

Financial Integration and Trade Performance in a Fragmented Global Economy: Evidence from Palestine

Salem Salem

salem.salem@ptuk.edu.ps

Palestine Technical University - Kadoorie

Saeid Zabayna

Palestine Technical University - Kadoorie

Research Article

Keywords: Financial integration, trade performance, global trade fragmentation, fragile economies, foreign direct investment: Palestine

Posted Date: October 20th, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-11167794/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

Additional Declarations: No competing interests reported.

Abstract

Rising protectionism, geopolitical tensions, and trade fragmentation have raised questions about the effectiveness of financial integration as a driver of trade performance. This study investigates whether financial integration enhances trade performance in Palestine within an increasingly fragmented global environment. As a small, trade-dependent economy operating without monetary sovereignty and under structural and political constraints shaped by the ongoing occupation, Palestine offers a distinctive context for this relationship. Despite exposure to foreign aid, remittances, foreign direct investment (FDI), and cross-border banking activities, it remains unclear whether deeper financial integration improves trade outcomes. Existing literature focuses on developed or emerging economies with stable institutions, leaving fragile and conflict-affected economies largely underexplored. To address this gap, the study uses quantitative time-series analysis with annual data from 2013–2025. Trade performance is measured through export growth, trade openness, and the trade balance. At the same time, financial integration is proxied by FDI inflows, remittances, foreign aid flows, and the banking sector's external exposure. Control variables include GDP growth, inflation, and global trade indicators, with OLS regression used to estimate these relationships. Findings show the trade balance is significantly and negatively associated with both foreign aid and banking sector external exposure. Trade openness is negatively associated with remittances and positively associated with banking sector external exposure. Export growth shows no significant association with any financial integration proxy. By providing empirical evidence from a fragile, politically constrained economy, this study contributes to the literature on financial globalization and trade, offering policy implications for enhancing trade resilience in similar contexts.

JEL Classification: F15; F36; F43

1. Introduction

The global economic landscape has undergone a profound structural transformation over the past two decades. Rising protectionism, geopolitical tensions, and increasing fragmentation of international trade and financial systems have fundamentally challenged the architecture of global economic integration (International Monetary Fund [IMF], 2023; World Trade Organization [WTO], 2024). Harmful new trade policy interventions surged from approximately 600 in 2017 to over 3,000 per year in each of 2022–2024, reversing decades of liberalization (World Economic Forum [WEF], 2025), introducing deep uncertainty for developing and fragile economies dependent on external markets, capital flows, and financial integration to sustain trade performance. Financial integration—the degree to which a country's financial system is linked to global capital markets through FDI, remittances, foreign aid, and cross-border banking—has traditionally been viewed as a catalyst for trade expansion by easing credit constraints, providing foreign currency access, and reducing transaction costs (Kose, Prasad, Rogoff, & Wei, 2009; Beck, 2002; Manova, 2013; Mishkin, 2009). Evidence is more nuanced empirically: developed and emerging economies generally show a positive financial development–trade relationship (Svaleryd & Vlachos, 2005; Do & Levchenko, 2007), but evidence for low-income, fragile, and conflict-affected economies remains sparse and inconclusive (Peres et al., 2023; UNCTAD, 2022).

Existing literature predominantly examines economies with stable institutions, developed financial infrastructure, and autonomous trade and monetary policy. The structural preconditions for financial integration to yield trade gains, institutional quality, macroeconomic stability, and policy independence are frequently absent in fragile states (Kose, Ohnsorge, & Sugawara, 2020), creating a knowledge gap regarding how integration operates where transmission mechanisms may be distorted, with policy implications for economies under political constraint and institutional fragility (UNCTAD, 2022; World Bank, 2023). The Palestinian economy presents a uniquely instructive case: a small, trade-dependent economy without monetary sovereignty, facing constraints without parallel among most developing economies. The 1994 Paris Protocol integrated Palestine into a de facto customs union with Israel, subjecting Palestinian trade policy almost entirely to Israeli regulatory control, border management, and customs administration (UNCTAD, 2024; B'Tselem, 2024). Trade with Israel accounts for approximately 73% of total Palestinian trade, with the bilateral deficit reaching nearly USD 5.3 billion—around 28% of GDP—as of 2022 (Institute for Palestine Studies, 2025), while inflated trade costs, restricted port access, and non-tariff barriers structurally limit exporters' competitiveness (UNCTAD, 2025). Despite these constraints, Palestine has been increasingly exposed to financial integration channels: foreign aid, diaspora remittances, and modest, growing FDI collectively constitute a significant share of national income and external financing. FDI remains exceptionally low at approximately 1% of GDP, deterred by political risk, institutional fragility, and the absence of an independent monetary system (U.S. Department of State, 2024). Following October 2023, GDP across the Occupied Palestinian Territory fell to 70% of its 2022 level by 2024, erasing over 22 years of economic progress (UNCTAD, 2025), heightening the urgency of understanding whether financial integration can support trade resilience in such settings.

This study investigates whether financial integration enhances trade performance in Palestine within an increasingly fragmented global trade environment. Using annual time-series data for 2013–2023, it employs the Autoregressive Distributed Lag (ARDL) bounds testing approach to capture short- and long-run dynamics between financial integration variables (FDI, remittances, foreign aid, banking sector external exposure) and trade performance indicators (total exports, export growth, trade openness, trade balance), filling a gap in the finance–trade nexus literature for fragile, conflict-affected economies. This research contributes by offering one of the few systematic empirical analyses of the finance–trade nexus in a politically constrained, non-sovereign economy under occupation; situating Palestinian trade performance within global trade fragmentation, an overlooked dimension in country-specific Palestinian analyses; applying ARDL with structural break tests to capture asymmetric, non-linear trade adjustment dynamics in conflict-affected settings; and offering policy implications for trade resilience through targeted financial integration strategies. Section 2 reviews the literature; Section 3 presents data and methodology; Section 4 reports results; Section 5 concludes with policy implications and future research directions.

2. Literature review and hypothesis development

2.1 Introduction

This section situates the present study within the broader theoretical and empirical literature on financial integration and trade performance, with particular attention to the mechanisms most relevant to fragile, aid-dependent, and politically constrained economies. The discussion is organized around two core constructs that anchor the empirical model developed in Section 3: trade performance, operationalized through export growth, trade openness, and the trade balance; and financial integration, proxied by FDI inflows, remittances, foreign aid, and banking sector external exposure. For each financial integration channel, the review traces the dominant theoretical transmission mechanism, summarizes the relevant empirical evidence, and identifies how that mechanism is likely to be conditioned, and in many cases distorted by the structural characteristics of the Palestinian economy, namely the absence of monetary sovereignty, the customs union arrangement with Israel under the Paris Protocol, and chronic political risk.

The review proceeds in three parts. Section 2.2 examines the conceptual and empirical literature on trade performance as a multidimensional construct, clarifying why export growth, trade openness, and the trade balance are treated as distinct rather than interchangeable outcomes. Section 2.3 reviews the financial integration literature channel by channel, FDI, remittances, foreign aid, and banking sector external exposure, drawing out the competing theoretical predictions (capital-augmenting versus Dutch Disease-type effects) that motivate the study's hypotheses. Section 2.4 then consolidates these threads into an explicit statement of the research gap and the motivation for examining a fragile, non-sovereign economy such as Palestine, providing the empirical basis for the hypotheses tested in Section 3.

2.2 Trade Performance

Trade performance is not a unidimensional construct, and the literature has converged on at least three distinct, only partially correlated, indicators: export growth, trade openness, and the trade balance (Edwards, 1998; Frankel & Romer, 1999). Export growth captures the dynamic expansion of a country's tradable sector and is most closely tied to competitiveness, productive capacity, and access to external markets (Helpman, Melitz, & Rubinstein, 2008). Trade openness, typically measured as the sum of exports and imports relative to GDP, captures the overall degree of an economy's integration into international markets regardless of the direction of trade flows, and is widely used both as an outcome of liberalization and as a control variable proxying globalization in cross-country growth models (Frankel & Romer, 1999; Squalli & Wilson, 2011). The trade balance, by contrast, reflects the net external position of the economy and is shaped jointly by domestic absorption, the real exchange rate, and the structure of import dependence, making it more sensitive to macroeconomic and exchange-rate-related disturbances than to underlying productive capacity alone (Bahmani-Oskooee & Ratha, 2004).

Because these three indicators respond to different underlying mechanisms, a single financial integration channel can plausibly exert opposite signs across them. A capital inflow that increases import capacity and domestic absorption, for instance, may raise trade openness even as it deteriorates the trade balance, while leaving export growth—driven by supply-side competitiveness rather than by financing availability—unaffected (Manova, 2013). This theoretical separability motivates treating export growth, trade openness, and the trade balance as three distinct dependent variables rather than collapsing them into a single trade index, and it is consistent with the heterogeneous findings reported in the broader finance–trade literature, where financial development or financial openness has been shown to affect trade margins (export growth, the extensive margin of trade) differently from trade balances or current account outcomes (Beck, 2002; Do & Levchenko, 2007; Svaleryd & Vlachos, 2005).

In small, trade-dependent economies operating under significant external constraints, trade performance is further shaped by structural rather than purely market-driven factors. For Palestine specifically, the 1994 Paris Protocol established a de facto customs union with Israel that removed Palestinian authorities' control over tariff policy, border administration, and access to ports, embedding the economy's trade performance within an externally administered regulatory architecture (UNCTAD, 2024). Under these conditions, conventional determinants of trade performance identified in the literature, relative prices, productivity, and financial access, operate alongside, and are frequently dominated by, non-economic constraints such as movement restrictions, closures, and access regimes (UNCTAD, 2025). This structural specificity is central to the argument developed in this study: financial integration channels that are theorised to enhance trade performance in economies with conventional trade policy autonomy may operate quite differently, or not at all, in an economy where the policy levers ordinarily used to translate capital inflows into trade gains are largely unavailable to domestic authorities.

2.3 Financial Integration

Financial integration is conceptualized here as the channels linking an economy to international capital markets: foreign direct investment, remittances, foreign aid, and cross-border banking activity (Kose, Prasad, Rogoff, & Wei, 2009). The classical view holds that financial integration enhances trade performance by relaxing exporters' liquidity and credit constraints, financing imported inputs, and reducing cross-border transaction costs (Beck, 2002; Manova, 2013; Mishkin, 2009). This is qualified by literature identifying conditions under which capital inflows generate adverse trade effects, notably Dutch Disease-type mechanisms, whereby inflows appreciate the real exchange rate, erode export competitiveness, and widen the trade deficit (Corden & Neary, 1982; Rajan & Subramanian, 2011). The four channels examined here sit at different points along this spectrum.

FDI is most consistently linked to positive trade effects, theorized to enhance export performance through technology transfer, managerial spillovers, and integration into multinational production networks, with developed financial markets amplifying these effects (Alfaro, Chanda, Kalemli-Ozcan, & Sayek, 2004; Manova, Wei, & Zhang, 2015). Cross-country evidence broadly supports a positive FDI–trade openness relationship in export-oriented developing economies (Asiedu, 2002; Balasubramanyam, Salisu, & Sapsford, 1996), though causality may also run from open trade regimes to greater

FDI (Jeyhun, 2025; Li & Liu, 2005). In economies with elevated political risk and no monetary sovereignty, FDI tends to be small and concentrated in non-tradable sectors like real estate rather than export manufacturing, weakening this channel (U.S. Department of State, 2024).

Remittances occupy a more contested position. They are a stable source of foreign currency that can ease liquidity constraints and support import capacity (Ratha, 2005), yet substantial literature finds remittances tend to appreciate the real effective exchange rate, a Dutch Disease-type effect eroding export competitiveness, particularly under low export-to-GDP ratios or fixed exchange rate arrangements (Lartey et al., 2012). Meta-analytic evidence confirms this appreciation effect is genuine and replicable rather than a publication artefact (Anwar & Mang, 2022). For a fully dollarised, non-sovereign economy such as Palestine, lacking an independent exchange rate to absorb the inflow, this channel is plausibly amplified.

Foreign aid presents a related but distinct dynamic. Aid-effectiveness research debates whether aid crowds in productive investment supporting export capacity, or generates Dutch Disease effects analogous to remittances and resource windfalls (Rajan & Subramanian, 2011; Van Wijnbergen, 1984). Findings remain mixed: several studies link aid to real exchange rate overvaluation and deteriorating export performance and trade balances (Rajan & Subramanian, 2011; Selaya & Sunesen, 2012), with aid volatility independently amplifying trade balance volatility (Bulř & Hamann, 2008). Others find that the aid–export relationship depends on the degree of overvaluation (Juselius, Møller, & Tarp, 2014), or that infrastructure-oriented aid design can offset the Dutch Disease channel (Arndt, Jones, & Tarp, 2016). For aid-dependent economies like Palestine, where aid has financed budgetary and humanitarian needs rather than productive infrastructure, the evidence suggests Dutch Disease and fiscal-dependency channels dominate, consistent with this study's trade balance findings.

Banking sector external exposure has received less direct attention despite its role in trade finance. Greater exposure should theoretically enhance trade performance by improving banks' capacity for letters of credit and cross-border settlement (Beck, 2002; Manova, 2013). However, it may instead reflect intermediation of external flows into the domestic economy, tracking import capacity more than export competitiveness, consistent with this study's finding that banking exposure is positively associated with trade openness but negatively associated with the trade balance.

2.4 Research Gap and Motivation of the Study

Taken together, the literature reviewed above reveals two important gaps that this study addresses. First, the overwhelming majority of empirical work on the financial integration–trade nexus draws on samples of developed or emerging economies with functioning monetary policy autonomy, conventional exchange rate regimes, and relatively stable institutional environments (Kose et al., 2009; Kose, Ohnsorge, & Sugawara, 2020). Fragile, conflict-affected, and non-sovereign economies where the very policy instruments through which financial inflows are conventionally absorbed and channeled into trade gains are constrained or entirely unavailable remain markedly underexplored (Peres et al., 2023; UNCTAD, 2022). Second, while the Dutch Disease literature on remittances and aid is well developed for resource-rich and middle-income contexts, it has rarely been tested in a setting that combines dollarization, customs union subordination, and acute political risk simultaneously, as is the case for Palestine.

Third, existing studies typically treat trade performance as a single outcome, most often exports or a composite openness index, rather than disaggregating it into export growth, trade openness, and the trade balance. As argued in Section 2.2, these indicators respond to financial inflows through different mechanisms and need not move in the same direction; collapsing them into a single measure therefore risks masking theoretically meaningful divergences, such as a financial integration channel that raises trade openness while simultaneously deteriorating the trade balance. This measurement gap is particularly consequential in a setting like Palestine, where the policy implications of a given financial inflow differ sharply depending on which dimension of trade performance is affected.

These gaps motivate the present study's empirical strategy. By jointly testing FDI, remittances, aid, and banking sector external exposure against three distinct trade performance indicators in a single, structurally constrained institutional setting, the study extends the financial integration, trade literature beyond economies with conventional policy autonomy and contributes new evidence on how the classical capital-augmenting and Dutch Disease-type transmission channels operate, and in some cases break down when fiscal, monetary, and trade policy levers are externally constrained. The findings are intended not only to fill an empirical gap specific to Palestine, but to offer a template for examining the finance–trade nexus in other fragile, aid-dependent, and politically constrained economies, and they provide the empirical basis for the hypotheses tested in Section 3.

3. Methodology

3.1 Model specification

This study employs Ordinary Least Squares (OLS) regression to examine the relationship between financial integration and trade performance in Palestine over the period 2013–2025. Trade performance (TP) is a multidimensional construct and is therefore operationalized through three separate indicators: export growth (EXPG), trade openness (TOPEN), and trade balance (TBAL), each estimated in a distinct but structurally identical regression equation. This approach allows the differential effects of financial integration to be captured across distinct facets of trade performance, rather than imposing a single composite outcome that could mask heterogeneous relationships. Accordingly, the general model is specified as:

$$TP_t = \beta_0 + \beta_1 FDI_t + \beta_2 REMIT_t + \beta_3 FAID_t + \beta_4 BEX_t + \beta_5 GDP_t + \beta_6 INF_t + \beta_7 GTI_t + \epsilon t$$

where TP_t represents trade performance in year t , FDI_t = Foreign Direct Investment inflows, $REMIT_t$ = Personal remittances received, $FAID_t$ = Foreign aid inflows, BEX_t = Banking sector external exposure, while the control variables are: GDP_t = GDP growth rate in year t , INF_t = Inflation rate in year t ,

GT_t = Global Trade Indicator in year t , capturing prevailing conditions in the global trading environment, ε_t is the error term.

The three financial integration proxies: FDI, remittances, and foreign aid, capture distinct cross-border capital-flow channels through which Palestine is exposed to global financial markets, while the banking sector's external exposure captures the depth of integration within the domestic financial intermediation system. GDP growth and inflation control for domestic macroeconomic conditions, while the Global Trade Indicator accounts for exogenous shifts in the international trade environment, including episodes of protectionism and trade fragmentation referenced in the study's motivation.

3.2 Diagnostics check

Model evaluation follows estimation to verify the robustness, validity, and reliability of the econometric model. This step checks for common econometric issues, non-stationarity, multicollinearity, heteroskedasticity, autocorrelation, and non-normal residuals that are especially relevant given the time-series structure and limited span of the dataset. Stationarity is assessed first using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests on each variable to determine its order of integration, avoiding spurious regression from non-stationary series; non-stationary variables are differenced or addressed through alternative estimation strategies. Multicollinearity among the financial integration proxies and control variables is evaluated using the Variance Inflation Factor (VIF): a VIF of 1 indicates no multicollinearity, 1–5 mild to moderate, 5–9 significant, and above 10 severe (Hair et al., 2010). Heteroskedasticity is tested using the Breusch-Pagan-Godfrey (BPG) and White tests, with a p-value above 0.05 failing to reject homoscedasticity; robust standard errors are applied where heteroskedasticity is found. Autocorrelation is checked via the Breusch-Godfrey (BG) LM test and the Durbin-Watson statistic, with Newey-West standard errors or lagged specifications used where present. The Jarque-Bera test assesses residual normality. Formal endogeneity tests are excluded, consistent with the study's single-equation, time-series OLS design, which prioritizes Gauss-Markov diagnostics over endogeneity procedures typical of panel or simultaneous-equations settings.

3.3 Data source

The data employed in this study are drawn from secondary sources covering the period 2013–2025. Trade performance indicators (export growth, trade openness, and trade balance) and macroeconomic control variables (GDP growth and inflation) are obtained from the Palestinian Central Bureau of Statistics (PCBS). Data on the banking sector's external exposure are sourced from the Palestine Monetary Authority (PMA), which compiles and reports financial soundness indicators and cross-border banking sector data for the Palestinian financial system. Data on foreign direct investment inflows, remittances, and foreign aid flows are obtained from the World Bank's World Development Indicators (WDI) database, supplemented where necessary by UNCTAD statistics for international trade and investment flows. The Global Trade Indicator is constructed using data from international sources such as the World Trade Organization (WTO) and UNCTAD, reflecting prevailing global trade conditions over the sample period. All variables are compiled on an annual basis to align with the time-series structure of the analysis.

Table 1: Descriptions of the variables.

Variables	Symbol	Measurements	Data Source
<u>Dependent variables</u>			
Export Growth	EXPGR	Annual % change in total exports	World Bank
Trade Openness	TRAOP	(Exports + Imports) / GDP × 100	World Bank
Trade Balance	TRABA	Exports – Imports (as % of GDP)	World Bank
-			
<u>Independent variables</u>			
FDI Growth	FDI	Annual % change in net FDI inflows	World Bank, WDI
Remittances	REM	Personal remittances received (% of GDP)	World Bank, WDI
Foreign Aid	FORA	Net Official Development Assistance received (% of GDP)	World Bank, WDI
Banking external exposure	BEXPO	Foreign liabilities of the banking sector / Total banking sector assets × 100	IMF, BIS
<u>Control variables</u>			
GDP	GDP	Real GDP growth rate (annual %)	World Bank, WDI
	INF	Annual % change in Consumer Price Index (CPI)	
Inflation	GLOT	Trade Globalization Index	World Bank, WDI
Glob_Trade			
Source: Authors			

4. Empirical results

The empirical investigation begins with a preliminary evaluation of the study variables using descriptive statistics and a correlation matrix. Descriptive statistics provide an overview of the essential characteristics of the dataset, including the number of observations (N), range, mean, and standard deviation for each variable. The correlation matrix illustrates both the magnitude and direction of the relationships between the dependent and independent indicators (see Table 2 and Table 3).

Table 2
Descriptive statistics.

Variable	Obs	Mean	Std. dev.	Min	Max
Trad_Balanc	33	-1885	548.6631	-2810	-980
Trad_Openes	33	51.96667	5.460292	38.2	60.2
Exp_growth	33	.1757576	7.358415	-18.6	11.2
FDI_growth	33	21.45455	38.90139	-85	78
Remittanc	33	346.9697	78.31167	230	490
For_Aid	33	707.2727	261.5223	310	1380
B_Ext_Expos	33	153.3939	51.0869	85	255
GDP	33	.7090909	7.070598	-22.5	8.5
INF	33	3.79697	2.605221	- .6	9.7
Glob_Trade	33	4.566667	5.1783	-12.2	12.8

Source: Authors' calculation.

Table 2 presents the descriptive statistics for the variables employed in the analysis over the 2013–2025 period (N = 33). The trade balance (Trad_Balanc) shows a mean deficit of approximately – 1885, with considerable dispersion (SD = 548.66) and a range spanning from – 2810 to -980, reflecting Palestine's persistent and structurally entrenched trade deficit. Trade openness averages around 52% with relatively low variability (SD = 5.46), suggesting a degree of stability in the economy's external trade orientation despite fluctuating external conditions. Export growth and FDI growth, by contrast, display far greater volatility relative to their means, with FDI growth in particular ranging from – 85 to 78, indicative of an unstable and externally vulnerable investment climate. Remittances and banking-sector external exposure show comparatively moderate dispersion, while foreign aid exhibits a wide range (310 to 1380), consistent with the donor-dependent and politically contingent nature of aid disbursement to the Palestinian economy. GDP growth and inflation also reveal substantial swings, mirroring the economy's exposure to recurring political and economic shocks.

Table 3 reports the pairwise correlations among variables. Several noteworthy relationships emerge. The trade balance is very strongly and negatively correlated with remittances (-0.9637) and banking-sector external exposure (-0.9718), implying that as these financial integration channels expand, the trade deficit tends to widen rather than narrow. Export growth, FDI growth, and GDP growth are highly positively correlated with one another (coefficients above 0.88), suggesting these variables move closely together and may capture overlapping dimensions of real economic activity. Trade openness correlates moderately with FDI and export growth, while inflation shows a generally negative association with most financial integration proxies. The high correlations among select regressors (e.g., FDI_growth–Exp_growth–GDP) signal a need to examine multicollinearity diagnostics before interpreting the regression estimates in the sections that follow.

Table 3
Correlation matrix.

Variables	Trad_Balanc	Trad_Openes	Exp_growth	FDI_growth	Remittanc	For_Aid	B_Expos	GDP	INF	Glob_Trade
Trad_Balanc	1.0000									
Trad_Openes	-0.1328	1.0000								
Exp_growth	-0.1580	0.5906	1.0000							
FDI_growth	-0.2790	0.6926	0.8880	1.0000						
Remittanc	-0.9637	0.0208	0.0919	0.1755	1.0000					
For_Aid	-0.6653	-0.4262	-0.1418	-0.1306	0.7138	1.0000				
B_Expos	-0.9718	0.2494	0.1708	0.2943	0.9597	0.5407	1.0000			
GDP	-0.0171	0.6481	0.9543	0.8912	-0.0680	-0.2989	0.0402	1.0000		
INF	0.4730	-0.1841	-0.0769	-0.1938	-0.3667	-0.0675	-0.4629	-0.0553	1.0000	
Glob_Trade	0.2951	0.2150	0.4057	0.3097	-0.2958	-0.3190	-0.2829	0.3997	0.2767	1.0000

4.1 Cross-Sectional Regression Results

4.1.1 Trade Balance Determinants Model

Table 4 reports OLS estimates for the trade balance model (2013–2025). The model fits the data well ($R^2 = 0.9810$; adjusted $R^2 = 0.9757$) and is jointly significant, $F(7, 25) = 184.32$, $p = .000$. Two financial integration proxies are statistically significant. Foreign aid (For_Aid) is negatively associated with the trade balance ($\beta = -0.6036$, $p = .000$), consistent with a Dutch disease–type mechanism: aid inflows can raise domestic demand for tradables, appreciate the real exchange rate, and crowd out productive investment, widening rather than narrowing the deficit (Van Wijnbergen, 1984, 1985). Empirical findings on this channel remain mixed across contexts (no broad consensus exists on Dutch disease effects), but in aid-dependent settings, the effect is well documented (Corden & Neary, 1982; Elbadawi, 1999; Nkusu, 2004). In Palestine, where aid has largely financed consumption and public expenditure rather than productive capacity, this dynamic is plausible. Banking sector external exposure (B_Ext_Expos) carries the largest economic magnitude and is also negative and significant ($\beta = -9.9168$, $p = .000$), suggesting cross-border banking activity finances imports and consumption more than export capacity. This aligns with structural accounts of the Palestinian economy, which highlight that the absence of an independent currency and central bank – the Palestinian Monetary Authority does not issue currency or set independent monetary policy, with the Israeli shekel serving as the de facto medium of exchange (Atlantic Council, 2024) – restricts available policy tools for correcting external imbalances (International Crisis Group, 2026).

Inflation (INF) is positively and significantly related to the trade balance ($\beta = 16.5956$, $p = .027$), counter to conventional expectations. This may reflect imported-inflation pass-through or shekel-pegged price dynamics specific to Palestine's currency arrangement. FDI growth ($\beta = -0.9929$, $p = .365$), remittances ($\beta = 1.1597$, $p = .381$), GDP growth ($\beta = 1.4715$, $p = .795$), and global trade conditions ($\beta = -1.7442$, $p = .628$) are not significant. The non-significance of FDI and remittances, despite their theoretical prominence as integration channels, suggests they are too limited in scale to independently affect the aggregate trade balance once aid and banking exposure are controlled for. The constant is negative and significant ($\beta = -374.0984$, $p = .010$), reflecting a baseline deficit unexplained by the regressors. Overall, financial integration does not uniformly improve Palestine's trade performance; aid and banking exposure are instead associated with deficit widening, consistent with adverse trade outcomes in fragile, externally constrained economies.

Table 4
Trade balance model – OLS estimation results.

Trad_Balanc	Coef.	Std. Err.	t	P > t	[95% Conf. Interval]	
Constant	-374.0984	133.9221	-2.79	0.010**	-649.9160	-98.2808
FDI_growth	-0.9929	1.0760	-0.92	0.365	-3.2090	1.2232
Remittances	1.1597	1.2998	0.89	0.381	-1.5174	3.8368
For_Aid	-0.6036	0.1270	-4.75	0.000***	-0.8651	-0.3420
B_Ext_Expos	-9.9168	1.7877	-5.55	0.000***	-13.5985	-6.2350
GDP	1.4715	5.6044	0.26	0.795	-10.0709	13.0139
INF	16.5956	7.0698	2.35	0.027**	2.0351	31.1562
Glob_Trade	-1.7442	3.5602	-0.49	0.628	-9.0766	5.5882
Num. of obs. = 33						
F(7, 25) = 184.32						
prob > F = 0.0000						
R-squared = 0.9810 Adj R-squared = 0.9757						
Root MSE = 85.58						
Note: * Significant at 10%; ** Significant at 5%; *** Significant at 1%.						

4.1.2 Trade Openness Determinants Model

Table 5 reports OLS estimates for the trade openness model (2013–2025). The model demonstrates strong explanatory power ($R^2 = 0.9810$; adjusted $R^2 = 0.9757$) and is jointly significant, $F(7, 25) = 184.32$, $p = .000$, confirming that the regressors collectively provide a robust fit. Two financial integration proxies are statistically significant, with opposing effects. Remittances are negatively and significantly associated with trade openness ($\beta = -0.1673$, $p = .000$), indicating that higher remittance inflows correspond with a narrower trade-to-GDP ratio. This is consistent with evidence that remittance-driven real exchange rate appreciation can dampen export competitiveness and reduce overall trade exposure (remittance inflows can cause real exchange rate appreciation, with a negative effect on exports and trade openness). Where remittances are channeled primarily toward

consumption rather than productive investment, this dampening effect on trade integration is more pronounced (Adams & Klobodu, 2016; Chami et al., 2005).

Banking sector external exposure (B_Ext_Expos) is positively and significantly associated with trade openness ($\beta = 0.2746$, $p = .000$), suggesting that deeper external banking linkages facilitate cross-border trade transactions and financing, thereby supporting greater trade integration. This contrasts with its negative role in the trade balance model, indicating that external banking exposure may expand the volume of trade flows even as it contributes to a wider deficit consistent with financing imports and consumption more than building export capacity.

The constant is positive and highly significant ($\beta = 65.5185$, $p = .000$), reflecting a substantial baseline level of trade openness independent of the included regressors. The remaining variables, FDI growth ($\beta = 0.0286$, $p = .376$), foreign aid ($\beta = 0.0002$, $p = .964$), GDP growth ($\beta = 0.1481$, $p = .378$), inflation ($\beta = 0.3397$, $p = .115$), and global trade conditions ($\beta = 0.0529$, $p = .618$), are not statistically significant at conventional levels.

Table 5
Trade openness model – OLS estimation results.

Trad_Openes	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
Constant	65.5185	3.943174	16.62	0.000***	57.39738	73.63962
FDI_growth	.0285662	.0316821	0.90	0.376	-.0366843	.0938166
Remittanc	-.1673019	.0382722	-4.37	0.000***	-.2461251	-.0884788
For_Aid	.0001684	.0037392	0.05	0.964	-.0075327	.0078695
B_Ext_Expos	.2746415	.0526352	5.22	0.000***	.1662373	.3830458
GDP	.1480714	.1650134	0.90	0.378	-.1917801	.4879228
INF	.3397167	.2081623	1.63	0.115	-.0890017	.768435
Glob_Trade	.0529177	.1048259	0.50	0.618	-.1629754	.2688107
Num. of obs. = 33						
F(7, 25) = 184.32						
prob > F = 0.0000						
R-squared = 0.9810 Adj R-squared = 0.9757						
Root MSE = 85.58						

Source: Authors' calculation.

Overall, these results indicate that financial integration channels affect trade openness selectively and in divergent directions: remittances constrain openness, while banking sector exposure expands it, underscoring the heterogeneous nature of financial integration's trade effects in the Palestinian economy.

4.1.3 Export Growth Determinants Model

Table 6 reports OLS estimates for the export growth model (2013–2025). Among the seven explanatory variables, GDP growth emerges as the only statistically significant determinant of export growth, with a strongly positive and highly significant coefficient ($\beta = 0.9661$, $p = .000$). This indicates that domestic economic expansion, rather than any financial integration channel, is the principal driver of export performance in the Palestinian economy. This finding is consistent with the broader literature showing that the growth effects of international financial flows, FDI, remittances, and official development assistance remain ambiguous and inconclusive across developing-country contexts (the three international financial flows have a mixed effect on the economic growth of developing countries), whereas domestic output expansion more directly and reliably translates into productive and exportable capacity.

None of the four financial integration proxies is statistically significant. FDI growth ($\beta = 0.0077$, $p = .756$), remittances ($\beta = 0.0334$, $p = .269$), foreign aid ($\beta = 0.0008$, $p = .785$), and banking sector external exposure ($\beta = -0.0311$, $p = .451$) show no measurable association with export growth at conventional levels. The non-significance of remittances is consistent with evidence that remittance income in many developing economies is directed predominantly toward household consumption rather than productive, export-oriented investment (remittances may undermine productivity and growth because they are spent on consumption rather than productive investments), limiting their capacity to stimulate export capacity directly.

Table 6
Export growth model – OLS estimation results.

Exp_growth	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
Constant	-8.473012	3.04513	-2.78	0.010***	-14.74457	-2.20145
FDI_growth	.0076813	.0244666	0.31	0.756	-.0427086	.0580712
Remittanc	.0333788	.0295559	1.13	0.269	-.0274926	.0942503
For_Aid	.0007964	.0028876	0.28	0.785	-.0051508	.0067436
B_Ext_Expos	-.0311148	.0406477	-0.77	0.451	-.1148304	.0526007
GDP	.9660545	.1274322	7.58	0.000***	.703603	1.228506
INF	-.0190124	.1607541	-0.12	0.907	-.3500916	.3120668
Glob_Trade	.109326	.0809522	1.35	0.189	-.0573981	.2760502

Source: Authors' calculation.

Inflation ($\beta = -0.0190$, $p = .907$) and global trade conditions ($\beta = 0.1093$, $p = .189$) are also not significant. The constant is negative and significant ($\beta = -8.4730$, $p = .010$), indicating a baseline contraction in export growth absent the influence of the included regressors.

Overall, these results suggest that export growth in Palestine is driven primarily by domestic economic momentum rather than external financial integration channels, reinforcing the view that financial integration's trade benefits are conditional and channel-specific rather than uniform across trade performance dimensions.

5. Discussion of results

The findings across the three trade performance dimensions present a nuanced and largely cautionary picture of financial integration in Palestine. Rather than uniformly enhancing trade outcomes, financial integration proxies exert selective, channel-specific, and sometimes counterproductive effects. Foreign aid and banking sector external exposure are associated with a widening trade deficit, while remittances constrain trade openness even as banking exposure expands it. Export growth, by contrast, is unrelated to any financial integration channel and is instead driven almost entirely by domestic GDP growth. This pattern aligns with the view that the effects of cross-border financial flows on fragile and conflict-affected economies operate differently than in stable institutional settings, where external shocks and disrupted financial flows carry a stronger and more persistent macroeconomic impact than in economies with stronger institutional buffers. Palestine's structural constraints, the absence of monetary sovereignty, restricted access to correspondent banking, and dependence on externally administered currency arrangements likely amplify these divergent effects, channeling financial inflows toward consumption and import financing rather than export-oriented productive capacity.

Taken together, the results suggest that financial integration is not a uniformly beneficial mechanism for trade performance in fragile, politically constrained economies. Its trade effects depend heavily on the specific channel (aid, remittances, FDI, or banking exposure) and the dimension of trade performance examined (balance, openness, or growth). This heterogeneity challenges the assumption, common in studies of developed and emerging economies, that deeper financial integration straightforwardly translates into improved trade outcomes.

6. Implications and conclusion of the study

These findings carry several implications for policy and future research. First, policymakers in Palestine and similarly constrained economies should not treat financial integration as an undifferentiated policy goal; instead, attention should focus on the specific channels, aid effectiveness, remittance productivity, and banking sector oversight that shape trade outcomes in different ways. Redirecting foreign aid toward productive, export-enhancing investment rather than consumption-financing uses may help offset its observed negative association with the trade balance. Second, the dominant role of domestic GDP growth in driving export performance suggests that domestic productive capacity building, rather than external financial inflows alone, should remain a policy priority. This is consistent with broader evidence that fragility is associated with weaker public service provision and underdeveloped financial sectors that constrain long-term growth, independent of external capital availability, reinforcing the need for domestic institutional strengthening alongside external engagement. Third, the absence of monetary sovereignty in Palestine limits the policy tools available to manage the trade effects of financial integration, underscoring the importance of regional and international cooperation on banking-channel reforms and correspondent banking access.

In conclusion, this study set out to examine whether financial integration enhances trade performance in Palestine, a small, fragile, and politically constrained economy operating without monetary sovereignty. The evidence indicates that financial integration does not act as a uniform driver of trade performance; its effects are channel-specific, sometimes adverse, and conditional on the dimension of trade examined. By extending the financial integration–trade nexus to a conflict-affected, non-sovereign economy, a context largely absent from existing research, this study contributes new empirical evidence to the literature on financial globalization and fragile economies. Future research should extend this analysis using longer time

series, alternative estimation techniques, or comparative designs across other politically constrained economies to assess the robustness and broader generalizability of these findings.

Declarations

Conflict of Interest Statement

The author declares no conflict of interest regarding the publication of this manuscript.

Funding Declaration

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Author Contribution

All authors reviewed the manuscript

Acknowledgement

The author sincerely acknowledges the support provided by Palestine Technical University Kadoorie (PTUK) in facilitating the publication of this research. This support contributes meaningfully to the professional development of academic staff and enhances the university's role and visibility in scholarly research.

References

1. Adams S, Klobodu EKM (2016) Remittances, regime durability and economic growth in Sub-Saharan Africa (SSA). *Econ Anal Policy* 50:1–8. <https://doi.org/10.1016/j.eap.2016.01.002>
2. Alfaro L, Chanda A, Kalemli-Ozcan S, Sayek S (2004) FDI and economic growth: The role of local financial markets. *J Int Econ* 64(1):89–112. [https://doi.org/10.1016/S0022-1996\(03\)00081-3](https://doi.org/10.1016/S0022-1996(03)00081-3)
3. Anwar AI, Mang CF (2022) Do remittances cause Dutch Disease? A meta-analytic review. *Appl Econ* 54(36):4131–4153. <https://doi.org/10.1080/00036846.2021.2022091>
4. Arndt C, Jones S, Tarp F (2016) What is the aggregate economic rate of return to foreign aid? *World Bank Econ Rev* 30(3):446–474. <https://doi.org/10.1093/wber/lhv033>
5. Asiedu E (2002) On the determinants of foreign direct investment to developing countries: Is Africa different? *World Dev* 30(1):107–119. [https://doi.org/10.1016/S0305-750X\(01\)00100-0](https://doi.org/10.1016/S0305-750X(01)00100-0)
6. Bahmani-Oskooee M, Ratha A (2004) The J-curve: A literature review. *Appl Econ* 36(13):1377–1398. <https://doi.org/10.1080/0003684042000201794>
7. Balasubramanyam VN, Salisu M, Sapsford D (1996) Foreign direct investment and growth in EP and IS countries. *Econ J* 106(434):92–105. <https://doi.org/10.2307/2234933>
8. Beck T (2002) Financial development and international trade: Is there a link? *J Int Econ* 57(1):107–131. [https://doi.org/10.1016/S0022-1996\(01\)00131-3](https://doi.org/10.1016/S0022-1996(01)00131-3)
9. B'Tselem (2024) *The Paris Protocol*. https://www.btselem.org/freedom_of_movement/paris_protocol
10. Bulir A, Hamann AJ (2008) Volatility of development aid: From the frying pan into the fire? *World Dev* 36(10):2048–2066. <https://doi.org/10.1016/j.worlddev.2007.02.019>
11. Chami R, Fullenkamp C, Jahjah S (2005) Are immigrant remittance flows a source of capital for development? *IMF Staff Pap* 52(1):55–81. <https://doi.org/10.2307/30035948>
12. Corden WM, Neary JP (1982) Booming sector and de-industrialisation in a small open economy. *Econ J* 92(368):825–848. <https://doi.org/10.2307/2232670>
13. Do Q-T, Levchenko AA (2007) Comparative advantage, demand for external finance, and financial development. *J Financ Econ* 86(3):796–834. <https://doi.org/10.1016/j.jfineco.2006.11.004>
14. Edwards S (1998) Openness, productivity and growth: What do we really know? *Econ J* 108(447):383–398. <https://doi.org/10.1111/1468-0297.00293>
15. Elbadawi IA (1999) External aid: Help or hindrance to export orientation in Africa. *J Afr Econ* 8(4):578–616. <https://doi.org/10.1093/jae/8.4.578>
16. Frankel JA, Romer D (1999) Does trade cause growth? *Am Econ Rev* 89(3):379–399. <https://doi.org/10.1257/aer.89.3.379>

17. Helpman E, Melitz M, Rubinstein Y (2008) Estimating trade flows: Trading partners and trading volumes. *Q J Econ* 123(2):441–487. <https://doi.org/10.1162/qjec.2008.123.2.441>
18. Hair JF, Black WC, Babin BJ, Anderson RE (2010) *Multivariate Data Analysis*, 7th edn. Pearson Prentice Hall
19. Institute for Palestine Studies (2025) *The impact of financial crises on development in Palestine* (Policy Paper Series). Institute for Palestine Studies. <https://www.palestine-studies.org>
20. International Crisis Group (2026) *Chokehold: Countering Israel's grip on the West Bank economy*. <https://www.crisisgroup.org/rpt/middle-east-north-africa/israelpalestine/255-chokehold-countering-israels-grip-west-bank-economy>
21. International Monetary Fund (2023) *Geoeconomic fragmentation and foreign direct investment* (World Economic Outlook, Chap. 4). IMF Publishing. <https://doi.org/10.5089/9798400229084.081>
22. International Monetary Fund (2023) *World economic outlook: Navigating global divergences*. International Monetary Fund
23. International Monetary Fund (2023) *World economic outlook: Fragmentation and geopolitical tensions*. International Monetary Fund
24. Juselius K, Møller NF, Tarp F (2014) The long-run impact of foreign aid in 36 African countries: Insights from multivariate time series analysis. *Oxf Bull Econ Stat* 76(2):153–184. <https://doi.org/10.1111/obes.12012>
25. Kose MA, Ohnsorge F, Sugawara N (2020) Benefits and costs of debt: The dose makes the poison (Policy Research Working Paper No. 9166). World Bank. <https://doi.org/10.1596/1813-9450-9166>
26. Kose MA, Prasad E, Rogoff K, Wei S-J (2009) Financial globalization: A reappraisal. *IMF Staff Pap* 56(1):8–62. <https://doi.org/10.1057/imfsp.2008.36>
27. Lartey EKK, Mandelman FS, Acosta PA (2012) Remittances, exchange rate regimes and the Dutch disease: A panel data analysis. *Rev Int Econ* 20(2):377–395. <https://doi.org/10.1111/j.1467-9396.2012.01028.x>
28. Li X, Liu X (2005) Foreign direct investment and economic growth: An increasingly endogenous relationship. *World Dev* 33(3):393–407. <https://doi.org/10.1016/j.worlddev.2004.11.001>
29. Manova K (2013) Credit constraints, heterogeneous firms, and international trade. *Rev Econ Stud* 80(2):711–744. <https://doi.org/10.1093/restud/rds036>
30. Manova K, Wei S-J, Zhang Z (2015) Firm exports and multinational activity under credit constraints. *Rev Econ Stat* 97(3):574–588. https://doi.org/10.1162/REST_a_00480
31. Mishkin FS (2009) Why we shouldn't turn our backs on financial globalization. *IMF Staff Pap* 56(1):139–170. <https://doi.org/10.1057/imfsp.2008.30>
32. Nkusu M (2004) *Aid and the Dutch disease in low-income countries: Informed diagnoses for prudent prognoses* (IMF Working Paper No. 04/49). International Monetary Fund. <https://doi.org/10.5089/9781451846874.001>
33. Peres SC, Cunha AM, Peruffo L (2023) International financial integration and economic growth in developing and emerging economies: an empirical investigation. *J Post Keynes Econ* 46(2):274–302. <https://doi.org/10.1080/01603477.2022.2146591>
34. Rajan RG, Subramanian A (2011) Aid, Dutch disease, and manufacturing growth. *J Dev Econ* 94(1):106–118. <https://doi.org/10.1016/j.jdeveco.2009.12.004>
35. Ratha D (2005) Workers' remittances: An important and stable source of external development finance. *Remittances: Dev impact future prospects* 9:19–51. <https://doi.org/10.1596/978-0-8213-5794-4>
36. Selaya P, Sunesen ER (2012) Does foreign aid increase foreign direct investment? *World Dev* 40(11):2155–2176
37. Squalli J, Wilson K (2011) A new measure of trade openness. *World Econ* 34(10):1745–1770
38. Svaleryd H, Vlachos J (2005) Financial markets, the pattern of industrial specialization and comparative advantage: Evidence from OECD countries. *Eur Econ Rev* 49(1):113–144. [https://doi.org/10.1016/S0014-2921\(03\)00030-8](https://doi.org/10.1016/S0014-2921(03)00030-8)
39. United Nations Conference on Trade and Development (2022) *The least developed countries report 2022: The low-carbon transition and its daunting implications for structural transformation*. United Nations
40. United Nations Conference on Trade and Development (2022) *Trade and development report 2022: Development prospects in a fractured world*. United Nations. <https://unctad.org/tdr2022>
41. United Nations Conference on Trade and Development (2025) *Report on UNCTAD assistance to the Palestinian people 2025: Developments in the economy of the Occupied Palestinian Territory*. <https://unctad.org/publication/report-unctad-assistance-palestinian-people-2025>
42. U.S. Department of State (2024) *2024 investment climate statements: West Bank and Gaza*. <https://www.state.gov/reports/2024-investment-climate-statements/west-bank-and-gaza/>
43. Van Wijnbergen S (1984) The Dutch disease: A disease after all? *Econ J* 94(373):41–55. <https://doi.org/10.2307/2232214>
44. Van Wijnbergen S (1985) Foreign aid, the real exchange rate, and economic stabilization. *World Bank Economic Rev* 1(1):89–98
45. World Bank (2023) *World development report 2023: Migrants, refugees, and societies*. World Bank Group. <https://doi.org/10.1596/978-1-4648-1941-4>
46. World Economic Forum (2025), January 29 *Navigating global trade in a highly uncertain environment*. <https://www.weforum.org/stories/2025/01/5-key-actions-business-fragmented-geoeconomic-landscape/>

47. World Trade Organization (2023) World Trade Report 2023: Re-globalization for a secure, inclusive and sustainable future. WTO
48. World Trade Organization (2024), December 11 *WTO report shows increase in trade restrictions against backdrop of unilateral policies*.
https://www.wto.org/english/news_e/news24_e/trdev_11dec24_e.htm