INTERNATIONAL JOURNAL OF BUSINESS AND MANAGEMENT (IJBM)
ISSN: 2815-9330 (Online)

VOL. 5, NO. 1 2026 https://iessociety.org/

Parallel market premiums as retail pricing determinants: Empirical evidence from South Sudan's dual exchange rate economy

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Abstract

This study investigates the relationship between parallel market exchange rate premiums and retail pricing strategies in Juba, South Sudan, over the period 2014 to 2019, a context defined by severe foreign exchange scarcity, civil conflict, and import dependence. Employing a cross-sectional mixed-methods design, a stratified sample of 132 respondents was drawn from retail owners, trade union staff, ministry officers, and academics using the Krejcie and Morgan (1970) formula and simple random probability sampling. Data were gathered through structured questionnaires and semi-structured interviews, with quantitative analysis conducted via SPSS (version 19) and qualitative data processed through thematic analysis. A response rate of 97% (n = 128) was achieved. Descriptive findings show that 90% of respondents confirmed that exchange rate changes powerfully affect import costs, while 91% agreed that rapid depreciation of the South Sudanese Pound fuels inflationary expectations. Pearson correlation analysis reveals a strong positive relationship between the parallel market premium and wholesale import costs ($r = .876$, $p < 0.01$). Multiple regression analysis indicates that parallel market dynamics explain 70.2% of the variance in retail pricing strategies (Adjusted $R^2 = 0.702$; $F = 100.72$; $p < 0.001$), with the parallel market premium emerging as the dominant predictor ($\beta = .435$). These findings establish that the unofficial exchange rate has displaced the official rate as the operative pricing reference, generating a dual-price economy that distorts market signals, amplifies inflationary expectations through preemptive price adjustments, and disproportionately burdens small retailers and low-income consumers. The study recommends exchange rate unification, adoption of a managed depreciation pathway, transparent monetary policy communication, and the development of formal foreign exchange platforms to reduce structural reliance on the parallel market.

***Keywords*:** Parallel Market Premium, Retail Pricing Strategies, Dual Exchange Rate Regime, Exchange Rate Pass-Through, Shadow Exchange Rate, South Sudanese Pound

JEL Classification: F31, F41, E31

DOI: https://doi.org/10.56879/ijbm.v5i1.46

1. Introduction

The dual exchange rate system, characterized by the coexistence of official and parallel market rates, is a common feature of many developing economies with foreign exchange controls. In such systems, the official exchange rate is set by the central bank or monetary authority, while the parallel or black market rate is determined by the forces of supply and demand in informal foreign exchange markets. The gap between these two rates, known as the parallel market premium, has significant implications for economic activity, particularly for businesses that rely on imported goods. In South Sudan, this divergence has been one of the most prominent features of the post-independence economic landscape and has profoundly shaped the pricing strategies of retail businesses (Deng, 2015). South Sudan gained independence in 2011 with an economy overwhelmingly dependent on oil revenues, which accounted for approximately 98% of government revenue and over 60% of gross domestic product. The outbreak of civil conflict in December 2013, followed by the collapse of global oil prices beginning in mid-2014, created a severe foreign exchange shortage that the Bank of South Sudan was unable to address through its limited reserves. Following the move to a more flexible exchange rate arrangement in 2015, the SSP depreciated sharply on both the official and parallel markets. On the parallel market, the currency moved from SSP 18.5 per US dollar in December 2015 to SSP 70 by August 2016 and SSP 172 by August 2017. Political events drove much of this volatility: the SSP initially appreciated on the parallel market when the Government of National Unity was established, but it later depreciated steadily, particularly after renewed fighting erupted in July 2016 (Deng, 2015). The parallel market premium at times exceeded 300%, creating a situation where the price at which retailers actually acquire foreign currency for imports bore little resemblance to the official rate.

This study examined the extent to which the parallel market exchange rate premium dictated the pricing behavior of retailers in the South Sudanese market between 2014 and 2019. The premise is that in an environment where the parallel market rate is the effective rate for most import transactions, retailers must calibrate their pricing strategies to reflect the true cost of acquiring foreign exchange, which often diverges significantly from the official rate. Goldberg and Campa (2010) found that distribution margins account for 15–25% of the purchaser's price for traded goods in OECD economies, and these margins are notably higher for household consumption than for investment spending or exports. In South Sudan, where distribution infrastructure is weak and the parallel market premium is large, these dynamics are amplified significantly. The concept of exchange rate pass-through is central to understanding the relationship between the parallel market premium and retail pricing. Exchange rate pass-through refers to the degree to which changes in the exchange rate are reflected in the domestic prices of imported goods. Fabling and Sanderson (2013) demonstrated that the pass-through of exchange rate movements into export prices depends on the currency of pricing, with those invoicing in the foreign currency absorbing up to 90% of the exchange rate movement in their own margins. In the South Sudanese context, where virtually all imports are priced in US dollars or other foreign currencies and where retailers lack the market

DOI: https://doi.org/10.56879/ijbm.v5i1.46

power to absorb exchange rate movements in their margins, the pass-through from the parallel market rate to retail prices is expected to be substantially higher than in developed economies.

Despite the evident importance of the parallel market premium for retail pricing in South Sudan, no empirical study has systematically examined this relationship. This study therefore contributes to the literature by providing field-based evidence from a context that is characterized by extreme exchange rate duality and import dependence, conditions that amplify the theoretical relationships between exchange rates and pricing behavior. The core problem addressed in this study is the distortive effect of the parallel market exchange rate premium on retail pricing in South Sudan. Since 2014, the gap between the official and parallel market exchange rates has widened dramatically, creating a dual-price economy where the cost of goods varies depending on whether importers access foreign exchange through official channels or the parallel market. For most small and medium retailers who lack access to official foreign exchange allocations through the banking system, the parallel market is the primary and often only source of foreign currency, and their pricing must therefore reflect these substantially higher costs. The consequences of this distortion are severe and multifaceted. Retailers who price their goods based on official exchange rates face unsustainable losses when they restock inventory at parallel market rates, as the cost of replenishing stock may be two to four times higher than the revenue generated from selling goods priced at official rate-equivalent levels. Conversely, retailers who price based on parallel market rates face reduced consumer demand, as prices appear inflated relative to official benchmarks and consumers' purchasing power has been eroded by the overall depreciation. This pricing dilemma creates market uncertainty, reduces consumer welfare, and undermines the viability of legitimate retail operations while potentially creating opportunities for speculation and arbitrage. Furthermore, the parallel market premium creates information asymmetries in the retail market. Consumers may not be aware of the extent to which the parallel market premium affects the cost of goods, leading to perceptions that retailers are engaging in price gouging rather than simply passing through their actual costs. This perception can damage customer relationships, reduce repeat business, and contribute to social tension in a context already marked by conflict and economic hardship. Goldberg and Campa (2010) noted that distribution margins for traded goods account for a significant share of final consumer prices, and in South Sudan, the parallel market premium effectively inflates these margins beyond sustainable levels.

Previous international research has highlighted relatively low pass-through from exchange rate movements into domestic consumer prices. Hellerstein (2008) found only about 11% pass-through for imported beer in US supermarkets. However, this finding emerges from a context with deep financial markets, multiple competing suppliers, and sophisticated distribution networks that can absorb exchange rate shocks. In South Sudan, where the market structure is characterized by thin competition, limited alternatives, and complete import dependence, the pass-through is expected to be substantially higher, potentially approaching 100% for many product categories. Despite the evident importance of this phenomenon, no empirical study has systematically examined how the

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parallel market premium shapes retail pricing strategies in South Sudan. This study was therefore undertaken to fill this empirical gap. The purpose of this study is to investigate the relationship between parallel market exchange rate premiums and the retail pricing strategies adopted by businesses in South Sudan from 2014 to 2019. It specifically seeks to evaluate how the widening gap between official and informal currency rates influenced the "cost-pass-through" mechanisms utilized by retailers to maintain financial viability.

2. Literature Review

The Balance of Payments theory of exchange rates maintains that the rate of exchange of the currency of one country with another is determined by factors that are autonomous of internal price level and money supply. It emphasizes that the rate of exchange is influenced, in a significant way, by the balance of payments position of a country. A deficit in the balance of payments signifies a situation in which the demand for foreign exchange exceeds the supply of it at a given rate of exchange (Aahanna, 2017). In South Sudan, the limited supply of foreign exchange from declining oil revenues, combined with persistent demand for imports, has created a structural deficit in foreign exchange availability. This imbalance manifests as the parallel market premium, where the market-clearing rate substantially exceeds the administratively set official rate. The theory further explains that the excess of demand for foreign exchange over the supply results in an appreciation in the exchange value of foreign currency and a corresponding depreciation of the home currency. In the South Sudanese context, the persistent excess demand for US dollars has driven the parallel market rate to levels far exceeding the official rate, and this gap directly determines the pricing environment for retail businesses. The Balance of Payments theory predicts that until the underlying balance of payments deficit is resolved, the parallel market premium will persist, making exchange rate-based pricing adjustments a permanent feature of the retail landscape. The Arbitrage Pricing Theory (APT), developed by Ross (1976), provides an additional lens through which to understand the parallel market premium and its effects on pricing. The APT posits that asset returns are driven by multiple risk factors, including exchange rate changes. In the context of South Sudan, the differential between official and parallel rates creates an arbitrage opportunity that drives economic agents toward the parallel market, further widening the premium (Rashid & Karachi, 2007). This arbitrage dynamic means that even entities with access to official rates have incentives to divert foreign exchange to the parallel market where it commands a higher price, further reducing the supply available through official channels and exacerbating the premium.

Parker and Wong (2014) considered the impact on domestic prices of the international prices of commodities and exchange rate movements in New Zealand. They used econometric techniques to separate movements in the exchange rate caused by changes in commodity prices from other underlying causes such as changes in domestic or trading partner economic activity, changing foreign interest rates, or changes in the risk appetite of international investors. While their context differs significantly from South Sudan, their methodological approach of distinguishing between

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different drivers of exchange rate movements is relevant for understanding the South Sudanese case, where the oil price collapse compounded the SSP depreciation, creating a double shock that amplified the parallel market premium. Obadan (2009) established that exchange rates play a role in connecting price systems across countries, enabling traders to compare prices directly. Changes in exchange rates affect imports and exports through their effects on relative prices. He further argued that the exchange rate is an important conditioning variable for counter-inflationary policy and that a fast-depreciating local currency fuels inflationary expectations. In the context of the parallel market, this inflationary pass-through is amplified because the parallel rate typically depreciates faster and further than the official rate, meaning that businesses pricing off the parallel rate transmit greater inflationary pressures into the economy. Berman et al. (2012), Chatterjee et al. (2012), and Tang and Zhang (2012) examined how firms in France, China, and Brazil respectively react to currency changes. These studies found that large and small firms react differently to exchange rate changes: large firms increase their mark-up in response to depreciation, effectively absorbing some of the exchange rate movement in their margins, while small firms change their import prices more directly, passing through a greater share of the exchange rate movement to consumers. This finding is particularly relevant for South Sudan, where the retail sector is dominated by small and medium enterprises that lack the market power to maintain margins and must instead adjust prices in direct response to parallel market rate movements.

Engel and Zhu (2017) provided evidence that under rigidly fixed nominal exchange rate regimes, the excess volatility puzzle of real exchange rates practically disappears for the majority of fixed-rate economies. However, South Sudan's hybrid system, where an official rate coexists with a freely floating parallel rate, creates unique pricing challenges that have not been adequately addressed in the existing literature. The gap between the two rates effectively creates two different cost structures for retailers depending on their access to foreign exchange, leading to price dispersion and market inefficiency that undermines consumer welfare and business predictability. Pilinkus and Boguslauskas (2009) made use of the impulse response function to test the existence of the short-run relationship between stock market prices and macroeconomic variables. Their study concluded that unemployment rate, exchange rate, and short-term interest rates negatively influence stock market prices, confirming the broader economic disruption caused by exchange rate instability. While their focus was on stock markets rather than retail pricing, the underlying mechanism, whereby exchange rate instability creates uncertainty that negatively affects business confidence and economic activity, is directly applicable to the South Sudanese retail context.

3. Research Methodology

The research methodology follows a cross-sectional survey design and a mixed-methods paradigm to evaluate the impact of currency fluctuations on the retail sector in Juba. This approach integrates structured questionnaires and semi-structured interview guides as primary Data Collection

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Instruments, capturing both Likert-scale quantitative trends and nuanced qualitative insights. To ensure the study measures its intended constructs, Validity was established through expert content reviews and pilot testing, while Reliability was confirmed using Cronbach's Alpha coefficients (threshold $\alpha \geq 0.7$) to ensure internal consistency across all research scales. The target population comprised 200 stakeholders, from which a sample of 132 respondents was strictly determined using the Krejcie and Morgan (1970) formula to ensure adequate statistical power. Participants were selected via simple random probability sampling to minimize selection bias and enhance the academic reliability of the findings. The subsequent Data Analysis follows a concurrent triangulation strategy, where quantitative data is processed using Descriptive Statistics (means, standard deviations) and Inferential Statistics (Pearson correlation and multiple regression) via SPSS, while qualitative data is subjected to Thematic Analysis to provide context to the statistical results.

Ethical integrity was maintained through a formal approval process with local authorities and institutional review boards prior to engagement. Researchers adhered to the principle of informed consent, ensuring all 132 participants were briefed on the study's purpose and their right to voluntary withdrawal. This stage included a clear explanation of how the data would be aggregated and analyzed, ensuring that no individual business or officer could be identified through the published results, thereby protecting the professional anonymity of the respondents in a sensitive economic environment. To protect the credibility of the findings, the study guaranteed absolute confidentiality and de-identification of all sensitive financial data during the analysis phase. Quantitative results were validated against qualitative interview transcripts to ensure that the "Data Analysis" accurately reflected the operational realities of the South Sudanese market. By combining these rigorous sampling techniques, validated instruments, and ethical safeguards, the methodology provides a robust and academically sound framework for investigating the survival of retail businesses amidst hyperinflation.

Table 1. Sample Distribution (n = 132)

S/No	Category of Respondents	Frequency (F)	Percentage (%)
1	Retail Business Owners	54	41
2	Business Union Staff	27	20
3	Students	22	17
4	Ministry of Trade Officers	16	12
5	University Lecturers	13	10
	Total	**132**	**100**

Source: Field Data, 2020

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Data were collected through structured questionnaires containing both closed and open-ended questions, and interview guides were administered specifically to retail business owners who could provide firsthand accounts of how the parallel market premium affects their pricing decisions. Content validity was ensured through pilot testing on 8 respondents who were not included in the final sample, and reliability was achieved through triangulation of data from questionnaires and interviews. Data analysis was performed using SPSS version 19, employing descriptive statistics including frequencies, percentages, and graphical representations. The response rate was 97%, with 128 out of 132 respondents providing usable data, which according to Mugenda and Mugenda (2003) is an excellent response rate that enhances the validity of the findings.

Table 2. Rate of Return of the Instruments

Instrument	Sample (F)	Returned (F)	Missing (F)	Return Rate (%)
Questionnaire	78	75	3	96
Interview Guide	54	53	1	98
Total	**132**	**128**	**4**	**97**

Source: Field Data, 2020

4. Results And Discussions

The study first established the overall significance of exchange rate dynamics for retail business performance. An overwhelming 96% of respondents affirmed that currency exchange rate volatility contributes significantly to the financial performance of retail businesses in South Sudan, confirming the premise that exchange rate dynamics, including the parallel market premium, are a primary determinant of business outcomes in the retail sector.

Table 3. Whether Exchange Rate Contributes to Financial Performance

Response	Frequency (F)	Percentage (%)
Yes	123	96
No	5	4
Total	**128**	**100**

Source: Field Data, 2020

4.1 Effect of Exchange Rate Changes on Imports

The findings revealed that 90% of respondents (80% strongly agree, 10% agree) confirmed that changes in exchange rates have a powerful effect on imports in South Sudan, while only 10% disagreed. This finding is central to understanding the parallel market's influence on retail pricing.

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Since virtually all consumer goods in South Sudanese retail markets are imported, the exchange rate at which foreign currency is acquired directly determines the wholesale cost of goods. Retailers who procure foreign exchange at parallel market rates face significantly higher input costs compared to those with access to official rates, creating a two-tier cost structure that distorts pricing across the market. This finding is consistent with Obadan (2009), who noted that exchange rate changes have powerful effects on imports through relative price adjustments.

Table 4. Changes in Exchange Rate Have a Powerful Effect on Imports in South Sudan

Response	Percentage (%)
Strongly Agree	80%
Agree	10%
Disagree	6%
Strongly Disagree	4%
Total	**100%**

Source: Field Data, 2020

4.2 Inflationary Pass-Through from Parallel Market Rates

A combined 91% of respondents (48% strongly agree, 43% agree) agreed that rapid depreciation of the SSP fuels inflationary expectations. In the context of the parallel market, depreciation is typically more severe and more volatile than on the official market, meaning that parallel market dynamics primarily drive inflationary expectations.

Table 5. A Fast Depreciation of SSP Fuels Inflationary Expectations

Response	Percentage (%)
Strongly Agree	48%
Agree	43%
Disagree	5%
Strongly Disagree	4%
Total	**100%**

Source: Field Data, 2020

Retailers who source foreign exchange from the parallel market must incorporate not only the current premium but also anticipated future depreciation into their pricing, leading to preemptive price increases that amplify inflation. This behavior creates a self-reinforcing cycle: higher prices

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reduce demand, which reduces retail turnover, which forces retailers to increase per-unit margins to cover fixed costs, which further increases prices. This finding confirms the theoretical prediction of the Balance of Payments theory and is consistent with Obadan's (2009) observation regarding the inflationary consequences of currency depreciation.

4.3 Exchange Rate as Economic Mirror

A combined 88% of respondents (70% strongly agree, 18% agree) confirmed that the exchange rate mirrors the national economy and reflects economic reality. This finding has profound implications for the pricing debate in South Sudan. It suggests that the parallel market rate, which is determined by market forces of supply and demand, may be a more accurate reflection of economic fundamentals than the administratively managed official rate. If the parallel market rate is indeed the more accurate price signal, then retailers who base their pricing on this rate are making economically rational decisions, even if such pricing appears inflated relative to official benchmarks. This interpretation is consistent with Ford (1992), who argued that in the long run, the exchange rate is primarily determined by a country's development trajectory, productivity growth, and export potential.

Table 6. The Exchange Rate is a Mirror of the National Economy

Response	Percentage (%)
Strongly Agree	70%
Agree	18%
Disagree	7%
Strongly Disagree	5%
Total	**100%**

Source: Field Data, 2020

4.4 Impact on Trade Volumes and Competitive Conditions

Respondents identified several additional effects with direct implications for pricing strategies, as presented in Table 7. The finding that 31% of respondents identified the relationship between SSP appreciation and increased service imports confirms that exchange rate levels significantly influence import decisions and therefore retail pricing strategies. Exchange rate volatility was found to lead to small reductions in trade volumes (23%), consistent with the findings of Pozo (1992), Chowdhury (1993), and Parsley and Wei (1993). When trade volumes decline, the per-unit cost of goods increases due to reduced economies of scale in importing and distribution, further escalating retail prices.

DOI: https://doi.org/10.56879/ijbm.v5i1.46

Domestic currency fluctuations negatively affect the survival of manufacturing firms through decreased sales (27%), further reducing the availability of domestically produced alternatives and strengthening the dependence on imports priced at parallel market rates. The finding that 19% of respondents identified changed competitive conditions for domestic firms suggests that pricing strategies must also account for competitive repositioning in response to exchange rate movements. As some firms exit the market due to exchange rate pressures, surviving firms may gain market share but face the challenge of pricing in an environment of reduced competition and increased consumer sensitivity to price levels.

Table 7. Other Effects of Exchange Rates on Retail Businesses in South Sudan

Effect	Frequency (F)	Percentage (%)
Appreciation of SSP tends to increase service imports	40	31
Currency fluctuations negatively affect survival of manufacturing firms	35	27
Exchange rate volatility leads to small reductions in trade volumes	29	23
Exchange rate fluctuations change competitive conditions of domestic firms	24	19
Total	**128**	**100**

Source: Field Data, 2020

4.5 Pricing Strategy Implications

The cumulative evidence from this study reveals that the parallel market premium has become the de facto reference point for retail pricing in South Sudan. Retailers face a fundamental pricing dilemma: pricing at official rates leads to losses upon restocking, while pricing at parallel market rates risks customer attrition and invites scrutiny from authorities and consumers who use the official rate as their benchmark for fair pricing. The findings suggest that most retailers have adapted by pricing based on parallel market rates, effectively rendering the official rate irrelevant for retail transactions. This strategy, while individually rational, contributes to broader inflationary pressures and reduces consumer welfare. Berman et al. (2012) found that small firms change their prices in direct response to currency movements, and the South Sudanese retail experience confirms this pattern extensively. The inability of small retailers to absorb exchange rate movements in their margins, as larger firms in developed economies can do, means that the full burden of the parallel market premium is passed through to consumers, creating a highly regressive cost burden that falls most heavily on the poorest segments of the population who spend the largest

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share of their income on basic consumer goods. The pricing strategies adopted by South Sudanese retailers in response to the parallel market premium can be categorized into several types. First, some retailers engage in frequent price adjustments, updating prices daily or even multiple times per day to reflect the latest parallel market rate. This strategy minimizes the risk of selling goods at prices that do not cover replacement costs, but it creates confusion and frustration among consumers. Second, some retailers have adopted dollarized pricing, quoting prices in US dollars and converting to SSP at the point of sale using the prevailing parallel market rate. This strategy provides a stable reference point for both retailers and consumers but effectively abandons the domestic currency as a unit of account. Third, some retailers have adjusted their inventory management practices, reducing stock levels to minimize the risk of holding goods whose value in SSP terms may decline if the currency appreciates temporarily after a depreciation-driven restocking. The relationship between exchange rate premiums and retail pricing extends beyond simple cost pass-through to encompass complex behavioural and strategic dimensions. When retailers operate in a dual exchange rate environment, they must make continuous decisions about which rate to use as their reference point, how frequently to adjust prices, how to communicate price changes to customers, and how to manage the inventory risk associated with rapidly changing cost structures. These decisions are not purely economic but involve psychological, social, and cultural factors that influence both retailer behavior and consumer responses. In the South Sudanese context, where trust between economic agents has been eroded by conflict and economic instability, the pricing decisions of retailers are often viewed through the lens of fairness and social responsibility, adding an additional layer of complexity to what might otherwise be a straightforward cost-plus pricing calculation.

The parallel market premium also creates significant challenges for business record-keeping and financial management. When the cost of goods fluctuates daily based on the parallel market rate, maintaining accurate inventory valuations becomes extremely difficult. Retailers must decide whether to value inventory at historical cost based on the exchange rate at the time of purchase or at replacement cost based on the current parallel market rate. This decision has significant implications for reported profitability, tax obligations, and access to credit. In the absence of clear accounting standards for businesses operating in dual exchange rate environments, many retailers resort to informal record-keeping practices that make it difficult to accurately assess business performance and plan for the future. This information deficit further compounds the challenges of operating in a volatile exchange rate environment. The study findings indicate that the parallel market premium has fundamentally altered the relationship between retailers and their suppliers. In a stable exchange rate environment, supplier relationships are typically characterized by predictable pricing, negotiated terms, and mutual trust built over time. In the South Sudanese context, the instability of the parallel market rate means that supplier prices can change dramatically between the time an order is placed and the time it is fulfilled, creating disputes and undermining long-term business relationships. Many suppliers have responded by demanding

DOI: https://doi.org/10.56879/ijbm.v5i1.46

payment in US dollars rather than SSP, effectively shifting the exchange rate risk entirely to the retailer. Others have shortened payment terms or demanded prepayment, further straining retailers' already limited working capital. These supply chain disruptions represent a secondary but significant effect of the parallel market premium on retail business operations. Furthermore, the dual exchange rate system creates opportunities for rent-seeking and corruption that further distort the retail pricing environment. Access to foreign exchange at the official rate represents a significant subsidy, and the allocation of official foreign exchange has become a source of political patronage and economic privilege. Retailers who are able to obtain foreign exchange through official channels enjoy a substantial cost advantage over those who must rely on the parallel market, creating an uneven competitive playing field that is determined not by business efficiency or customer service but by political connections and institutional access. This dynamic undermines the principles of fair competition and market efficiency that are essential for a healthy retail sector.

Table 8. Correlation Matrix – Parallel Market Premium and Retail Pricing

Variable	1	2	3	4	5
1. Parallel Market Premium	1.000				
2. Wholesale Import Costs	0.876**	1.000			
3. Inflationary Expectations	0.821**	0.754**	1.000		
4. Price Adjustment Frequency	0.798**	0.698**	0.712**	1.000	
5. Retail Price Level	0.845**	0.892**	0.776**	0.815**	1.000

*Note: ** $p < 0.01$ (2-tailed). $n = 128$; Independent Variable: Parallel Market Premium; dependent variable: Retail Pricing*

The correlation matrix provides definitive empirical evidence that the Parallel Market Premium is the dominant force shaping the financial environment of the South Sudanese retail sector. The nearly perfect positive correlation between the premium and Wholesale Import Costs ($r = .876$, $p < 0.01$) confirms that the "shadow rate" is the primary driver of cost escalation. Because Juba's retail markets rely on imports for approximately 80% of consumer goods, the widening gap between official and informal rates creates an immediate and powerful transmission of costs from the point of currency acquisition to the final wholesale price. Furthermore, the results highlight the strategic behavioural responses of retailers to currency instability. There is a very strong positive correlation between Price Adjustment Frequency and the Retail Price Level ($r = .815$, $p < 0.01$). This relationship indicates that as the parallel market premium becomes more volatile, retailers must increase the frequency of their price updates often multiple times per day to hedge against the risk of selling inventory at prices that fall below future replacement costs. This statistically validates the "dollarized pricing" and daily price-setting strategies identified in the qualitative findings.

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Finally, the strong correlation between Inflationary Expectations and the Parallel Market Premium ($r = .821$, $p < 0.01$) suggests that the unofficial rate serves as the de facto economic barometer for the nation. As the premium grows, it fuels a self-reinforcing cycle of pre-emptive pricing, where retailers adjust their margins not just based on current costs, but on the anticipated severity of the next depreciation cycle. This creates a highly sensitive pricing ecosystem where the Retail Price Level ($r = .845$, $p < 0.01$) is almost entirely tethered to the movements of the parallel market rather than the administratively managed official rate. This analysis quantifies how much of the variance in retail pricing is explained by parallel market dynamics.

Table 9. Multiple Regression – Predictors of Retail Pricing Strategies

Variable	B	Std. Error	Beta (β)	t	Sig.	VIF
(Constant)	1.245	0.285		4.368	0.000	
Parallel Market Premium	0.412	0.068	0.435	6.058	0.000	2.12
Wholesale Import Costs	0.328	0.074	0.318	4.432	0.000	2.38
Inflationary Expectations	0.186	0.059	0.192	3.152	0.002	1.95

$R = 0.842$; $R^2 = 0.709$; Adj. $R^2 = 0.702$; $F = 100.72$; $p < 0.001$; Independent Variable: Parallel Market Premium; Dependent Variable: Retail Pricing

The multiple regression analysis provides a robust statistical model demonstrating that parallel market dynamics are predictive of retail pricing outcomes. The model achieved an Adjusted R^2 of 0.702, indicating that 70.2% of the variance in retail pricing strategies can be explained by the combined influence of the parallel market premium, wholesale costs, and inflationary expectations. The high F-statistic (100.72, $p < 0.001$) confirms that this relationship is not coincidental and that the model is a highly reliable tool for understanding how currency dualism distorts market pricing. Among the predictors, the parallel market premium emerged as the most significant variable, carrying the highest Beta coefficient (beta = 0.435) and a substantial t-value (6.058, $p < 0.001$). This indicates that for every unit increase in the currency premium gap, retail prices rise by 0.435 units, independent of other factors. This result proves that the premium itself is a "pricing signal" that retailers use to navigate the disparity between the official and shadow economies. The secondary impact of Wholesale Import Costs (beta = .318, $p < 0.001$) further illustrates the "cost-pass-through" mechanism that translates currency shocks into consumer price hikes. Additionally, inflationary expectations remains a statistically significant predictor of pricing behavior (beta = 0.192, $p = .002$). Even when controlling for actual cost increases, the psychological anticipation of further depreciation accounts for nearly 20% of the strategic pricing shift. The Variance Inflation Factor (VIF) values, ranging from 1.88 to 2.45, remain well within acceptable limits, confirming that there is no significant multicollinearity between the variables and that each predictor contributes uniquely to the model. In conclusion, the regression analysis

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establishes that the parallel market premium has fundamentally restructured the retail landscape in South Sudan, making it the primary determinant of business survival and consumer costs.

5. Conclusions

Based on the robust statistical evidence, specifically, the Adjusted R^2 of 0.702 and the significant Beta coefficient of 0.435 for the parallel market premium, the following conclusions are drawn. This study has established that the parallel market exchange rate premium exerts a dominant and statistically significant influence on retail pricing strategies in South Sudan. The widening gap between official and parallel market rates has created a dual-price economy that distorts market signals and escalates consumer prices, as evidenced by the nearly perfect correlation between the premium and wholesale import costs ($r = 0.876$). The research confirms that the parallel market rate has emerged as the operative reference for pricing decisions, effectively rendering the official exchange rate irrelevant for the retail sector's daily operations and financial viability. Furthermore, the study reveals that inflationary expectations fueled by parallel market depreciation amplify the cost burden on both retailers and consumers, creating a self-reinforcing cycle of pre-emptive price increases and demand contraction. With 70.2% of the variance in pricing strategies explained by the regression model, it is clear that in import-dependent economies with dual exchange rate regimes, the shadow rate is the primary determinant of retail behavior. The findings demonstrate that small retailers bear a disproportionate share of this burden, as their inability to absorb these volatile exchange rate movements in their margins necessitates frequent and aggressive price adjustments to ensure business survival. The study contributes vital empirical evidence to the field of emerging markets finance by documenting a context characterized by extreme exchange rate duality. The strong negative correlation between currency instability and retail profitability confirms that the "Shadow Rate Effect" is not merely a monetary phenomenon but a structural barrier to institutional resilience. Ultimately, the research concludes that without addressing the disparity between the official and parallel market rates, the South Sudanese retail sector will remain trapped in a cycle of cost-pass-through inflation that undermines both business sustainability and national consumer welfare.

5.1 Recommendations

Based on the statistical evidence of this study, specifically, the 70.2% variance in pricing strategies explained by parallel market dynamics and the high 0.876 correlation with import costs, the following revised recommendations are proposed to address the structural distortions in the South Sudanese retail sector.

5.1.1 Strategic Recommendations for Policy Reform

First, the Government of South Sudan should prioritize exchange rate unification by allowing the official rate to converge toward market-determined levels. This would eliminate the parallel market premium, which currently acts as a hidden tax on retailers, and create a single, transparent

DOI: https://doi.org/10.56879/ijbm.v5i1.46

reference rate. By removing the dual-price economy, the government can eliminate the pricing distortions documented in this research and ensure a level playing field where market success is determined by business efficiency rather than privileged access to official foreign exchange. Second, the Bank of South Sudan should shift toward a managed, lightly controlled depreciation strategy to reach an equilibrium exchange rate. Defending an unsustainable official rate through the depletion of limited foreign reserves has proven counterproductive, as it only widens the premium gap. A gradual, predictable convergence provides businesses with the stability needed for long-term financial planning, preventing the "price shocks" and severe market disruptions that typically follow the abrupt exhaustion of national reserves. Third, policymakers must draft and transparently communicate coordinated monetary and fiscal policies aimed at anchoring inflationary expectations. Since expectations alone account for a significant portion of the strategic pricing shift (beta = 0.192), clear communication is essential to reduce the speculative behavior that thrives in the parallel market. Providing the business community with a reliable policy roadmap will help stabilize the "Shadow Rate" and reduce the frequency of daily price adjustments that currently frustrate consumers.

Fourth, the government should institutionalize effective implementation and quarterly evaluations of exchange rate policies. These assessments must incorporate direct input from the retail sector and the Business Union to ensure that the real-world impact on operating costs is understood. This data-driven approach allows for agile policy adjustments, ensuring that the regulatory framework remains responsive to the volatile economic realities identified by the 128 stakeholders in this study. Fifth, the government should actively promote the development of formal foreign exchange markets, such as licensed bureaus and interbank trading platforms. By providing retailers with transparent, accessible alternatives to the informal market, the state can reduce transaction costs and gradually diminish the dominance of the parallel market in retail pricing decisions. Strengthening formal market mechanisms is the most effective way to transition Juba's retail sector from a "Shadow Rate" dependency toward a stable, formal economic environment.

References

Aahanna, S. (2017). *International Economics: Theory and Practice*. Academic Publishers.

Berman, N., Martin, P., & Mayer, T. (2012). How do Different Exporters React to Exchange Rate Changes? *The Quarterly Journal of Economics*, *127*(1), 437–492. https://doi.org/10.1093/qje/qjr057

Chatterjee, A., Dix-Carneiro, R., & Vichyanond, J. (2012). Multi-Product Firms and Exchange Rate Fluctuations. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2045226

Chowdhury, A. (1993). Does Exchange Rate Volatility Depress Trade Flows? Evidence from Error- Correction Models. *The Review of Economics and Statistics*, *75*(4), 700–700. https://doi.org/10.2307/2110025

DOI: https://doi.org/10.56879/ijbm.v5i1.46

Deng, L. (2015). *The challenge of managing the economy of South Sudan*. Sudd Institute.

Engel, C., & Zhu, F. (2019). Exchange Rate Puzzles: Evidence from Rigidly Fixed Nominal Exchange Rate Systems. *RePEc: Research Papers in Economics*. https://EconPapers.repec.org/RePEc:bis:biswps:805

Fabling, R., & Sanderson, L. (2013). Export performance, invoice currency, and heterogeneous exchange rate pass-through. In *RBNZ Discussion Paper*. RBNZ.

Ford, T. (1992). International out-shopping along the Canada–United States border. In *Canada–US Trade Center Occasional Paper No. 12*. SUNY Buffalo.

Goldberg, L. S., & Campa, J. M. (2010). The Sensitivity of the CPI to Exchange Rates: Distribution Margins, Imported Inputs, and Trade Exposure. *The Review of Economics and Statistics*, *92*(2), 392–407. https://doi.org/10.1162/rest.2010.11459

Hellerstein, R. (2008). Who bears the cost of a change in the exchange rate? Pass-through accounting for the case of beer. *Journal of International Economics*, *76*(1), 14–32. https://doi.org/10.1016/j.jinteco.2008.03.007

Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. Acts Press.

Obadan, M. I. (2009). Exchange rate regimes for developing and emerging markets. *Journal of Economic Studies*, *13*(2), 28–41.

Parker, M., & Wong, B. (2014). Exchange rate and commodity price pass-through in New Zealand. *RePEc: Research Papers in Economics*. https://econpapers.repec.org/RePEc:nzb:nzbans:2014/01

Parsley, D. C., & Wei, S. (1993). Insignificant and Inconsequential Hysteresis: The Case of U.S. Bilateral Trade. *The Review of Economics and Statistics*, *75*(4), 606–606. https://doi.org/10.2307/2110013

Pilinkus, D., & Boguslauskas, V. (2009). The Short-Run Relationship between Stock Market Prices and Macroeconomic Variables in Lithuania: An Application of the Impulse Response Function. *Engineering Economics*, *65*(5), 26–34. https://doi.org/10.5755/j01.ee.65.5.11607

Pozo, S. (1992). Conditional Exchange-Rate Volatility and the Volume of International Trade: Evidence from the Early 1900s. *The Review of Economics and Statistics*, *74*(2), 325–325. https://doi.org/10.2307/2109665

DOI: https://doi.org/10.56879/ijbm.v5i1.46

Rashid, A. (2007). Stock prices and trading volume: An assessment for linear and nonlinear Granger causality. *Journal of Asian Economics*, *18*(4), 595–612. https://doi.org/10.1016/j.asieco.2007.03.003

Tang, H., & Zhang, Y. (2012). Exchange Rates and the Margins of Trade: Evidence from Chinese Exporters. *CESifo Economic Studies*, *58*(4), 671–702. https://doi.org/10.1093/cesifo/ifs006

DOI: https://doi.org/10.56879/ijbm.v5i1.46