



Do Remittances Save or Spend? Testing the Consumption-Investment Allocation Hypothesis for the Philippines Using WDI Time-Series Evidence, 2000–2023

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Abstract

The Philippines receives among the largest remittance inflows in Southeast Asia relative to gross domestic product, averaging approximately 10 percent of GDP across the 2000–2023 period. Despite their scale and counter-cyclical stability, the macroeconomic allocation of these flows — whether they are predominantly directed toward savings, productive investment, household consumption, or financial intermediation — remains without rigorous country-specific empirical resolution. This paper addresses that gap by estimating four ordinary least squares regression models with Newey-West heteroskedasticity- and autocorrelation-consistent standard errors using Philippine annual World Development Indicators data spanning 2000 to 2023. The dependent variables are gross national savings, gross fixed capital formation, household final consumption expenditure, and domestic credit to the private sector by banks, each regressed on personal remittances received as a share of GDP with a consistent set of macroeconomic controls. Unit root pre-testing confirms that savings, investment, and consumption are integrated of order one; Models 1 through 3 are accordingly estimated in first differences. Domestic private sector credit is stationary in levels and estimated as such in Model 4. Results consistently support the consumption-direction hypothesis: remittances are positively and significantly associated with changes in household consumption ($\beta = 0.393$, $p = 0.001$) and negatively and significantly associated with changes in gross fixed capital formation ($\beta = -0.356$, $p = 0.001$). The savings association is positive but weakly supported and partially sensitive to pandemic-year controls. Remittances are not associated with financial deepening; foreign direct investment emerges as the external capital source most strongly linked to private credit depth ($\beta = 6.514$, $p < 0.001$). Robustness checks using lagged remittances and a COVID-2020 dummy corroborate the main consumption and investment findings. These results characterise the Philippine remittance economy as a remittance-consumption equilibrium with identifiable implications for business strategy, enterprise financing, and entrepreneurial ecosystem design in remittance-dependent emerging markets.

Keywords: *remittances; household consumption; capital formation; financial intermediation; time-series regression; Philippines; entrepreneurial ecosystem*

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1. Introduction

Few structural features of the Philippine economy are as persistent, as large, or as strategically consequential as its dependence on overseas personal remittances. For more than two decades, the Philippines has ranked among the world's top recipients of remittance inflows in absolute terms and among the most remittance-intensive economies in Southeast Asia as a share of gross domestic product. Through periods of regional financial turbulence, domestic

political transition, and global pandemic disruption, overseas Filipino workers have sustained a flow of household transfers that functions, in aggregate, as one of the most reliable external financing mechanisms available to any emerging economy in the region. That reliability, however, does not resolve a question of fundamental economic and strategic significance: what do these capital flows actually do once they arrive?

The remittance-allocation debate occupies a central position in the development economics literature, and its implications extend well beyond academic interest. If remittances are predominantly absorbed into household consumption expenditure — food, utilities, education spending, durable goods, and housing improvement — their aggregate effect is to sustain consumer demand and support household welfare without systematically building the productive capital base of the economy. This is not a trivial contribution; consumer demand-sustaining transfers reduce poverty and smooth income volatility in ways that matter enormously for household welfare. But from the perspective of macroeconomic structure, business environment quality, and entrepreneurial ecosystem development, consumption-oriented remittance allocation produces a specific strategic configuration: a large and relatively stable consumer market, but a shallow investment base, constrained financial intermediation, and limited enterprise-financing capacity relative to the scale of external capital inflows.

If, on the other hand, remittances translate into savings mobilization, capital formation, and financial deepening — if households deposit remittance income into formal financial institutions, if those deposits are intermediated as credit to productive enterprises, and if the household savings rate rises in remittance-receiving communities — the strategic implications are substantially different. A remittance-driven savings and investment dynamic would create conditions for deeper financial markets, broader credit availability for small and medium enterprises, and a more robust base for entrepreneurial activity, productive investment, and capability development at the firm level. These are precisely the macro-strategic conditions that management scholars and practitioners identify as foundational to entrepreneurial ecosystem quality.

The distinction between these two trajectories is not merely of interest to macroeconomists. For strategic management scholars, the allocation question determines the structural context within which Philippine firms compete, raise capital, and attempt to scale. For investors assessing the Philippine market, it shapes the risk-return calculus of consumer-facing versus investment-facing positions. For entrepreneurial ecosystem architects — including financial institutions, development agencies, incubators, and policymakers — understanding how remittance capital flows through the macroeconomy is essential for designing interventions that channel household resources into productive enterprise rather than allowing them to dissipate in aggregate consumption. And for the firms themselves, the allocation dynamics of remittances shape both the demand environment and the financial conditions available for growth.

Despite the strategic relevance of this question, the Philippine literature offers a fragmented empirical picture. Household-level surveys provide evidence of remittance spending patterns in specific communities and time periods, but they do not speak to the aggregate macroeconomic allocation pattern across the full arc of the post-2000 period. Cross-country panel studies provide estimates of remittance effects on macroeconomic outcomes, but they aggregate across countries with very different economic structures and institutional environments, diluting the country-specific signal that Philippine strategic analysis requires. What the literature lacks is a direct, multi-outcome time-series regression analysis of remittance allocation specifically for the Philippines, using the most comprehensive available secondary data source — the World Development Indicators — across a period long enough to capture the full structural significance of remittance dependency.

This paper addresses that gap. Drawing on Philippine annual data from the World Development Indicators spanning 2000 to 2023, it estimates four separate ordinary least squares regression models with heteroskedasticity- and autocorrelation-consistent standard errors, each designed to test the relationship between personal remittance inflows and a distinct macroeconomic allocation outcome. The first model examines whether higher remittance inflows as a share of GDP are associated with higher gross national savings rates. The second model examines whether remittances are associated with higher rates of gross fixed capital formation. The third model examines the relationship between remittances and household final consumption expenditure, directly testing the consumption-direction hypothesis. The fourth model examines whether remittances are associated with deeper domestic credit provision to the private sector.

Each model controls for GDP per capita growth, inflation, net foreign direct investment inflows, and trade openness, with robustness checks employing lagged remittance specifications and a COVID-2020 indicator variable. Together, the four models constitute a multi-equation empirical portrait of how remittances transmit through the

Philippine macroeconomy — and what that transmission pattern implies for the strategic management environment in which Philippine enterprises operate.

The contribution of this paper is threefold. Empirically, it provides a rigorous time-series regression analysis of remittance-allocation dynamics specific to the Philippines, filling a gap in the quantitative country-level evidence base. Theoretically, it connects the remittance-allocation debate in development economics to the entrepreneurial ecosystem and strategic management literatures. Practically, it generates findings that are directly interpretable by managers, investors, and institutional designers operating in or seeking to engage with the Philippine market.

2. Review of Related Literature

2.1 Remittances and Development: Competing Theoretical Positions and the Allocation Debate

The theoretical landscape governing remittance-development relationships is organized around three broad positions, each generating different predictions about whether remittances represent a productive development resource or a structural liability. The optimist position, broadly consistent with a private development finance view, holds that remittances supplement household income, relax budget constraints, and create positive multiplier effects through consumption spending and, under favorable conditions, productive investment. A 38-country study finds that remittances raise household consumption expenditure and reduce poverty across Africa, Asia, and Latin America, with consumption serving as the primary welfare transmission channel (Ojeyinka & Ibukun, 2024). Panel studies for South Asia demonstrate that remittances increase economic growth, with causality running from remittance inflows to per-capita output (Islam, 2021), and a 17-country Asian panel reaches similar conclusions about the long-run growth association (Dutta & Saikia, 2022). For the ASEAN region specifically, evidence suggests that remittances, alongside consumption and foreign direct investment, contribute positively to economic growth (Mariska et al., 2021). East African panel evidence further suggests that the remittance-growth relationship is strengthened when financial depth is greater (Adow, 2025).

The dependency critique challenges this benign interpretation by arguing that remittances primarily sustain consumption rather than building productive capacity, and that structural reliance on migrant labor income may ultimately undermine domestic employment development and long-run competitiveness. Country-level evidence lends qualified support: studies in Nepal find that while remittances provide income, their predominant allocation toward basic consumption with limited enterprise investment raises concerns about productive capacity (Dhakal & Paudel, 2023), and Nigerian evidence suggests positive income effects are primarily consumption-supporting rather than investment-generating (A et al., 2025). Lebanon's experience illustrates the vulnerability of remittance-dependent growth models: strong aggregate GDP contributions coexist with heavy consumption orientation and distributional concerns (Ltaif et al., 2024). The distributional dimension appears across multiple studies, with evidence from Bangladesh and Nigeria suggesting that wealthier households capture disproportionate benefits (Ahmed et al., 2025; Song et al., 2021).

The Dutch Disease hypothesis extends the dependency critique to the external sector, arguing that remittance-driven exchange rate appreciation reduces the competitiveness of tradeable goods production. A meta-analysis drawing on 67 studies confirms that remittances appreciate the real exchange rate, particularly in East Asia and lower-middle-income countries (Anwar & Mang, 2022). A global panel study acknowledges mixed lagged effects across income groups and recommends policies to neutralize potential Dutch Disease risks (Zhang et al., 2021). The unifying implication for this paper's analytical design is that the optimist, dependency, and Dutch Disease positions each turn critically on the allocation question — whether remittances are predominantly consumed or channeled toward savings, investment, and productive intermediation.

2.2 Remittances and Household Savings: Evidence and Mechanisms

The relationship between remittances and household savings is one of the most actively debated dimensions of the allocation question. The dominant finding across a broad range of developing-country studies is that remittances increase household savings rates and aggregate deposit mobilization, but this positive result is subject to important qualifications. In Vietnam, remittances raise both the volume and rate of household saving and shift expenditure patterns toward health maintenance and physical asset repair, consistent with an investment-oriented allocation profile (Hua et al., 2022). In Nigeria, remittances function as an alternative income source that enables savings beyond basic consumption needs, with a significant positive effect on household saving levels and use of formal financial

instruments (Okpara et al., 2025; Osei-Gyebi et al., 2023). At the macroeconomic level, cross-country studies for South Asia, Latin America, and Sub-Saharan Africa find that remittances raise domestic savings rates (Jallow & Jiang, 2025; Pal, 2024; Adeniyi et al., 2021). For BRICS economies, a one percentage point increase in remittance inflows is associated with a 4.5 percentage point increase in bank deposits (Bindu et al., 2021).

Against this predominantly positive picture, the Philippine evidence introduces a crucial qualification. Survey-based research using Filipino household data finds that remittance-receiving households show no statistically significant difference in overall savings behavior relative to non-receiving households, with social obligations, ceremonial expenditure, and debt repayment consuming remittance inflows in ways that reduce net savings capacity (Coronel & Estelami, 2025). This finding aligns with theoretical arguments about income permanence: when remittances are treated as permanent household income rather than transitory windfall receipts, they are more likely to be consumed at the marginal propensity associated with normal income. Financial inclusion emerges as the most consistently identified moderating variable: households with formal bank or mobile money accounts face lower transaction costs for depositing remittance income, making saving more accessible (Osei-Gyebi et al., 2023; Bindu et al., 2021). Adjacent Philippine financial-literacy evidence suggests that the conversion of income into savings or investment may also depend on awareness and behavioral orientation, as monetary policy awareness was associated with saving and investment behavior but not spending behavior among Filipino students (Espelita et al., 2025). Whether this moderating effect is large enough to produce a detectable aggregate savings response in the WDI time-series data is the empirical question that Model 1 directly addresses.

2.3 Remittances and Investment and Capital Formation

If the savings evidence is cautiously optimistic, the evidence on remittances and productive capital formation is markedly more contested. Studies spanning multiple methodologies and regional contexts find effects ranging from clearly positive, to statistically insignificant, to negative. At the macro level, a panel of 30 African countries applying PMG-ARDL estimation finds a long-run cointegrating relationship between remittances and domestic investment, with bidirectional causality (Magwedere & Marozva, 2023). For 15 Latin American economies, panel vector autoregression reveals a positive effect of remittances on capital formation (Moreano et al., 2024). These positive cross-country results stand in contrast to country-specific evidence from Nepal, where ARDL estimation shows remittances raising GDP while simultaneously reducing private gross fixed capital formation — a pattern interpreted as compensatory transfer behavior (Chaudhary, 2022). Kenyan time-series evidence similarly reports short-run negative effects on gross fixed capital formation (Amutabi, 2023).

At the household level, Bangladeshi survey evidence provides a positive case: remittance-receiving households invest significantly more in housing, land, agriculture, business, and durable assets, with remittances functioning as a form of credit insurance (Salahuddin et al., 2024). Conversely, Pakistani agricultural evidence reveals that remittance-receiving rural households engage in substantially less agricultural investment as migration-related labor loss reduces the household's capacity to apply capital productively in farming (Ali et al., 2023). A consistent theme across studies is that housing investment is the dominant form of remittance-funded capital spending before any reallocation toward enterprise investment occurs (Chaudhary, 2022; Xia et al., 2022; Salahuddin et al., 2024). The mediating role of financial development is confirmed across multiple studies: more developed financial systems amplify remittances' capacity to generate productive investment by channeling household deposits into enterprise lending (Amutabi, 2023; Magwedere & Marozva, 2023; Bare et al., 2022).

2.4 Remittances and Financial Intermediation and Credit Depth

The financial intermediation channel represents the systemic pathway through which remittances could most consequentially reshape the macro-strategic environment. If remittance-receiving households deposit inflows into formal institutions and those institutions recycle deposits as credit, remittances contribute to the productive capital base even when initial household allocation is consumption-oriented. Evidence on this channel is substantially more consistent than the investment evidence, though non-linearities require attention. For BRICS economies, a 1 percentage point increase in remittances generates an estimated 4.5 percentage point increase in bank deposits, with a clear long-run relationship (Bindu et al., 2021). Mexican municipal-level evidence shows that higher remittance receipt is strongly associated with more bank branches, accounts per capita, and higher deposits-to-GDP ratios (Reed et al., 2023). For 26 Sub-Saharan African countries, remittance inflows raise bank deposits and liquid liabilities, with governance quality functioning as a significant amplifier (Özyılmaz et al., 2021). Turkish time-series evidence finds a positive though modest long-run effect on domestic credit to the private sector (Offor et al., 2023).

The private sector credit channel appears more conditional than the deposit channel. West African evidence finds that remittances and domestic private sector credit independently raise investment, with their interaction becoming complementary beyond approximately 21 percent of GDP (Keho, 2024). Non-linearities complicate the relationship: Jamaican evidence reveals a U-shaped relationship between remittances and financial development, with remittances substituting for rather than complementing formal finance below a critical threshold (Das & McFarlane, 2021). Africa-wide analyses document that financial systems below minimum thresholds may be unable to capture remittance flows in ways that generate broad-based financial development (Ofori et al., 2023; Ofori et al., 2022). Comparable ASEAN entrepreneurship evidence also shows that domestic credit to the private sector by banks is positively associated with new business density, reinforcing the strategic importance of the credit-conversion channel beyond the deposit effect alone (Atento, 2026). These threshold effects carry direct implications for the Philippine estimation, as the financial development environment changed substantially across the 2000–2023 study period.

2.5 Remittances, Entrepreneurship, and the Philippine Strategic Context

The entrepreneurship and Philippine-specific literature brings the paper's analytical agenda into direct contact with its strategic management audience. At the cross-country level, a panel study of 79 remittance-receiving economies finds no robust positive impact of remittances on formal business creation in the absence of complementary financial development (Alhassan et al., 2025). The critical conditioning variable is financial system depth: in economies with well-developed financial systems, remittances become entrepreneurship-inducing by easing credit constraints; in financially shallow environments, remittances substitute for rather than complement the enterprise financing function of formal credit (Alhassan et al., 2025). A conceptual review of remittance-entrepreneurship mechanisms reaches a consistent conclusion: while remittances can in principle function as seed capital for micro and small enterprises, this potential is systematically underrealized when flows are absorbed by consumption needs or when the business enabling environment is weak (Mohamad et al., 2025).

The Philippine evidence adds spatial and behavioral granularity to this conditional finding. Survey data based on the Family Income and Expenditure Survey show that remittance-receiving Filipino households allocate more spending toward long-term investments and engage more actively in financial investing than non-recipients, but their overall savings rates are not significantly higher (Coronel & Estelami, 2025). Mixed-methods rural research across municipalities in Ilocos Norte and Tarlac finds that household financial capabilities and local commercial opportunity structures are the primary determinants of whether remittances translate into local business investment (Opiniano, 2021; Opiniano et al., 2023). A multi-year analysis of six rural municipalities finds that even when the investment climate, local financial institutions, and supportive programs are all present, remittance-induced hometown investing is not guaranteed (Opiniano & Ang, 2024). Related Philippine WDI-based enterprise-dynamism evidence likewise indicates that inclusive economic participation can matter for formal firm entry, with a composite women's empowerment index positively associated with new business density under HAC/Newey-West specifications (Menez & Atento, 2026).

The macro-structural context is substantial. Philippine personal remittances have been approximately 9 to 10 percent of GDP throughout much of the study period, consistently exceeding net FDI inflows (Rivera, 2022; Kikkawa et al., 2024). An input-output analysis of 2018 data estimates that remittance-financed household expenditure and investment contributed 3.5 percent of gross output and 3.4 percent of GDP, with downstream effects in manufacturing, construction, agriculture, and wholesale and retail trade (Kikkawa et al., 2024). Remittance receipt is positively associated with formal financial account ownership among Filipino rural households (Yamada et al., 2021), but researchers consistently conclude that policy support and deliberate financial intermediation remain necessary to convert remittances from a household welfare resource into an effective vehicle for productive investment and sustainable growth (Rivera, 2022; Rivera & Tullao, 2024).

2.6 Synthesis of Literature

The five thematic bodies of literature reviewed above converge on several analytically important patterns. The most consistent finding across all four allocation dimensions is that remittances are not self-allocating toward productive uses. Their economic effect depends overwhelmingly on the institutional and financial architecture through which they pass, with financial development functioning as the master moderator. Within this overarching conditionality finding, the evidence establishes a broadly consistent hierarchy of allocation outcomes: consumption is the dominant household use across virtually all contexts; savings respond positively where financial access is adequate; capital formation effects are heterogeneous and frequently negative or insignificant; and financial

intermediation effects appear most robust at the deposit level but weaker and more conditional for private credit. For the Philippines specifically, the macro-structural context is distinctive in scale and stability, but community-level studies consistently flag that conversion of remittance volume into productive investment requires deliberate policy beyond what the private household sector generates spontaneously.

2.7 Gaps in the Literature

Despite the richness of the reviewed literature, several significant gaps remain. Most consequentially, no study has estimated multiple dependent variable models simultaneously for the Philippines using WDI data in a unified regression framework covering savings, investment, consumption, and credit. Philippine studies are either embedded in cross-country panels, conducted at the household level, or descriptive rather than econometric. Additionally, Southeast Asian evidence is substantially underrepresented relative to the volume of remittance research conducted for Sub-Saharan Africa and South Asia, despite the Philippines being one of the world's most economically significant remittance-receiving nations. Finally, the strategic management implications of remittance-allocation dynamics are almost entirely absent from the literature; the reviewed body of work is framed within development economics and welfare analysis with little attention to implications for firms, investors, and entrepreneurial ecosystem designers.

2.8 Contribution of the Present Paper

This paper makes three specific and complementary contributions. Empirically, it provides the first multi-equation time-series regression analysis of remittance allocation outcomes for the Philippines using consistent WDI annual data spanning 2000 to 2023, simultaneously estimating four dependent variable models to generate a comprehensive empirical portrait of remittance transmission. Theoretically, it bridges the remittance-allocation debate in development economics with the entrepreneurial ecosystem and strategic management literatures, establishing the macro-strategic relevance of an empirical question framed almost exclusively within welfare economics. Practically, it delivers findings directly interpretable by the managers, investors, financial institutions, and institutional designers whose strategic decisions are shaped by the Philippine macro-financial environment.

3. Methodology

3.1 Research Design and Data Source

This paper employs a quantitative time-series research design to examine the relationship between personal remittance inflows and four macroeconomic allocation outcomes in the Philippines across the period 2000 to 2023. All data are sourced from the World Development Indicators (WDI) published by the World Bank, accessed through the Philippine country dataset. The WDI provides a consistently constructed, internationally harmonized annual series for all variables included in the analysis. The use of a single national dataset for a country-specific study eliminates the cross-country heterogeneity that limits the interpretive precision of panel studies, at the cost of sample size — a trade-off acknowledged explicitly in the limitations discussion below.

3.2 Dependent Variables

Four dependent variables are estimated in separate regression equations, each representing a distinct dimension of the remittance-allocation hypothesis. The first is gross national savings as a percentage of GDP. The second is gross fixed capital formation as a percentage of GDP. The third is household final consumption expenditure as a percentage of GDP. The fourth is domestic credit to the private sector by banks as a percentage of GDP. Together, these four outcomes constitute a comprehensive empirical representation of the macroeconomic channels through which remittances could plausibly operate.

3.3 Primary Independent Variable and Controls

The primary independent variable is personal remittances received as a percentage of GDP. Five control variables are included to account for macroeconomic conditions that independently affect the dependent variables: GDP per capita growth (annual percentage change); inflation (consumer price index, annual percentage change); net foreign direct investment inflows (percentage of GDP); trade openness (total trade as percentage of GDP); and

financial account ownership (percentage of the population aged 15 and above holding a formal financial account, sourced from Global Findex data available from 2011 onward).

3.4 Model Specifications and Estimation Procedure

Two specification sets are estimated for each dependent variable model. The parsimonious model includes remittances, GDP per capita growth, inflation, FDI, and trade openness, using the full 2000–2023 sample. The extended model adds financial account ownership but is restricted to 2011–2023. Each model is estimated using ordinary least squares regression with Newey-West heteroskedasticity- and autocorrelation-consistent standard errors with a maximum lag bandwidth of four periods. Prior to estimation, all series were tested for stationarity using the Augmented Dickey-Fuller test with AIC lag selection and a maximum of three lags. Remittances, gross savings, gross fixed capital formation, household consumption, FDI, and trade were found to be non-stationary in levels (all ADF p-values above 0.10) but stationary after first differencing (all p-values below 0.01). GDP per capita growth and inflation were found stationary in levels. Domestic credit to the private sector was confirmed stationary in levels (ADF p = 0.001). Models 1 through 3 are therefore estimated using first-differenced dependent and independent variables; Model 4 is estimated in levels throughout.

3.5 Robustness Checks

Three robustness checks are conducted. First, the primary independent variable is lagged by one year to address potential simultaneity. Second, a COVID-2020 indicator variable is included for the pandemic year in Models 1 through 3 to assess whether the shock disproportionately influences coefficient estimates, consistent with standard robustness practice in small-sample macroeconomic time-series work. Third, the full unit root test and first-difference results are tabulated and reported in the accompanying data workbook.

3.6 Limitations

Several limitations require acknowledgment. The sample of approximately 24 annual observations imposes binding constraints on model complexity and statistical power. Causal identification is not achieved: remittances may respond endogenously to domestic economic conditions, and without a credible instrumental variable, coefficients are interpreted as associations rather than causal effects. The aggregate WDI series cannot capture the distributional heterogeneity of remittance allocation across household income groups, geographic regions, or OFW occupational categories. Findings are specific to the Philippines across the 2000–2023 period and cannot be generalized without replication.

4. Results and Discussion

4.1 Descriptive Trends, 2000–2023

Personal remittances received by the Philippines averaged approximately 10.1 percent of GDP across the 2000–2023 period, reaching a peak of 12.8 percent in 2005 and stabilizing in the 9 to 10 percent range from 2012 onward. The series remained notably stable through the 2008–2009 global financial crisis and contracted only modestly during the COVID-19 pandemic in 2020 before recovering by 2021. This counter-cyclical resilience is a defining feature of Philippine remittance flows and distinguishes them from more volatile external financing sources. Gross national savings averaged 34.2 percent of GDP over the full period, declining from approximately 39.8 percent in 2010 to 27.3 percent by 2023. Gross fixed capital formation averaged 22.7 percent of GDP, fluctuating within a range of approximately 20 to 26 percent. Household final consumption expenditure remained persistently elevated, averaging 72.8 percent of GDP and rising to 76.5 percent by 2023. Domestic credit to the private sector grew substantially, rising from 35.6 percent of GDP in 2000 to 48.3 percent in 2023, with particularly rapid expansion from 2015 onward.

4.2 Unit Root Test Results

Augmented Dickey-Fuller tests were conducted on all series using AIC lag selection with a maximum of three lags. Remittances, gross savings, gross fixed capital formation, household consumption, FDI, and trade are non-stationary in levels (all p-values above 0.10) but stationary after first differencing (all p-values below 0.01). GDP per capita growth and inflation are stationary in levels. Domestic credit to the private sector is confirmed stationary in

levels ($p = 0.001$). Models 1 through 3 are accordingly estimated in first differences; Model 4 is estimated in levels throughout. Full test statistics are reported in the data workbook.

4.3 Main Regression Results

Table 1 presents the coefficient estimates with Newey-West HAC standard errors across all four models. The results provide a clear and strategically significant empirical portrait of how remittance flows transmit through the Philippine macroeconomy.

Table 1. OLS-HAC Regression Results: Remittance Allocation Models — Philippines, 2001–2023

Variable	Model 1 Δ Gross Savings	Model 2 Δ GFCF	Model 3 Δ HH Consumption	Model 4 Credit/GDP (Levels)
Constant	−0.2169 (0.4713)	0.2832 (0.2290)	0.1579 (0.1903)	57.1920*** (11.4485)
Remittances (% GDP)	0.6149** (0.3016)	−0.3564*** (0.1110)	0.3925*** (0.1163)	−3.3294* (1.8302)
GDP pc Growth (%)	0.0683 (0.1116)	0.1386*** (0.0485)	−0.0492 (0.0322)	−0.5821** (0.2263)
Inflation (%)	−0.1123 (0.1590)	−0.0510 (0.0740)	0.0854 (0.0918)	−0.0244 (0.4822)
FDI Inflows (% GDP)	−0.5027 (0.6069)	0.0087 (0.2354)	−0.0160 (0.2573)	6.5142*** (1.6182)
Trade (% GDP)	0.0735 (0.0812)	0.1290** (0.0545)	−0.0494 (0.0371)	0.0707 (0.1521)
Diagnostics				
N	23	23	23	24
R²	0.102	0.619	0.340	0.688
Adj. R²	−0.162	0.506	0.146	0.601
F-statistic	2.145	14.322	8.331	9.103
F p-value	0.109	0.000	0.000	0.000
Durbin-Watson	1.026	1.252	1.925	1.139
Specification	1st Diff	1st Diff	1st Diff	Levels

Note: Newey-West HAC standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Models 1–3 use first-differenced variables (ADF confirmed $I(1)$ in levels). Model 4 uses levels (credit confirmed $I(0)$, ADF $p = 0.001$).
Source: World Bank WDI, Philippines, 2000–2023.

Model 1 — Gross Savings. The first-differenced model yields a positive and statistically significant coefficient on remittances ($\beta = 0.615$, $p = 0.041$), implying that a one percentage point increase in remittances as a share of GDP is associated with approximately a 0.62 percentage point increase in the gross savings rate in the same year. The model explains 10.2 percent of the variance in savings changes, and the overall F-statistic falls short of conventional significance thresholds (F- $p = 0.109$), reflecting the noisiness of the savings series and the small sample. The remittance-savings finding is directionally consistent with the optimist position reviewed in Section 2.2, but the

modest R-squared and weak overall model fit suggest that the savings relationship is not robustly driven by remittances in isolation.

Model 2 — Gross Fixed Capital Formation. The investment model produces the paper's most striking and analytically consequential finding. The coefficient on changes in remittances is negative, large in magnitude, and highly significant ($\beta = -0.356$, $p = 0.001$). A one percentage point increase in remittances as a share of GDP is associated with approximately a 0.36 percentage point decline in the GFCF share of GDP in the same year. The model explains 61.9 percent of the variance in GFCF changes (Adj. $R^2 = 0.506$), and the overall F-statistic is highly significant ($F = 14.32$, $p < 0.001$). GDP per capita growth ($\beta = 0.139$, $p = 0.004$) and trade openness ($\beta = 0.129$, $p = 0.018$) are both positively and significantly associated with investment changes, establishing that the negative remittance coefficient is not an artefact of omitted business cycle effects. This result is directly contrary to the investment-direction hypothesis and supports a structural interpretation in which remittance inflows crowd out productive capital formation.

Model 3 — Household Consumption. The consumption model strongly confirms the consumption-direction hypothesis. The coefficient on remittance changes is positive, significant, and precisely estimated ($\beta = 0.393$, $p = 0.001$). A one percentage point increase in remittances as a share of GDP is associated with approximately a 0.39 percentage point increase in the household consumption share of GDP in the same year. The model explains 34.0 percent of the variance in consumption changes ($F = 8.33$, $p < 0.001$). No control variable reaches conventional significance, indicating that the remittance-consumption relationship is not substantially confounded by the macroeconomic conditions included in the specification. This finding is the most direct empirical validation of the dependency critique position.

Model 4 — Domestic Credit to the Private Sector. The levels model yields a negative and marginally significant coefficient on remittances ($\beta = -3.329$, $p = 0.069$). This finding is consistent with a substitution interpretation: in the Philippine context, remittances may reduce households' demand for formal credit by providing an alternative source of consumption finance. FDI inflows are positively and significantly associated with private credit depth ($\beta = 6.514$, $p < 0.001$), suggesting that foreign investment — rather than remittance flows — is the external capital source most directly associated with financial deepening.

4.4 Robustness Check Results

When the primary independent variable is replaced with its one-year lag, the savings result remains positive and significant ($\beta = 0.709$, $p = 0.020$), suggesting that the savings response persists into the following year. The GFCF and consumption associations with lagged remittances are not statistically significant ($p = 0.186$ and $p = 0.353$ respectively), indicating that the negative investment and positive consumption effects operate contemporaneously rather than with a year's delay. When a COVID-2020 indicator variable is added, the remittance coefficient in Model 1 loses significance ($\beta = 0.351$, $p = 0.242$), suggesting the pandemic shock accounts for part of the savings relationship. In contrast, the negative investment coefficient in Model 2 strengthens ($\beta = -0.482$, $p < 0.001$), and the positive consumption coefficient in Model 3 remains strongly significant ($\beta = 0.407$, $p < 0.001$), reinforcing the interpretation that consumption and investment associations reflect structural rather than crisis-period dynamics.

4.5 Synthesis of Findings

Taken together, the four regression models and their robustness checks yield a consistent empirical verdict. Philippine remittances are predominantly consumption-directed: they significantly raise the household consumption share of GDP, significantly reduce the gross fixed capital formation share, have a weak and partially unstable positive association with savings, and are not associated with deepening domestic credit to the private sector. The strongest and most robust finding is the negative remittance-investment relationship, which holds under multiple specifications and strengthens when the pandemic year is controlled for.

5. Discussion of Findings

5.1 The Consumption-Direction of Philippine Remittances: Strategic Management Implications

The central empirical finding — that Philippine remittances are significantly and robustly associated with higher household consumption and lower gross fixed capital formation — carries consequences that extend well beyond the macroeconomic accounting identity within which these estimates are framed. For strategic management scholars and

practitioners, the consumption-direction of remittance flows defines a specific macro-structural environment: one characterized by sustained and relatively stable consumer demand, underwritten by an external income source largely independent of domestic labor market and business cycle conditions, but accompanied by a persistently shallow productive investment base that constrains enterprise development, capability building, and competitive upgrading. This structural configuration is precisely what Rivera (2022) describes when arguing that Philippine remittances require deliberate policy and financial intermediation to function as growth vehicles rather than consumption transfers, and it is consistent with the broader theoretical concern that remittance-receiving economies risk structural lock-in in which consumption-sustaining inflows suppress the productive investment pressures that historically accompany development (Dhakal & Paudel, 2023; A et al., 2025).

For managers assessing the Philippine business environment, this finding sharpens where structural opportunity and structural constraint intersect. Consumer-facing sectors operate in a demand environment structurally supported by remittance-sustained spending, documented by Kikkawa et al. (2024) as generating approximately 3.4 percent of Philippine GDP through remittance-linked household expenditure in 2018 alone. However, stable demand does not automatically translate into capital-market conviction; Philippine market evidence describes the PSE as fundamentally resilient but sentiment-impaired, indicating that observable fundamentals and investor willingness to allocate capital may diverge (Atento, 2025). Still, the investment-crowding finding warns that this consumer demand depth does not translate automatically into a proportionally robust productive investment environment. Firms seeking to invest in capacity expansion, physical infrastructure, or technology-intensive production are operating in a macroeconomy where the investment share of GDP is negatively associated with the dominant external capital flow — a configuration that may reflect constrained investment returns in tradeable sectors, persistent governance gaps, or household capital allocation patterns that prioritize consumption over productive asset accumulation. At the firm level, this means consumer-facing incumbents must still convert demand stability into adaptive capability; a Philippine legacy-retail case shows that consumer trust becomes strategically durable only when translated into omnichannel capability under digital disruption (Atento & Atento, 2026).

5.2 The Negative Investment Finding and Entrepreneurial Ecosystem Implications

The negative remittance-GFCF association ($\beta = -0.356$, $p = 0.001$) is the most analytically consequential result in the paper. Three non-mutually-exclusive mechanisms may explain it. First, the Dutch Disease channel, documented meta-analytically by Anwar and Mang (2022) specifically for East Asian economies, predicts that remittance-driven demand appreciation reduces the competitiveness of tradeable goods production and depresses investment in tradeable-sector capital. Second, the labor reallocation mechanism — documented by Ali et al. (2023) — suggests that migration itself removes productive workers whose labor would complement physical capital investment, reducing returns at the margin. Third, the income substitution mechanism holds that households receiving remittance income have reduced incentives to invest in productive activities because consumption needs are already met by external transfers.

From an entrepreneurial ecosystem perspective, this investment-crowding mechanism is directly relevant to why Philippine remittances have not translated into proportionally dynamic enterprise formation. The cross-country evidence of Alhassan et al. (2025), who find no robust positive impact of remittances on formal business creation without complementary financial development, and the Philippine community-level evidence of Opiniano (2021) and Opiniano et al. (2023), who find that remittance-induced enterprise investment is concentrated in municipalities with stronger financial capabilities, together suggest that the aggregate investment-crowding finding reflects genuine structural constraints on the remittance-to-enterprise conversion pathway.

5.3 Financial Intermediation and the Role of FDI

The finding that remittances are not significantly associated with financial deepening challenges the financial intermediation optimism documented for BRICS economies (Bindu et al., 2021) and Mexico (Reed et al., 2023). The Philippine evidence suggests that the remittance-to-deposit-to-credit intermediation chain is either incomplete or insufficient to generate a detectable aggregate credit-deepening effect over the study period. More revealing is the strong positive association between FDI inflows and private sector credit depth ($\beta = 6.514$, $p < 0.001$), suggesting that foreign investment rather than domestic household remittances is the external capital flow most directly linked to

financial deepening in the Philippines. The policy and practitioner implication is that strategies to deepen enterprise credit access should focus on the institutional and investment climate conditions that attract productive FDI, rather than assuming that the remittance economy will automatically generate the financial intermediation depth needed for enterprise scaling.

5.4 Boundaries of the Analysis

Several analytical boundaries must be stated explicitly. This paper establishes associations, not causal effects. The endogeneity of remittance flows cannot be resolved without a credible instrumental variable. The aggregate WDI series cannot capture the heterogeneity in remittance allocation across households, income quintiles, regions, or OFW occupational categories that the micro literature reveals. The small sample imposes binding constraints on statistical power and on the range of specifications that can be reliably estimated. Findings are specific to the Philippines across the 2000–2023 period and cannot be generalized to other remittance-dependent economies without replication.

6. Conclusions and Recommendations

6.1 Principal Conclusions

This paper set out to answer a specific empirical question: in the Philippines over the period 2000 to 2023, are personal remittances predominantly associated with savings accumulation, productive investment, household consumption, or financial intermediation? The four-equation OLS-HAC regression analysis produces a consistent and analytically coherent answer. Philippine remittances are consumption-directed. They are significantly and robustly associated with higher household consumption as a share of GDP; they are significantly and robustly associated with lower gross fixed capital formation; they have a weak and partially unstable positive association with gross savings; and they are not associated with deepening domestic credit to the private sector.

Of the four relationships estimated, the negative remittance-investment association is the most striking and consequential. The finding that a one percentage point increase in remittances as a share of GDP is associated with approximately a 0.36 percentage point decline in the GFCF share of GDP is both statistically well-supported and robust to pandemic-year controls. It does not support the optimist prediction and is directionally consistent with a Dutch Disease or income-substitution mechanism in which the dominant external income flow of the Philippines suppresses rather than stimulates productive investment activity. The financial intermediation result reinforces this picture: FDI — not remittances — is the external capital source most strongly associated with private sector credit depth. Taken together, these findings are consistent with the characterization of the Philippine remittance economy as a remittance-consumption equilibrium: large, stable household transfers sustain aggregate consumer demand at the cost of productive investment depth and enterprise financing capacity.

6.2 Recommendations

For managers and investors, the consumer demand environment is structurally underwritten by remittance flows and is therefore more stable and less cyclically sensitive than nominal GDP growth figures alone would suggest. Consumer-facing investment positions benefit from this structural demand support. However, firms seeking to invest in productive capacity should expect a macro-financial environment that is less generative of the investment depth, credit availability, and institutional support for productive enterprise that characterises economies where external capital flows are more investment-oriented.

For financial institutions and ecosystem architects, the finding that remittances do not deepen private credit while FDI does identifies a specific intermediation gap. Financial institutions designing products for OFW-connected households should specifically target the savings-to-credit conversion pathway, developing instruments that link remittance deposit accounts to working capital credit facilities for micro and small enterprise borrowers. Building on the financial inclusion gains documented over the study period, remittance-linked savings products that automatically direct a designated share of inflows toward business or investment accounts could shift the marginal allocation of household capital in ways that improve the macro-level investment outcome.

For researchers, three directions follow from the present findings. First, future work should pursue instrumental variable identification strategies to establish whether the consumption and investment associations reflect causal effects. Second, the period heterogeneity implied by the robustness checks warrants sub-period analysis examining whether the allocation relationship has changed as Philippine financial infrastructure has deepened. Third, the household-level mechanisms underlying the aggregate investment-crowding finding remain unresolved; micro-econometric work linking FIES household data to remittance receipt and investment behavior would provide complementary evidence.

6.3 Closing Statement

The Philippines has built one of the world's most institutionalised overseas labor systems, generating a remittance flow whose scale, stability, and counter-cyclical character are without parallel in Southeast Asia. This paper's evidence suggests that the strategic and development potential of this capital flow has not yet been systematically realised: remittances sustain consumption but do not build the productive investment base, financial depth, or enterprise financing infrastructure that would allow the OFW economy to function as a foundation for competitive upgrading rather than merely a mechanism for household welfare maintenance. Translating the remittance economy's scale into productive investment capacity is not primarily a problem of capital availability — it is a problem of institutional architecture, financial product design, and strategic management of the conditions under which household capital converts into enterprise capital. That conversion, the evidence suggests, does not occur spontaneously. It requires deliberate design.

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