government and either coercive activism or passive withdrawal. A non-forcing response does not mean that agencies do nothing. It means they act without creating avoidable secondary disorder through contradictory messages, opaque eligibility, excessive documentation, fragmented referrals, or moral pressure.

Applied to inflation communication, agencies should provide timely and comprehensible price information, explain policy changes in plain language, strengthen protection against deceptive claims, and coordinate messages across offices. Buy-local campaigns should not shame households that purchase non-local goods or imply that patriotism requires paying prices they cannot afford. Public communication should expand informed choice rather than intensify scarcity, guilt, or desire.

Applied to MSME and financial-inclusion programs, wuwei supports reliable infrastructure, streamlined registration, interoperable assistance, accessible grievance mechanisms, and digital systems that reduce rather than relocate administrative work onto citizens. Frontline officers and trusted intermediaries remain important because many users experience formal institutions through relational encounters, not only through policy documents or online portals (Lipsky, 1980).

Digital-trace monitoring should follow the same restraint. Search behavior can identify shifts in concern, but agencies should aggregate data, protect privacy, avoid intrusive profiling, and use insights to correct misinformation or improve service availability. The appropriate administrative response is to remove friction around legitimate needs, not to exploit anxiety as a behavioral lever.

5.4. Financial Inclusion, Administrative Burden, and Women Micro-Entrepreneurs

The Kalinga evidence makes the public-administration problem concrete. Women micro-entrepreneurs were formally connected to accounts and credit, yet participation remained constrained by documentary requirements, collateral, high service costs, repayment pressure, limited digital confidence, fear of formal institutions, and unpaid care work. These are not simply individual deficits. They are interactions between personal capability and institutional design.

The administrative-burden framework helps classify these constraints as learning costs, compliance costs, and psychological costs (Moynihan et al., 2015). The companion study adds relational and temporal dimensions: women preferred familiar officers and cooperatives, depended on family members for digital transactions, and interrupted business activities for care responsibilities. A program may therefore be legally available while remaining practically inaccessible.

A Daoist public-administration response would combine pu, ziran, and wuwei. Pu supports simpler forms, fewer duplicative documents, plain-language product terms, and transparent fees. Ziran supports delivery models adapted to local trust networks, schedules, languages, connectivity, and care burdens. Wuwei supports institutions that enable access through assistance and protection rather than forcing users to navigate complexity alone.

The stronger reported effect of financial inclusion on socio-economic empowerment than on employment creation also has evaluation implications. Public programs should not be judged solely by rapid firm growth or job counts. Household income stability, emergency savings, healthcare and education access, reduced vulnerability, and confidence are legitimate public outcomes. A sufficiency-oriented metric recognizes gradual empowerment as meaningful even when enterprise expansion is modest.

5.5. An Integrated Daoist Public-Administration Model

The combined evidence supports five linked administrative principles. First, sense disturbance ethically by monitoring inflation, confidence, complaints, and aggregate search attention. Second, stabilize around sufficiency by prioritizing affordability, continuity, and household resilience. Third, simplify through pu by reducing unnecessary procedural and informational complexity. Fourth, adapt through ziran by designing with local contexts and trusted intermediaries. Fifth, enable through wuwei by creating conditions for autonomous, proportionate action rather than prescribing symbolic behavior.

These principles are mutually reinforcing. Monitoring without simplification may merely document distress. Simplification without consumer protection may expose users to risk. Local adaptation without public standards may reproduce inequality. Enabling action without sufficiency may favor growth while neglecting household welfare. The framework therefore treats Daoist concepts not as decorative metaphors but as a coherent ethic for balancing action, restraint, context, and public value.

Table 6. Daoist public-administration principles for economic anxiety, MSMEs, and financial inclusion.

Daoist concept	Administrative principle	Illustrative application	Guardrail
Zhizu (sufficiency)	Prioritize adequate welfare and resilience	Affordable essentials, emergency savings, continuity support	Do not reduce success to growth or job counts alone
Pu (simplicity)	Reduce unnecessary complexity	Plain-language rules, fewer documents, transparent fees	Simplicity must not remove due process or protection
Ziran (local adaptation)	Fit implementation to lived conditions	Local languages, trusted intermediaries, flexible delivery	Avoid romanticizing locality or tolerating exclusion
Wuwei (non-forcing action)	Enable rather than coerce	Price information, consumer protection, accessible infrastructure	Wuwei is not withdrawal or neglect
Shaosi guayu (restraint)	Avoid intensifying fear and manufactured desire	Non-shaming campaigns and ethical use of digital signals	Do not suppress legitimate needs or informed choice

5.6. Contribution to Daoist Studies and Public Administration

The contribution to Daoist studies is intentionally interdisciplinary and bounded. The article does not present new philological findings or empirical evidence of Daoist practice. It demonstrates how classical concepts can provide a disciplined normative framework for a contemporary governance problem while remaining distinct from the measured variables. Wuwei is treated as non-forcing responsiveness, ziran as context-sensitive emergence, pu as simplicity before excessive differentiation, and zhizu as a critique of indefinite escalation rather than a rejection of basic needs.

The contribution to public administration is to connect behavioral signals, administrative burden, public value, and local institutional accessibility. Economic anxiety becomes a condition that agencies can recognize without pathologizing citizens; buy-local attention becomes a possible signal rather than a policy command; and financial inclusion becomes a question of usability, trust, and capability rather than account ownership alone. The resulting framework expands the meaning of responsive administration from delivering more interventions to designing interventions that create less avoidable disturbance.

5.7. Limitations and Future Research

The national analysis uses a small quarterly time series with 31 to 32 observations, limiting statistical power and model complexity. Google Trends values are relative indices rather than counts of people, motives, or transactions, and keyword construction affects results. The data are national and cannot show regional differences in inflation experience, digital access, or local markets. The design is observational and should not be interpreted as causal evidence.

The Kalinga study is incorporated only as a companion policy-context case. Its aggregate results were not pooled with the national series, and the present article does not independently re-estimate its models. The local evidence is also specific to women micro-entrepreneurs who were active clients of one microfinance organization. It should therefore inform administrative interpretation rather than support national generalization.

Daoist concepts were not measured. Future research could operationalize sufficiency orientation, perceived forcing, procedural simplicity, trust, administrative burden, and reactions to enabling versus coercive policy messages. Regional transaction data, program-uptake records, complaint data, interviews, and comparative case studies could distinguish attention from behavior and test whether simpler, locally adaptive, and non-coercive administrative designs improve inclusion and resilience.

6. Conclusions

This study reframed inflationary anxiety as a public-administration problem and examined its relationship with buy-local search attention in the Philippines. Search-based and survey-based economic anxiety were positively associated with buy-local interest, while inflation itself was not a significant direct predictor after anxiety indicators were included. The result is best understood as a pattern of attention under disturbance, not as proof that inflation automatically causes local purchasing.

The companion evidence from women micro-entrepreneurs in Kalinga shows why institutional design matters. Financial inclusion was moderate and more strongly connected with household welfare and socio-economic empowerment than with employment creation. Formal access remained constrained by requirements, costs, digital capability, trust, and care responsibilities. These findings shift the administrative question from whether programs exist to whether citizens can understand, reach, trust, and use them.

Daoist philosophy provides the article's governing ethic. Zhizu directs administration toward sufficient welfare and resilience; pu toward procedural simplicity; ziran toward locally adaptive implementation; shaosi guayu toward restraint in fear-based messaging and manufactured desire; and wuwei toward enabling action without coercive overreach. For Philippine public administration, the practical implication is neither aggressive behavioral steering nor governmental withdrawal. It is responsive governance that monitors anxiety ethically, reduces administrative burden, protects consumers, strengthens accessible finance and local supply, and enables households and MSMEs to act with greater autonomy and proportion.

Supplementary Materials

The following supporting files accompany the national analysis: Table S1, merged quarterly dataset; Table S2, Google Trends source data and keyword construction notes; Table S3, PSA quarterly inflation data; Table S4, regression and correlation outputs; Table S5, robustness model outputs; and Code S1, Python code for data cleaning and statistical analysis. The companion Kalinga manuscript and its aggregate supporting materials may be requested from the corresponding author, subject to institutional and participant-protection requirements.

Institutional Review Board Statement

The national component used aggregate publicly available secondary data. The present article did not collect new human-participant data or access identifiable records from the companion Kalinga study; only aggregate statistics and anonymized themes reported in the completed manuscript were incorporated.

Informed Consent Statement

Not applicable to the present secondary analysis; no new participants were recruited or contacted.

Data Availability Statement

The cleaned quarterly dataset, processed source tables, and analysis outputs supporting the national findings are provided in Supplementary Tables S1-S5 and Code S1. The underlying public data are available from the Philippine Statistics Authority, Google Trends, and Bangko Sentral ng Pilipinas sources described in the Materials and Methods section. Aggregate materials from the companion Kalinga study are available from the corresponding author upon reasonable request and subject to applicable institutional restrictions.

Author Contributions

Conceptualization J.M.D.; methodology, K.R.M.D.; validation, J.S.B.; formal analysis, A.L.L.; data curation, AL.L..; writing - original draft, J.M.D.; writing - review and editing, K.R.M.D.; visualization, A.L.L.; project administration, L.M.A. All authors have read and approved the manuscript and agree to be accountable for the work.

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Conflicts of Interest

The authors declare no conflict of interest.

References

Grimmelikhuijsen, S., Jilke, S., Olsen, A. L., & Tummers, L. (2017). Behavioral public administration: Combining insights from public administration and psychology. Public Administration Review, 77(1), 45-56.

Herd, P., & Moynihan, D. P. (2018). Administrative burden: Policymaking by other means. Russell Sage Foundation.

Labbutan, A. L. (2026). Financial inclusion determinants and barriers: Implications for poverty reduction among women micro-entrepreneurs in the Philippines [Unpublished manuscript]. Kalinga State University.

Lipsky, M. (1980). Street-level bureaucracy: Dilemmas of the individual in public services. Russell Sage Foundation.

Moore, M. H. (1995). Creating public value: Strategic management in government. Harvard University Press.

Moynihan, D. P., Herd, P., & Harvey, H. (2015). Administrative burden: Learning, psychological, and compliance costs in citizen-state interactions. Journal of Public Administration Research and Theory, 25(1), 43-69. https://doi.org/10.1093/jopart/muu009.

Ames, R. T., & Hall, D. L. (2003). Daodejing: Making this life significant: A philosophical translation. Ballantine Books.

Girardot, N. J., Miller, J., & Liu, X. (Eds.). (2001). Daoism and ecology: Ways within a cosmic landscape. Harvard University Center for the Study of World Religions.

Kohn, L. (2009). Introducing Daoism. Routledge.

Liu, X. (2001). Non-action (wuwei) and the environment today: A conceptual and applied study of Laozi's philosophy. In N. J. Girardot, J. Miller, & X. Liu (Eds.), Daoism and ecology: Ways within a cosmic landscape (pp. 315-339). Harvard University Center for the Study of World Religions.

Miller, J. (2003). Daoism: A short introduction. Oneworld Publications.
Seok, B. (2021). The emotions in early Chinese philosophy. Stanford Encyclopedia of Philosophy.
Slingerland, E. (2003). Effortless action: Wu-wei as conceptual metaphor and spiritual ideal in early China. Oxford University Press.
Watson, B. (Trans.). (2013). The complete works of Zhuangzi. Columbia University Press.
Achar, C., So, J., Agrawal, N., & Duhachek, A. (2016). What we feel and why we buy: The influence of
emotions on consumer decision-making. Current Opinion in Psychology, 10, 166-170. https://doi.org/10.1016/j.copsyc.2016.01.009
Ayyagari, M., Demirguc-Kunt, A., & Maksimovic, V. (2011). Small vs. young firms across the world:
Contribution to employment, job creation, and growth. World Bank Policy Research Working Paper No. 5631.
Bagozzi, R. P., Gopinath, M., & Nyer, P. U. (1999). The role of emotions in marketing. Journal of the
Academy of Marketing Science, 27(2), 184-206. https://doi.org/10.1177/0092070399272005
Bangko Sentral ng Pilipinas. (2026). Consumer Expectations Survey. Available online:
https://www.bsp.gov.ph/SitePages/MediaAndResearch/ConsumerExpectationSurvey.aspx (accessed on 24 June 2026).
Choi, H., & Varian, H. (2012). Predicting the present with Google Trends. Economic Record, 88(s1), 2-9.
https://doi.org/10.1111/j.1475-4932.2012.00809.x
DellaVigna, S. (2009). Psychology and economics: Evidence from the field. Journal of Economic Literature,
47(2), 315-372. https://doi.org/10.1257/jel.47.2.315
Google. (2026). Google Trends. Available online: https://trends.google.com/trends/ (accessed on 24 June
2026).
Jun, S. P., Yoo, H. S., & Choi, S. (2018). Ten years of research change using Google Trends: From the
perspective of big data utilizations and applications. Technological Forecasting and Social Change, 130, 69-87. https://doi.org/10.1016/j.techfore.2017.11.009
Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015). Emotion and decision making. Annual Review of
Psychology, 66, 799-823. https://doi.org/10.1146/annurev-psych-010213-115043
Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, N. (2001). Risk as feelings. Psychological Bulletin,
127(2), 267-286. https://doi.org/10.1037/0033-2909.127.2.267
MacKinnon, J. G., & White, H. (1985). Some heteroskedasticity-consistent covariance matrix estimators with improved finite sample properties. Journal of Econometrics, 29(3), 305-325. https://doi.org/10.1016/0304-4076(85)90158-7
Newey, W. K., & West, K. D. (1987). A simple, positive semi-definite, heteroskedasticity and autocorrelation
consistent covariance matrix. Econometrica, 55(3), 703-708. https://doi.org/10.2307/1913610
Philippine Statistics Authority. (2026). Statistical tables on May 2026 Consumer Price Index for all income
households (2018=100). Available online: https://psa.gov.ph/price-indices/cpi-ir (accessed on 24 June 2026).
Thaler, R. H. (2016). Behavioral economics: Past, present, and future. American Economic Review, 106(7),
1577-1600. https://doi.org/10.1257/aer.106.7.1577
United Nations General Assembly. (2015). Transforming our world: The 2030 Agenda for Sustainable Development (A/RES/70/1). United Nations. Available online: https://sdgs.un.org/2030agenda (accessed on 24 June 2026).
Vosen, S., & Schmidt, T. (2011). Forecasting private consumption: Survey-based indicators vs. Google
Trends. Journal of Forecasting, 30(6), 565-578. https://doi.org/10.1002/for.1213
White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for

heteroskedasticity. Econometrica, 48(4), 817-838. https://doi.org/10.2307/1912934
Wooldridge, J. M. (2016). Introductory econometrics: A modern approach (6th ed.). Cengage Learning.