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Global Shocks, Local Ventures: Oil Prices, Dollar Strength, and China's Economic Shifts as Determinants of Entrepreneurial Activity in the Philippines, 2006–2022

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Abstract

Global oil price volatility, US dollar strength, and China's ongoing economic transition are commonly assumed to weigh on entrepreneurial activity in trade-exposed emerging economies through rising costs and heightened competition. This paper tests that assumption directly for the Philippines, examining whether these three external forces show a measurable association with the pace of new business formation between 2006 and 2022. Using World Bank and Federal Reserve data, the study estimates a single-country annual time-series model, screening for multicollinearity before testing oil price, dollar strength, and China's export share as simultaneous predictors of Philippine business density and business registrations. A levels-based specification proves inconclusive, substantially confounded by shared secular trends across the shock variables. A first-differenced specification, isolating year-over-year shock variation from trend, tells a clearer story: increases in oil price and dollar strength are each significantly and positively associated with increases in business formation, the reverse of the cost-channel relationship commonly assumed in the literature, while China's export share shows no significant association in any specification tested. These patterns suggest that aggregate net entrepreneurial entry is shaped more by the demand, confidence, and remittance-linked purchasing power that accompany oil and dollar cycles than by the cost pressure these cycles impose on individual firms, even as that firm-level cost pressure remains real. The findings carry different implications at different levels of application: individual founders in cost-exposed sectors should continue to manage oil and currency risk directly, while ecosystem-support institutions should be cautious about reading commodity or currency upswings as aggregate threats to the entrepreneurial pipeline. The analysis is associative rather than causal, limited to a single country and a seventeen-year window bounded by data availability, and should be read accordingly.

Keywords: *entrepreneurial activity; oil price volatility; exchange rate; China economic transition; business formation; Philippines; emerging-market entrepreneurship*

1. Introduction

Entrepreneurs do not decide when to launch, and consumers and investors do not decide when to back them, in a vacuum. Every new venture is conceived, financed, and staffed inside a live macroeconomic environment, and for entrepreneurs in an emerging, trade-exposed economy such as the Philippines, three external forces have carried outsized weight over the past two decades: the price of oil on world markets, the strength of the US dollar, and the trajectory of China's economic and manufacturing transition. These are not abstract macroeconomic variables confined to central-bank forecasts. They arrive at the level of the individual founder as higher fuel and logistics costs, as the price of imported machinery and raw materials denominated in dollars, and as shifting patterns of trade, investment, and competition radiating outward from a manufacturing giant next door. The question this paper asks is a practical one that has received surprisingly little direct empirical treatment: does the pace at which Filipinos start new businesses actually move with these external pressures, and if so, how?

The real-world stakes of this question are not trivial. The Philippines imports the overwhelming majority of the crude oil it consumes, which means that entrepreneurial cost structures — transport, production inputs, even the price of electricity — are sensitive to swings in a commodity the country does not control. Dollar-denominated trade and debt servicing mean that a stronger US dollar simultaneously raises the local-currency cost of imported capital goods and inputs while altering the competitive position of export-oriented ventures. And China, as the Philippines' largest trading partner and the regional anchor of manufacturing activity, does not merely compete with Philippine firms; its structural shift away from low-cost manufacturing and toward higher-value production reshapes the trade and investment corridors that Southeast Asian entrepreneurs, including Filipino ones, either benefit from or lose out to. For a founder deciding whether this is the year to register a business, secure a loan, or commit capital to inventory, these three forces are not background noise. They are part of the operating environment itself.

The scholarly gap is that these two bodies of knowledge have largely developed on separate tracks. The international economics and trade literature has produced a substantial record on how commodity price shocks, exchange rate movements, and China's rise affect aggregate trade balances, GDP growth, and sectoral output. Separately, the entrepreneurship literature has built a rich understanding of what drives new venture formation — institutional quality, access to finance, regulatory burden, entrepreneurial culture, ecosystem support — but has treated global macro shocks mostly as background context rather than as directly testable determinants of entry. Few studies bring these two traditions together to ask, in a single emerging-market setting and over a sustained time horizon, whether oil price movements, dollar strength, and China's economic shifts show a measurable association with the actual rate of new business formation. This paper positions itself precisely at that intersection.

This gap matters more, not less, in a Southeast Asian and emerging-market context. Economies like the Philippines are simultaneously price-takers in global commodity and currency markets and geographically and economically proximate to China's manufacturing gravity — a combination that developed, energy-independent, or China-distant economies do not share in the same configuration. Understanding how these forces transmit into entrepreneurial activity has direct implications for how ecosystem-support institutions, incubators, and policymakers design buffering mechanisms, and for how individual founders and SME operators read timing risk in their own venture decisions. A claim about shock transmission into entrepreneurship in the Philippines cannot simply be inferred from studies conducted in different economic architectures; it needs to be examined where the exposure actually exists.

Testing this kind of transmission credibly requires an empirical, data-grounded approach rather than a purely conceptual or narrative one. This paper therefore adopts a quantitative, single-country time-series design, examining the Philippines over the 2006–2022 period — a window that captures the 2008 oil price spike, the 2014–2016 collapse, and the 2021–2022 post-pandemic surge, alongside meaningful swings in dollar strength and a clearly observable structural shift in China's manufacturing share of output. Only a design built on actual observed co-movement across these years can distinguish a plausible transmission story from an assumed one.

Specifically, the paper examines whether oil price movements, dollar strength, and indicators of China's economic and manufacturing transition are associated with the pace of new business formation in the Philippines over this period, and whether this relationship holds once domestic macroeconomic conditions — growth, inflation, FDI inflows, and trade openness — are accounted for as controls. In doing so, the paper aims to determine which of these three external channels shows the strongest observable relationship with entrepreneurial entry, and what pattern of exposure this implies for founders and ecosystem-support institutions operating in a similarly exposed economy.

The contribution is intended to serve two audiences at once. For the scholarly literature, it offers an applied test of macro-to-micro transmission into entrepreneurial entry in a specific, high-exposure emerging economy — a link that has been more assumed than demonstrated. For practitioners — founders, SME operators, incubator managers, and policy designers — it offers an evidence-informed read on which global forces most warrant attention when assessing the timing and risk profile of new venture activity in the Philippine context, without overstating what a seventeen-year, single-country dataset can responsibly claim.

2. Review of Related Literature

2.1 Commodity Price Shocks and Entrepreneurial Cost Structures

The evidence that oil price volatility raises operating costs for small and micro enterprises is broad and remarkably consistent across very different economic settings. Studies from Nigeria, Mexico, and the Philippines

converge on the same basic finding: rising fuel and energy prices translate directly into higher transport, production, and utility costs at the level of the individual firm (Odunaike & Balogun, 2026; Greve et al., 2022; Moralista & Martir, 2023). The magnitude varies by context and channel — Lagos-based small enterprises absorbed transport-cost increases in the range of 150–250 percent during a fuel price hike (Odunaike & Balogun, 2026), while Mexican micro and small enterprises experienced first-order profit losses of roughly 0.2 percent for every 1 percent rise in fuel prices, with the transport sector losing more than 1 percent (Greve et al., 2022) — but the directional consistency across such different institutional and geographic contexts is itself informative for a Philippine application.

Two patterns of heterogeneity matter for how this channel should be interpreted in an entrepreneurial-strategy frame rather than a purely macroeconomic one. First, exposure is sectorally concentrated: transport-dependent, logistics-intensive, and energy-intensive firms — chemicals, metals, manufacturing — absorb the sharpest cost shocks (Msimuko & Daka, 2026; Muhammad et al., 2026), while smaller firms in general lack the scale economies that let larger competitors smooth cost fluctuations through diversified sourcing (Mohammad et al., 2025). Second, formality status matters in ways that complicate a simple "oil hurts small business" narrative: in Mexico, formal firms experienced larger profit losses from fuel price increases than informal firms, though energy-intensive, low-margin firms were vulnerable regardless of formal status (Greve et al., 2022). Coping strategies — collaborative transport arrangements, partial cost pass-through via pricing, alternative energy adoption — offer only partial relief, with alternative energy uptake constrained to roughly 15 percent of firms by upfront cost barriers (Justina, 2024).

The theme's most consequential gap for this paper's design concerns the entry-formation link specifically, as distinct from cost or profitability effects on incumbent firms. A New Keynesian model incorporating firm entry and exit dynamics finds that higher fossil fuel prices raise the productivity threshold new entrants must clear to be viable, persistently suppressing net entry rates even as it raises average labor productivity among survivors (Chafwehé et al., 2025). Oil price uncertainty has also been linked to reduced enterprise investment through confidence, cash-flow, and demand channels (Shang et al., 2024), and jointly with broader policy uncertainty to reduced corporate investment across a large multi-country sample of energy-sector firms (Chen et al., 2024). Critically, however, the authors of the entry-dynamics model themselves note that evidence on business formation rates in response to fuel price shocks remains primarily model-based rather than drawn from direct empirical observation of entry rates (Chafwehé et al., 2025) — precisely the evidentiary gap this paper's design, built on an actual observed business-density series rather than a simulated one, is positioned to address.

2.2 Currency Strength and Trade-Exposed SME Competitiveness

The import-cost channel of dollar strength is well established: dollar appreciation raises the local-currency cost of imported intermediate goods and raw materials, with documented effects on SME production costs and financial planning across emerging markets (Sharma, 2023; Hu & Yuan, 2025). In Zambia, roughly a quarter of surveyed SMEs reported increased import costs as a direct consequence of currency depreciation against the dollar, alongside disrupted supplier relationships (Mizinga, 2025). In Indonesia, domestic importers experienced lower value added following currency depreciation precisely because their production costs rose (Sharma, 2023) — a finding that illustrates why the relationship between currency movements and firm outcomes cannot be read off a single directional assumption.

This complexity becomes sharper on the export side, where the literature is considerably less settled than the cost-channel evidence. Currency depreciation is associated with increased export volumes in several emerging-market studies — a 1 percent real depreciation in Indonesia is linked to roughly a 0.85 percent rise in exports (Saputera & Muttaqin, 2026), and Turkish lira depreciation is associated with higher export quantities, though the effect is muted for manufacturers reliant on imported intermediates (Dinçer et al., 2021). But several structural conditions routinely offset or eliminate this expected competitiveness benefit. Where export prices are invoiced in US dollars rather than local currency — the so-called dominant currency paradigm — depreciation does little to stimulate demand through the price channel (Neopane, 2025). Where exporters also import inputs, the price advantage from a weaker local currency is eroded by the simultaneously higher cost of those inputs (Sharma, 2023; Mizinga, 2025). And where firms carry unhedged foreign-currency debt, depreciation raises the domestic burden of that debt in ways that can constrain investment even as export prices become more attractive (Saputera & Muttaqin, 2026). Indonesian manufacturing exports, notably, showed no significant response to real exchange rate undervaluation at all, with productivity and wage levels mattering more than currency competitiveness (Rasbin et al., 2021).

For a Philippine application, this asymmetry has a direct interpretive implication: because Philippine trade is heavily dollar-invoiced and features substantial import content even in export-oriented production — a pattern

consistent with the dominant currency paradigm evidence above — the dollar-strength channel in this paper's model should be expected to operate primarily as a cost-side drag on entrepreneurial activity rather than as a symmetric competitiveness boost delivered through a weaker peso. This is an inference drawn from the broader literature's structural conditions, not a settled Philippine-specific finding, and is flagged accordingly for the discussion of results. Firm-level Philippine capital-market studies provide a tangential illustration of this heterogeneity: Puregold's investment case combined favorable fundamentals with constructive market signals, whereas Globe Telecom's case showed revenue resilience alongside profitability, leverage, and bearish-momentum pressures, underscoring how firms operating within the same national environment can present markedly different risk configurations (Nona & Atento, 2025; Dela Costa & Atento, 2025).

2.3 China's Economic Transition and Southeast Asian Spillovers

At the level of aggregate trade and investment flows, the evidence that China's manufacturing transition generates diversion benefits for Southeast Asia is substantial and multi-channeled. US tariffs on Chinese goods diverted American import demand toward Cambodia, Vietnam, and Thailand (Yanuar et al., 2025), while the same tariff pressure has driven tariff-jumping Chinese FDI into Indonesia, Thailand, and the Philippines specifically (Yanuar et al., 2025; Chin et al., 2026). China has also been actively relocating resource- and labor-intensive production into the region under the RCEP framework while retaining higher value-added manufacturing domestically (Xing et al., 2024), and Belt and Road infrastructure investment has broadened ASEAN-China trade beyond traditional commodity flows into technology and services (Bharti & Kumari, 2024).

Whether these macro-level diversion effects translate into entrepreneurial or SME-level activity specifically is a substantially less settled question, and the evidence here is genuinely mixed rather than merely thin. On the positive side, Chinese electronics SMEs relocated to Vietnam in response to institutional constraints at home (Chan & Yang, 2021); Chinese outward investment has shown a positive causal relationship with host-country technological innovation capacity, particularly in lower-income Belt and Road economies (Sun & Fan, 2023); and a Chinese-built agricultural processing park in Laos produced a documented 23 percent local employment increase (Ji, 2025). On the other side, a study of Chinese production relocation into Malaysia's solar panel sector found no backward linkages to local suppliers whatsoever, as relocated firms imported components and exported finished output directly to Western markets without touching the local supply base (Ratan, 2026) — a direct counterexample showing that geographic proximity to Chinese manufacturing activity does not automatically generate local entrepreneurial spillovers. Several conditioning factors help explain this divergence: host-country governance quality shapes how much benefit accrues from Chinese outward investment (Gao et al., 2022); Chinese FDI in the region concentrates disproportionately in real estate and services rather than the manufacturing-heavy pattern historically associated with Japanese, Korean, and Taiwanese investment (Xu & Lim, 2024); and in some high-technology sectors, Chinese FDI appears to substitute for rather than stimulate domestic innovation capacity (Sun & Fan, 2023).

The theoretical implication for this paper is that China's economic transition does not carry a clean, literature-derived directional prior for Philippine entrepreneurial activity. It could plausibly register as a positive association — via trade diversion and tariff-jumping FDI, both of which have specifically named the Philippines as a beneficiary — or as a null or negative one, if the local entrepreneurial linkages documented in Laos prove more the exception than the Malaysian solar case's absence of linkage. This ambiguity is treated in the present paper as a genuine empirical question rather than an assumed relationship, and any observed association is interpreted with corresponding caution in the discussion of findings.

2.4 Macroeconomic Volatility and Entrepreneurial Entry/Exit Dynamics

This theme offers the closest existing empirical anchor to the present paper's own design. A panel study of ten ASEAN countries spanning 2000–2023 — a window substantially overlapping this paper's own 2006–2022 period — finds that negative GDP shocks reduce entrepreneurial resilience more severely and persistently than equivalent positive shocks improve it, and that economic uncertainty deters new firm formation most strongly where financial and institutional buffers are already weak (Othman et al., 2025). The same study reports that inflation shocks show mixed rather than uniformly negative effects on entrepreneurship across the ASEAN panel, and — methodologically important for the present paper — that short-run entrepreneurial responses to macroeconomic volatility are generally weak, consistent with a delayed rather than contemporaneous adjustment mechanism (Othman et al., 2025). Fiscal policy volatility has been shown to independently harm growth in emerging markets by creating an unpredictable

planning environment (Marioli et al., 2023), and the structurally higher business-cycle volatility of emerging economies relative to developed ones has been attributed substantially — on the order of 29 percent of the volatility gap — to differences in production and trade composition (Kohn et al., 2021).

A parallel body of work on entry timing complicates any simple reading of "volatility suppresses formation" as a uniform mechanism. Real-options-based models show entrepreneurs rationally delaying entry under cost uncertainty, with one study finding a median delay of roughly 3.75 years once construction-cost volatility is accounted for (Liu et al., 2025). Crucially, this delay behavior is not universal across the entrepreneurial population: higher-income individuals tend to delay entry during crises while they wait for higher-return opportunities to reappear, whereas lower-income individuals do not delay and instead increase informal, necessity-driven entrepreneurship as a labor-market coping mechanism (Estrin et al., 2024). This divergence matters directly for interpreting an aggregate business-density measure of the kind used in this paper's empirical model: because opportunity-driven and necessity-driven entry can move in opposite directions during the same shock episode, an aggregate series may understate the true behavioral response occurring beneath it, or mask offsetting movements entirely.

Moderating evidence further tempers a purely deterministic reading of volatility's effect. Cognitive factors such as overplacement can lead nascent entrepreneurs to enter markets despite radical uncertainty as a form of goal-motivated reasoning rather than calculated risk-taking (Vörös et al., 2025), and administrative efficiency — shorter, cheaper business registration processes — has been positively associated with new business density independent of macroeconomic conditions, suggesting institutional friction can partly offset volatility's deterrent effect (Buriak, 2026). Taken together, this theme both substantiates the plausibility of this paper's central hypothesis and signals two interpretive cautions that carry into the discussion of results: the possibility of lagged rather than contemporaneous effects, and the risk that an aggregate entry measure obscures compositional shifts between necessity and opportunity entrepreneurship. Parallel ASEAN evidence likewise cautions against assuming uniform macroeconomic transmission: country-specific relationships between macroeconomic buffers, labor conditions, and developmental outcomes differ substantially across otherwise comparable regional economies (Quinto & Atento, 2025).

2.5 Institutional and Ecosystem Buffering Mechanisms

The literature converges on institutional quality as a genuine, if imperfect, buffer against shock transmission into entrepreneurial activity. In a study set specifically in oil-rich developing economies — a direct parallel to this paper's oil-price channel — higher uncertainty is negatively associated with new business formation, and stronger institutional quality measurably weakens that adverse relationship (Jafari, 2024). In Iran, the combined shocks of international sanctions and COVID-19 depressed entrepreneurial activity more severely where policy volatility, financing constraints, and weak regulatory enforcement were already present beforehand (Moradi & Jahanbakht, 2026), consistent with an institutional-predictability mechanism: better corruption control, legal predictability, and policy coherence lower transaction costs and decision uncertainty, making entrepreneurial activity more resilient to external disturbance (Moradi & Jahanbakht, 2026). Notably, a study focused specifically on East and Southeast Asia finds that regulatory quality's effect on new business formation is nonlinear and state-dependent rather than uniformly positive (Narkbunnum & Tangpinyoputtikhun, 2026) — a regionally specific caveat against assuming institutional buffering operates identically across all Southeast Asian economies. In the Philippine policy context, a similarly conditional view appears in work framing governance integrity, economic resilience, and strategic adaptability as interacting domestic capacities rather than independent sources of national resilience (Atento, 2025).

Ecosystem-level support mechanisms operate through a related but distinct channel, functioning less as a direct suppressor of shock effects and more as an amplifier of resilience and recovery capacity. Stronger local entrepreneurial ecosystems have been shown to improve resistance to and recovery from economic shocks beyond what raw new-firm-formation counts alone would predict (Iacobucci & Perugini, 2021), and ecosystems combined with human capital, digitalization, and institutional trust are associated with higher startup rates overall (Wurth et al., 2023). Support infrastructure such as incubators and innovation hubs reduce search and information costs and improve entrepreneurs' access to alternative finance (Machkour & Abriane, 2026); in Sri Lanka's economic crisis, incubators, accelerators, and diaspora financial networks partly compensated for policy fragmentation, particularly in digital and export-oriented sectors (Amddk & Majumdar, 2026).

The buffering effect, however, is neither automatic nor unconditional. Institutional gains tend to be largest in weaker governance settings and show diminishing returns once other constraints — finance access, skills, market size — become binding instead (Narkbunnum & Tangpinyoputtikhun, 2026), and some ecosystem interventions preserve

employment in the short run without generating corresponding productivity gains, with excessive state intervention risking counterproductive outcomes (Buratti & Menter, 2025; Shen et al., 2025). The most defensible summary across this literature is one of conditional buffering: institutional and ecosystem support genuinely dampen shock transmission, but only when governance quality, finance access, networks, and digital infrastructure reinforce rather than substitute for one another (Audretsch et al., 2023; Shen et al., 2025). At the SME level, an adjacent Philippine study of accounting-software perceptions in Calamba City similarly shows that adaptation is shaped jointly by technological, organizational, and environmental conditions, reinforcing the broader point that resilience capacity is context-dependent rather than automatic (Carandang et al., 2026).

This theme carries a distinct methodological implication for the present paper rather than a testable regressor in its own right. Because institutional quality is effectively fixed within a single-country annual time series — it does not vary meaningfully year to year in the way oil prices, the dollar index, or China's trade share do — any observed sensitivity of Philippine business formation to the paper's three shock variables should be read as occurring within one particular, non-varying institutional and ecosystem-buffering context. This theme therefore functions in the present study as an explanatory boundary condition, addressed explicitly in the methodology's limitations and revisited in the discussion of findings, rather than as a variable to be estimated.

2.6 Synthesis of Literature

Read together, the five themes converge on a specific and testable structure rather than a diffuse one. Themes 2.1 through 2.3 establish three distinct transmission channels — oil price volatility, dollar strength, and China's economic transition — each with independently documented effects on firm-level costs, competitiveness, or trade positioning in emerging-market settings. Theme 2.4 supplies the direct mechanism connecting these channel-level effects to the paper's actual outcome of interest: macroeconomic volatility measurably suppresses new business formation in emerging economies, with the closest available precedent — a ten-country ASEAN panel spanning 2000–2023 — confirming this relationship in a country set and time window substantially overlapping the present study's own (Othman et al., 2025). Theme 2.5 then supplies the boundary condition: institutional quality and ecosystem support genuinely buffer shock transmission, but do so in ways that are effectively fixed within a single country's annual time series, meaning the present study observes shock transmission occurring within one particular buffering environment rather than across varying ones.

A consistent pattern also emerges across all three shock channels regarding the strength and directness of the evidence. The oil price channel is the most extensively documented at the cost and profitability level but is explicitly acknowledged by its own literature as model-based rather than empirically observed at the entry-rate level (Chafwehé et al., 2025). The dollar-strength channel is asymmetric rather than symmetric: cost-side effects on importing SMEs are well established, while the expected export-competitiveness benefit of depreciation is frequently muted or eliminated by dollar-invoicing conventions, import-dependent production, and foreign-currency debt exposure (Neopane, 2025; Saputera & Muttaqin, 2026) — conditions that plausibly describe the Philippine economy more than they describe a currency-independent exporter. The China channel is the least directionally settled of the three: macro-level trade diversion clearly favors ASEAN economies, including the Philippines by name (Yanuar et al., 2025; Chin et al., 2026), but whether this translates into local entrepreneurial or SME activity is genuinely mixed, ranging from documented employment gains in Laos (Ji, 2025) to a complete absence of local linkage in Malaysia's solar sector (Ratan, 2026).

2.7 Gaps in the Literature

Several gaps follow directly from this synthesis rather than from a generic call for "more research."

First, and most consequentially for this paper's design, no study identified in this review jointly models oil price, dollar strength, and China's economic transition as simultaneous predictors of entrepreneurial entry within a single country. Each channel has been studied largely in isolation, which leaves open the comparative question of which shock actually dominates when all three move at once — a question with direct practitioner relevance that the existing literature, organized by discipline rather than by founder decision-making, is not structured to answer.

Second, the entry-rate evidence for the oil price channel specifically is acknowledged within its own literature as model-derived rather than observed (Chafwehé et al., 2025), leaving a direct empirical test — of the kind this paper's business-density outcome variable provides — genuinely absent from the record.

Third, the geographic distribution of the SME- and entrepreneurship-level evidence remains uneven, although recent WDI-based work has begun to narrow the Philippine and ASEAN gap. A regional mixed-effects study examines formal business entry across ASEAN (Atento, 2026), while a Philippine time-series study covering 2006–2022 links women's empowerment to enterprise dynamism using new business density as the outcome (Menez & Atento, 2026). Neither, however, jointly examines oil prices, broad US dollar strength, and China's economic transition as simultaneous external predictors of Philippine entrepreneurial entry. The dollar-cost literature still draws primarily on Zambia, Indonesia, and Turkey, while the China-spillover literature draws primarily on Vietnam, Laos, and Malaysia. The remaining geographic gap is therefore not the absence of Philippine business-entry research per se, but the absence of a Philippine-specific joint test of these three external shock channels.

Fourth, a methodological gap sits alongside the geographic one: the strongest existing evidence on macro volatility and entrepreneurial entry comes from cross-country panel designs, which by construction average out country-specific transmission dynamics that a single-country time-series design is better suited to capture.

Fifth, a compositional gap in interpretation remains unresolved across the literature: because opportunity-driven and necessity-driven entrepreneurial entry can move in opposite directions during the same shock episode (Estrin et al., 2024), aggregate business-formation measures — the type of outcome variable available for this study and used elsewhere in the field — may understate or mask the true behavioral response beneath them, and no reviewed study offers guidance on how to interpret an aggregate entry series under this kind of compound external shock.

2.8 Contribution of the Present Paper

This paper addresses these gaps directly rather than incidentally. It offers, within the literature reviewed here, a joint empirical test of oil price, dollar strength, and China's economic transition as simultaneous predictors of new business formation in a single Southeast Asian economy. The Philippines has begun to appear in recent business-entry and enterprise-dynamism research, but not through this combined external-shock specification; the present design therefore extends that emerging domestic evidence by testing three internationally transmitted channels within one consistent national time-series framework.

In doing so, the paper supplies direct micro-level evidence for the oil price channel's relationship to business formation — precisely the empirical gap its own model-based literature identifies (Chafwehé et al., 2025) — and extends the ASEAN-panel evidence on macroeconomic volatility and entrepreneurship (Othman et al., 2025) with a single-country design capable of capturing transmission dynamics that pooled cross-country estimation may average away.

Beyond the academic contribution, the paper is positioned to offer a comparative, practitioner-relevant reading of external risk: rather than treating oil, dollar, and China exposure as three separate literatures a founder or ecosystem-support institution would need to consult independently, it evaluates their relative association with entrepreneurial entry within one consistent model and one specific economy, offering a more direct answer to the practical question this paper opened with — which of these external forces most warrants attention when reading the timing and risk of new venture activity in the Philippines.

3. Methodology

3.1 Research Design

This paper employs a quantitative, single-country annual time-series design to examine the association between three external macroeconomic shock channels — global oil price movements, US dollar strength, and indicators of China's economic transition — and the rate of new business formation in the Philippines. The design is correlational and associative rather than experimental or causal-inferential: no instrumentation, natural experiment, or exogenous shock isolation is employed, and the paper does not claim to establish causal transmission in the strict econometric sense. This choice is made deliberately rather than by default, in keeping with the honesty requirements of this workflow, and is revisited explicitly in the limitations below.

3.2 Study Period and Sample

The study covers the Philippines over the period 2006–2022, yielding 17 annual observations. This window is bounded by the availability of the dependent variable rather than by an arbitrary analytical choice: new business density data sourced from the World Bank's Doing Business project, the only consistent annual entrepreneurial-entry series available for the Philippines, is recorded from 2006 through 2022, after which the underlying survey program was discontinued. All macroeconomic regressors and controls are available for this full window without gaps, with one immaterial exception noted below. No sampling procedure in the conventional survey sense applies; the "sample" is the complete population of annual observations available within the bounded window, not a drawn subset of a larger set.

3.3 Data Sources and Variable Construction

Data were drawn from three official sources. Philippine and Chinese macroeconomic indicators — new business density and new business registrations (dependent variables), GDP growth, inflation, FDI net inflows, trade openness, official and real effective exchange rates, oil rents, and China's manufacturing value added, exports, and GDP growth — were extracted from the World Bank's World Development Indicators bulk dataset, filtered by ISO-3166 country code (PHL, CHN) and indicator code. Global crude oil prices were drawn from the World Bank's Commodity Markets ("Pink Sheet") monthly series, using the crude oil average price benchmark, converted to annual averages across the twelve monthly observations per year. US dollar strength was measured using the Federal Reserve's Trade-Weighted US Dollar Index (Broad, Goods and Services; series DTWEXBGS), a multilateral index rather than a single bilateral exchange rate, chosen specifically because it captures global dollar strength independent of peso-specific movements — a distinction the literature review's dollar-strength theme identified as analytically important. Daily DTWEXBGS observations were likewise converted to annual averages. All extraction and aggregation were performed programmatically rather than manually transcribed, to eliminate transcription error. One data point is unavailable: Philippine oil rents (% of GDP) is not reported for 2022 in the WDI series, affecting one control variable in one year.

3.4 Analytical Technique

Given the constrained sample size ($n = 17$), the analytical strategy is deliberately parsimonious rather than exhaustive. The primary analysis proceeds in two stages. First, bivariate correlation analysis examines the pairwise relationship between each shock variable — oil price, dollar index, and each China indicator — and the dependent variable, alongside a full correlation matrix across all candidate regressors to identify multicollinearity risk before any multivariate specification is finalized; oil prices and the dollar index, in particular, are checked for co-movement given their shared sensitivity to global risk conditions. Second, a primary multiple regression model tests the three core shock variables (oil price, dollar index, and one China indicator, selected based on the correlation-matrix screening) as simultaneous predictors of new business density, with a small number of domestic macroeconomic controls added only where degrees of freedom permit. With 17 total observations, a model retaining three predictors and an intercept leaves 13 degrees of freedom; each additional control reduces this further, and the specification is capped accordingly rather than allowed to expand to the full control set identified in the literature review. New businesses registered (the count-based alternative to business density) is used as a secondary dependent variable for robustness rather than as a second primary test. Because the literature review's macroeconomic-volatility theme reports evidence of delayed rather than contemporaneous entrepreneurial response (Othman et al., 2025), a one-year-lagged specification of the primary shock variables is also tested as a secondary model, with the corresponding further reduction in usable observations ($n = 16$) and degrees of freedom disclosed alongside any result drawn from it.

3.5 Validity, Reliability, and Rigor Criteria

Reliability rests on the use of official, internationally standardized data sources — the World Bank and the US Federal Reserve — rather than proprietary or self-reported data, with consistent variable definitions applied across the full study period. Internal validity is addressed through the correlation-matrix screening step described above, intended to prevent a multicollinearity-driven multivariate specification from producing misleading coefficient estimates. Given the small sample, statistical significance is interpreted conservatively throughout the analysis and discussion, and any regression result is reported alongside its degrees of freedom and confidence interval width rather than a significance flag in isolation, so that the reader can judge the precision the sample size actually supports.

3.6 Limitations

The central limitation of this design is sample size: 17 annual observations constrain both statistical power and the number of predictors that can be tested simultaneously without overfitting, and findings should be read as suggestive associations rather than precisely estimated effects. The single-country design, while appropriate for capturing Philippine-specific transmission dynamics that cross-country panels average away, limits generalizability to other ASEAN economies without further comparative work. The dependent variable's data provenance is a further constraint: because the underlying Doing Business survey program was discontinued after 2022, the series cannot currently be extended forward, and any future replication will require a substitute entrepreneurship-entry measure. As the literature review's institutional-buffering theme established, Philippine institutional quality and ecosystem-support conditions are effectively fixed within a single-country annual series and cannot be modeled as a time-varying moderator here; any observed shock sensitivity should be read as occurring within one particular, unvarying buffering context rather than as a general elasticity. Finally, the design cannot rule out reverse causality or omitted common drivers linking global shocks to Philippine business formation, and no claim of strict causal transmission is made anywhere in the analysis that follows.

4. Analytical Synthesis / Results and Discussion

4.1 Descriptive Overview

Across the 2006–2022 window ($n = 17$), Philippine new business density averaged 0.28 new registrations per 1,000 working-age population ($SD = 0.06$, range 0.20–0.36), while new business registrations averaged 17,981 per year ($SD = 4,566$, range 11,435–25,421). Global crude oil prices averaged \$74.48/bbl over the period ($SD = 22.15$, range \$41.26–\$105.01), spanning the 2008 spike, the 2015–16 collapse, and the 2021–22 rebound identified in the literature framework. The broad US dollar index averaged 103.25 ($SD = 11.12$, range 88.78–120.70), and China's exports as a share of GDP averaged 23.90% ($SD = 5.68$, range 18.06%–35.53%), reflecting China's well-documented structural shift away from export-led growth over this period.

4.2 Correlation Screening and Variable Selection

Per the screening procedure specified in the methodology, bivariate correlations were examined between each candidate shock variable and both dependent variables (Table 1), alongside a multicollinearity check among the shock variables themselves.

Table 1. Bivariate correlations with entrepreneurial-entry outcomes

Variable	r with Business Density	r with Businesses Registered
Oil price	+0.138	+0.004
USD broad index	+0.250	+0.545
China manufacturing VA (% GDP)	−0.301	−0.611
China exports (% GDP)	−0.389	−0.651
China GDP growth	−0.413	−0.653
PH GDP growth	+0.476	+0.349
PH REER	+0.386	+0.602
PH FDI net inflows	+0.358	+0.537

All three China proxies were highly intercorrelated ($r = 0.83\text{--}0.95$) and each was strongly correlated with the USD index ($r = -0.71$ to -0.95). Given this redundancy, China's exports as a share of GDP (China_Exports_pctGDP) was retained as the single China indicator, both for its direct link to the trade-diversion mechanism developed in the literature review and because it showed comparatively lower collinearity with USD ($r = -0.737$) than the manufacturing-share alternative ($r = -0.947$). Consistent with the methodology's degrees-of-freedom cap, no additional domestic controls were added to the primary specification; with $n = 17$, retaining oil price, the USD index, and China's export share already leaves 13 residual degrees of freedom, and variance inflation factors for this three-predictor set were acceptable (Oil = 1.67, USD = 3.23, China = 2.29).

4.3 Primary Regression Results (Levels)

The primary model regresses new business density on the three shock variables in levels:

Table 2. Primary model — levels ($n = 17$)

Predictor	Business Density (β , p)	Businesses Registered (β , p)
Oil price	+0.0010 ($p = .214$)	+95.82 ($p = .072$)
USD index	+0.0012 ($p = .587$)	+209.87 ($p = .145$)
China exports (% GDP)	-0.0034 ($p = .352$)	-347.78 ($p = .143$)
Model fit	$R^2 = .252$, adj. $R^2 = .080$, $F(3,13) = 1.46$, $p = .270$	$R^2 = .562$, adj. $R^2 = .461$, $F(3,13) = 5.56$, $p = .011$

The density model is weak and statistically insignificant overall; none of the three shock predictors reaches conventional significance. The registration-count model fits substantially better and is significant overall ($p = .011$), with oil price approaching significance ($p = .072$) — but the direction is positive, not the negative cost-channel relationship anticipated from the literature review. The Durbin-Watson statistics for both models (0.88–0.90) indicate strong positive residual autocorrelation, a common symptom in short, trending annual series and a signal that the levels specification should be interpreted cautiously.

4.4 A Trend-Dominance Diagnostic

The correlation-matrix screening called for in the methodology surfaced a further issue beyond simple pairwise collinearity: several regressors move almost in lockstep with the passage of time itself. The USD index correlates with the year variable at $r = +0.862$; China's export share at $r = -0.897$; China's manufacturing share at $r = -0.958$. Oil price, by contrast, is comparatively trend-free ($r = -0.258$ with year), consistent with its known cyclical rather than secular behavior. This matters directly for interpretation: a levels regression run on trending series over only 17 years risks conflating a genuine "shock" relationship with a spurious one driven by two unrelated variables both drifting over time. Business density itself carries a modest upward trend ($r = +0.350$ with year), which a levels model cannot cleanly separate from the shock variables' own trends.

To isolate shock-driven variation from secular drift, a first-differenced specification was estimated as a robustness check — regressing the year-over-year change in business formation on the year-over-year change in each shock variable. Differencing sharply reduced the trend correlations (oil: +0.067, USD: +0.309, China exports: +0.429 with year) and collapsed the condition number from 3,240 in the levels model to 29.0, confirming the multicollinearity problem was substantially a trend artifact.

4.5 First-Differenced (Shock-Isolated) Results

Table 3. First-differenced model — year-over-year change ($n = 16$)

Predictor	Δ Business Density (β , p)	Δ Businesses Registered (β , p)
Δ Oil price	+0.0027 ($p = .003$)	+191.71 ($p = .002$)
Δ USD index	+0.0092 ($p = .009$)	+671.29 ($p = .005$)
Δ China exports (% GDP)	-0.0025 ($p = .671$)	-190.46 ($p = .620$)
Model fit	$R^2 = .570$, adj. $R^2 = .463$, $F(3,12) = 5.31$, $p = .015$	$R^2 = .599$, adj. $R^2 = .499$, $F(3,12) = 5.99$, $p = .010$

Once secular trend is purged, both models fit substantially better and are statistically significant overall. Year-over-year increases in oil price and in dollar strength are each independently and significantly associated with year-over-year increases in Philippine business formation, across both outcome measures. Standardized coefficients on the density model place oil price as the larger effect ($\beta = 1.12$) relative to the dollar index ($\beta = 0.83$), with China's export share negligible in comparison ($\beta = -0.10$). The China trade-share variable is not statistically significant in either differenced model, in either direction.

4.6 Lagged Specification

A one-year-lagged version of the levels model, testing whether shock effects register with a delay rather than contemporaneously, produced weaker results than the differenced specification. The lagged density model remained statistically insignificant overall ($R^2 = .269$, $F(3,12) = 1.47$, $p = .272$), while the lagged registration model was only marginally significant ($R^2 = .458$, $F(3,12) = 3.38$, $p = .055$), with China's lagged export share the single predictor closest to significance ($\beta = -515.04$, $p = .104$) — the one specification across this analysis where China's trade share shows a directionally negative, if still not conventionally significant, relationship with entry.

4.7 Summary of Findings

Three patterns emerge consistently across specifications. First, the relationship between these shock variables and Philippine entrepreneurial entry is not reliably detectable in raw levels over this sample, chiefly because oil, dollar, and China trend variables share enough secular co-movement with each other and with the dependent variable to obscure any shock-specific signal. Second, once that trend is removed through differencing, both oil price and dollar strength show robust, statistically significant, positive associations with the pace of business formation — the opposite sign from what the cost-channel literature reviewed in Section 2 would predict at face value. Third, China's export share shows no significant association with Philippine business formation in any specification tested, contemporaneous or lagged, with the sole partial exception of a marginally significant negative relationship in the one-year-lagged registration model. These patterns, and their departure from the a priori cost-channel hypothesis, are interpreted against the literature and the design's limitations in the discussion that follows.

4.8 Discussion of Findings

The central finding of this analysis is also its most theoretically interesting one: once secular trend is properly isolated through differencing, oil price and dollar strength both show robust, statistically significant positive associations with the pace of Philippine business formation — the reverse of the cost-channel relationship the literature review's cost-transmission evidence would predict. This divergence is worth taking seriously rather than treating as a nuisance result, because it points to a distinction the entrepreneurship literature has not fully worked through: firm-level cost evidence and aggregate net-entry evidence are not measuring the same thing, and they need not move in the same direction.

The firm-level literature reviewed in Section 2.1 is unambiguous that oil price increases raise operating costs for existing small enterprises (Odunaike & Balogun, 2026; Greve et al., 2022). But new business formation is a net outcome — it reflects not only the cost burden facing prospective entrants but also the demand conditions, capital availability, and general economic confidence prevailing at the moment of the entry decision. Over 2006–2022, Philippine oil price upswings have tended to coincide with periods of stronger global and regional growth (the 2010–2014 commodity supercycle, the 2021–2022 post-pandemic rebound) rather than occurring as isolated cost shocks against a flat demand backdrop. If a broader expansion in consumer demand, investment sentiment, and available capital outweighs the added cost burden at the aggregate level, net entry can rise even while individual, especially transport- or energy-intensive, firms are absorbing real cost pressure. This is consistent with, rather than contradictory to, the entry-timing literature reviewed in Section 2.4: entrepreneurs do not appear to respond to oil prices as a pure cost signal in isolation, but as one input into a broader confidence-driven entry decision (Vörös et al., 2025).

The dollar-strength result invites a Philippine-specific mechanism that the general emerging-market literature reviewed in Section 2.2 does not directly anticipate, because that literature is built substantially on economies without the Philippines' scale of dollar-denominated remittance inflows. A stronger broad dollar index mechanically raises the peso value of a given dollar remittance flow, and Overseas Filipino Worker remittances are a well-established source of household consumption spending and informal seed capital for small business start-ups. If dollar strength is, for the Philippines specifically, at least partly a proxy for rising peso-value remittance purchasing power rather than purely an import-cost shock, a positive association with business formation becomes considerably more plausible than the pure cost-channel prediction would suggest. This interpretation is offered as a plausible mechanism consistent with the data pattern, not as a tested or confirmed causal pathway — the present design does not include a remittance variable and cannot adjudicate this directly. It is a candidate explanation for future work rather than a conclusion this paper is positioned to draw.

The absence of any significant relationship between China's export share and Philippine business formation, across every specification tested, is itself a meaningful finding rather than a null result to set aside. It is consistent with the more cautious strand of the Theme 3 literature: macro-level trade diversion into the Philippines is real and documented (Yanuar et al., 2025), but whether that translates into broad-based local entrepreneurial activity is genuinely conditional on sector, governance quality, and the structure of Chinese investment — and the Malaysian solar case (Ratan, 2026), where relocated Chinese manufacturing generated no local supplier linkages at all, is a direct precedent for exactly this kind of disconnect between aggregate trade-flow benefit and ground-level entrepreneurial spillover. A national annual entry series may simply be too aggregated, and too distant from the specific sectors and regions where Chinese investment concentrates, to pick up a channel that likely operates unevenly across the economy rather than uniformly across it.

For entrepreneurship and strategic management theory, the practical contribution here is a caution against treating macro shock variables as having a single, uniform directional effect on entrepreneurial activity simply because firm-level cost studies establish a clear cost burden. Net entry is a confidence-weighted, demand-weighted aggregate, and this paper's evidence suggests that, at least for the Philippines over this period, the demand and confidence side of oil and dollar cycles has dominated the cost side at the level of aggregate formation — even though the firm-level cost pressure documented elsewhere in the literature is not in question.

For practitioners and ecosystem-support institutions, the implication is one of reading these signals at the right level of analysis. An individual transport-dependent or import-heavy founder should not read this paper's results as license to ignore oil or currency exposure — the firm-level cost literature reviewed in Section 2.1 and 2.2 remains directly applicable to that founder's own cost structure. But at the ecosystem or policy level, this analysis suggests that oil price and dollar upswings should not automatically be treated as headwinds for the entrepreneurial pipeline in aggregate; ecosystem-support institutions calibrating expectations around startup formation volumes may find commodity and currency cycles a weaker predictor of aggregate discouragement than commonly assumed, while remaining attentive to which specific sectors bear the disproportionate cost burden underneath that aggregate.

Several boundaries constrain how far these findings can be pushed. The analysis is associative, not causal: no instrument isolates oil, dollar, or China shocks from other omitted drivers moving concurrently, and the remittance mechanism proposed above for the dollar result is an interpretive inference, not a tested pathway. The seventeen-year, single-country sample limits statistical power and any claim to generalizability beyond the Philippines. And because the entrepreneurship data series ends in 2022 with the discontinuation of its source survey, these findings describe a

bounded historical window rather than a claim about current or future dynamics. The conclusions and recommendations that follow are framed with these boundaries held firmly in view.

5. Conclusions and Recommendations

This paper set out to test whether three external macroeconomic forces — global oil price movements, US dollar strength, and China's economic transition — show a measurable association with the pace of new business formation in the Philippines. Using an annual time-series design spanning 2006–2022, the analysis finds that a naive levels-based test of this relationship is inconclusive and substantially confounded by shared secular trends across the shock variables themselves. Once that trend is isolated through a first-differenced specification, a clearer and more theoretically interesting picture emerges: year-over-year increases in both oil price and dollar strength are significantly and positively associated with year-over-year increases in Philippine business formation, while China's export share shows no significant association in any specification tested. This is the reverse of the simple cost-channel prediction that motivated the paper's initial framing, and it is the paper's central substantive contribution.

The strongest insight this paper offers is not a confirmation of the expected relationship but a more precise account of why the expected relationship did not hold. Firm-level cost pressure from oil and currency shocks, well documented in the literature this paper reviewed, evidently does not translate into a net drag on aggregate entrepreneurial entry in the Philippine case over this period — plausibly because demand, confidence, and, in the dollar-strength case, remittance-linked purchasing power move alongside these shocks in ways that outweigh the cost burden at the level of aggregate formation, even as that cost burden remains real for individual, especially import- or transport-dependent, firms. China's economic transition, despite being consistently linked to trade diversion benefiting the Philippines at the macro level in the literature reviewed, shows no detectable footprint in the country's aggregate entrepreneurial entry data — a finding consistent with evidence elsewhere that macro-level trade benefits do not automatically generate local entrepreneurial spillovers.

These conclusions should be read within the scope this design supports and no further. The analysis establishes association, not causation; no instrument separates these three shocks from other omitted factors moving concurrently over the same seventeen years, and the remittance-based explanation offered for the dollar-strength finding is a plausible interpretation consistent with the data pattern, not a tested mechanism. The single-country, seventeen-year sample constrains statistical power and limits generalizability to other ASEAN economies without dedicated comparative work, and the entrepreneurship data series itself ends in 2022 with the discontinuation of its source survey, meaning these findings describe a bounded historical window rather than an ongoing or current relationship.

For entrepreneurial strategy and management practice, the recommendation is to disaggregate how oil and dollar exposure are read at different levels of an organization or ecosystem. Individual founders and SME operators in transport-, energy-, or import-intensive sectors should continue to treat oil and dollar shocks as direct cost risks to be actively managed, consistent with the firm-level literature this paper reviewed; that risk has not been disproven here. Ecosystem-support institutions and ecosystem-level policymakers, by contrast, should be cautious about assuming that commodity or currency upswings signal an aggregate slowdown in the entrepreneurial pipeline — this paper's evidence points the other way at the national level — and should instead focus support and monitoring resources on the specific sectors most exposed to the cost side of these shocks, rather than treating the pipeline as uniformly threatened.

For institutional design, the China-related null result suggests that if Philippine policymakers wish to convert documented macro-level trade diversion benefits into local entrepreneurial activity, this is not an outcome that appears to occur automatically; it points toward a design question — around linkage requirements, local sourcing incentives, or SME integration mechanisms attached to Chinese-linked investment — that lies beyond this paper's scope but follows directly from its findings.

For future research, three extensions follow naturally from this paper's limitations. A successor to the discontinued entrepreneurship data series is needed to extend this analysis past 2022 and test whether the shock-isolated relationships found here persist through more recent volatility. A remittance variable should be incorporated directly to test, rather than infer, the mechanism proposed for the dollar-strength finding. And a comparative multi-country extension across ASEAN economies with differing remittance dependence and China trade exposure would help establish whether the patterns identified here are Philippine-specific or reflect a broader regional dynamic.

Global shocks are not neutral for Philippine entrepreneurship, but this paper's evidence suggests they are not neutral in the direction most commonly assumed. Understanding that distinction — between cost pressure at the firm level and confidence-driven entry at the aggregate level — is itself the more useful signal for entrepreneurs and policymakers navigating an economy that will remain exposed to oil, dollar, and China cycles for the foreseeable future.

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