

Accounting complexity under multiple exchange-rate regimes: Evidence from Lebanese SMEs

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Abstract

This article examines how multiple exchange-rate regimes reshape the accounting routines of small and medium-sized enterprises in Lebanon and increase the procedural complexity of their practices. Conducted in a context of prolonged monetary instability and fragmented exchange-rate benchmarks, the study employs partial least squares structural equation modelling on survey data from one hundred non-financial firms. The results show that exchange-rate diversification is the main factor directly increasing procedural complexity, while managerial responses to monetary shocks further contribute by amplifying rate-sensitive operations and the associated accounting workload. By contrast, currency depreciation and official devaluation do not exert a significant direct impact once diversification and organizational responses are considered.

The findings highlight that procedural complexity is an organizational outcome of frag-

mented exchange-rate regimes. They suggest that firms need formal and traceable conversion policies, standardized controls, and proportionate protocols to absorb monetary shocks without excessive closing costs. At the macro level, the evidence supports the importance of a credible unification roadmap, daily transparency in exchange-rate publication, and strengthened governance of foreign-exchange markets to restore the reliability of financial statements.

The study relies on a cross-sectional design and self-reported data, which limits causal inference. Future research could adopt longitudinal approaches, integrate operational accounting data, and extend the analysis to other sectors or countries facing similar monetary instability to enhance external validity.

Keywords: multiple exchange-rate regime; procedural complexity; PLS-SEM; SMEs; Lebanon.

الحوكمة وأثرها في إحكام إدارة الشركة المساهمة وفقاً لتعديلات قانون التجارة

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المُلخَص

تبحث هذه الدراسة في إشكالية العلاقة بين تعدد أسعار الصرف وإعادة تشكيل الإجراءات والعمليات المحاسبية لدى الشركات الصغيرة والمتوسطة في لبنان، بالإضافة الى رفع التعقيد الإجرائي لممارساتها. تمّ انجاز هذه الدراسة في سياق زمني متغير وطويل نسبياً من عدم الاستقرار النقدي، وتعدّد مراجع أسعار الصرف، مما يزيد من عدم اليقين في القياس والرقابة الداخلية. اعتمد البحث منهجية كمية باستخدام تقنية «نمذجة المعادلات الهيكلية بالمرتبعات الصغرى الجزئية» (PLS-SEM) على بيانات استبائية لعينة من مائة شركة غير مالية. أظهرت نتائج الدراسة، أنّ «متغير تعدد أسعار الصرف» هو العامل الرئيسي ذو الأثر المباشر في زيادة التعقيد الإجرائي.

كما تبين لنا أنّ الاستجابات الإدارية للصدمات النقدية تساهم في تعزيز تلك التعقيدات، عبر توسيع نطاق العمليات الحساسة لسعر الصرف، وما يلزمها من عبء محاسبي. وفي المقابل، أثبتت نتائج الاختبارات المعتمدة في البحث تضالّ التأثير المعنوي المباشر لمتغيري «تدهور سعر الصرف في السوق الموازية» و«التخفيض الرسمي لقيمة العملة»، خصوصاً بعد إدراج تأثير

معاملتي «التعدّد» و«الاستجابات التنظيميّة» في النّموذج. كما أكّدت تلك النتائج، أنّ «التعقيد الإجرائي» مُخرَج تنظيمي لأنظمة تعدّد أسعار الصّرف. وعليه، أظهرت الدّراسة أنّ هذا التعدّد يزيد من التعقيد الإجرائي المحاسبي، لا سيّما مع استجابة الإدارة للصدمات النقديّة. وبناءً على النّتائج، توصي الدّراسة بضرورة توحيد أسعار الصّرف، وتبني سياسات رقابيّة شفّافة وموحّدة، بالإضافة إلى تعزيز حوكمة سوق الصّرف الأجنبيّ لاستعادة موثوقيّة القوائم الماليّة. كما تقترح الدّراسة إجراء بحوث مستقبليّة تستخدم تصاميم طوليّة ودمج بيانات تشغيليّة من قطاعات أخرى، وذلك لتعزيز الصّلاحيّة الخارجيّة.

الكلمات المفتاحيّة: تعدّد أسعار الصّرف؛ التعقيد الإجرائي؛ الشركات الصغيرة والمتوسطة؛ لبنان؛ PLS-SEM.

1.Introduction

Multiple exchange rates create an accounting problem before they become a macroeconomic one. When official parities, selective platforms, and free markets coexist, price benchmarks diverge and measurement becomes uncertain. For firms the central question is not which single rate is correct but which rate is enforceable for a given purpose, on a given date, through an accessible channel. In such settings routines change: rate selection by use, tests of exchangeability, documentation of sources, foreign-currency cut-offs, end-of-period remeasurement, and reconciliation. International standards frame these judgments. IAS 21 governs translation and, after the amendments on lack of exchangeability, requires assessment of access to a spot market, estimation of a representative rate when access is absent, and documentation of assumptions (IASB, 2023a). In hyperinflation, IAS 29 requires restatement in units of purchasing power, adding sequences and interfaces across taxation, management, and accounting (IASB, 2023b).

This article takes the procedural complexity of accounting practices as its object of analysis. The focus is on how a multi-rate regime thickens routines inside the accounting and finance function of small and medium-sized enterprises. Lebanon provides a salient context with wide IFRS adoption, professional oversight, and statutory requirements on bookkeeping currency and translation that interact with multiple quotations and episodic non-exchangeability (Ministry of Finance, Lebanon, 1996; Capital Markets Authority, Lebanon, 2017; ALDIC, 2018; IMF, 2019, 2023). Since 2019, firms have faced the coexistence of official and parallel quotations, discrete changes in administered parities, and sustained depreciation, all of which raise the cost of measurement and control (Banque du Liban, 2021; Reuters, 2023; IASB, 2023c).

Two research questions guide the study. First, to what extent do exchange-rate diversification, official devaluation, and currency depreciation increase PC in small and medium-sized enterprises.? Second, which of these monetary shocks most strongly thickens day-to-day routines.?

The motivation is both conceptual and practical. Conceptually, the literature rarely treats PC as an outcome in its own right even though, in a multi-rate regime, it is the primary channel through which monetary shocks are absorbed. Practically, managers need guid-

ance on conversion policies, documentation, and closing routines that preserve discipline under stress while remaining feasible for smaller organizations.

Exchange-rate diversification (DTC) significantly increases the procedural complexity of accounting practices (PC). By contrast, the direct effects of official devaluation (DETC) and currency depreciation (DMN) on PC are not statistically significant once diversification is taken into account. These patterns place accounting complexity at the center of firm adjustment to monetary instability and indicate that the most effective levers are standardizing rate-selection rules, strengthening documentation, and streamlining closing workflows.

The article proceeds by reviewing prior work on exchange-rate regimes and organizational routines, presenting the data and empirical approach, reporting results, and discussing implications for standard-setting and managerial practice before concluding with limitations and avenues for future research.

2. Literature

Research on exchange-rate volatility documents firm-level repercussions through trade, investment, redistribution, and financial channels. In small open economies, undervaluation can support export-led growth through the trade channel (Caldentey and Moreno-Brid, 2019; Moreno-Brid, 1999). Along the investment channel, depreciation may raise profitability when real wages fall, yet the sign depends on the production structure and reliance on imported capital goods, which can compress margins (Bresser-Pereira, 2008; Frenkel and Ros, 2006; Aghion and al., 2001). The redistribution channel links real depreciation to inflationary pressure that lowers real wages, with aggregate growth effects that are not systematic once the labor share is controlled (Alexander, 1952; Ribeiro and al., 2020). The financial channel is central: remeasurement of foreign-currency liabilities weakens net worth, lifts risk premia, and can contract private investment (Bernanke and Gertler, 2000; Bruno and Shin, 2018; Caballero, 2020; Céspedes and al., 2004; Kiyotaki and Moore, 1997; Krugman, 1999). Firm-level evidence mirrors these mechanisms. Companies with dollar liabilities incur losses and cut investment during depreciations, while locally indebted firms are less exposed (Echeverry and al., 2003). Effects are expansionary when flows are naturally matched and contractionary when currency mismatches domi-

nate, though adjustment margins in debt structure and credit access can mute balance-sheet effects (Céspedes and al., 2004; Chang and Velasco, 2000; Bleakley and Cowan, 2008).

Operational choices directly impact a business's exposure and the pass-through of exchange rate fluctuations. The invoicing currency chosen for transactions, along with the use of indexation clauses, determines how currency movements are translated into changes in prices and profit margins. Payment timing and the avoidance of forced conversions at unfavorable rates are decisive, and longer horizons raise uncertainty and the role of judgment (Campa and Goldberg, 2005; Gopinath and al., 2010; Bodnar and Marston, 2002; Eiteman and al., 2019; Friberg and Vredin, 1996). For small and medium-sized enterprises, working-capital discipline is pivotal. Lower days-sales-outstanding, inventory management, renegotiated terms, and hard-currency buffers improve liquidity and reduce transaction exposure, with positive performance effects. Credit tightening and higher borrowing costs widen vulnerability, while access to hedging instruments remains uneven and concentrated in larger firms and deeper financial systems, which forces organizational rather than financial adjustments for smaller firms (Ekanem, 2010; García-Teruel and Martínez-Solano, 2007).

Under IAS 21, accounting for exchange differences is directly tied to the nature and measurement basis of an item. Specifically, monetary items are remeasured at the closing rate, impacting profit or loss, while non-monetary items carried at fair value are translated on the date they were measured. Furthermore, translation differences for foreign operations are subject to their own distinct rules.

The 2023 amendments require assessing exchangeability and, where access to a spot market is not assured, estimating a substitute rate with explicit disclosure. Under very high inflation, IAS 29 mandates restatement in units of purchasing power before translation, which multiplies sequences and creates sensitive interfaces across taxation, management, and accounting. The IMF policy on multiple currency practices underscores that the co-existence of administered and parallel channels fragments benchmarks and complicates measurement under Article VIII commitments (IASB, 2023a, 2023b, 2023c; IMF, 2019, 2023).

These normative references make the procedural complexity of accounting practices (PC)

observable and measurable. When the uniqueness of the rate fractures, firms must evidence the applicability of the chosen rate to the intended use and maintain robust traceability end to end. Decision nodes specified by IAS 21 render these judgments auditable. The literature on crisis and organization explains why turbulence widens the scope for judgment and calls for proportionate rules, controls, and documentation. It emphasizes continuous adaptation of routines, rapid trade-offs under imperfect information, and learning from experience, with particular salience for small and medium-sized enterprises that face tighter liquidity constraints yet can mobilize agility and proximity to markets when planning is explicit and routines are equipped (Denervaud and Tcheng, 2009; Lagadec, 1991; Lesca and Caron-Fasan, 2008; Levratto, 2009; Libaert, 2005; Marchesnay, 1993; Runyan, 2006; Coleman, 2004; Elsubbaugh and al., 2004; Spillan and Hough, 2003; Torrès, 1999).

Comparative evidence from multi-rate and hyperinflationary episodes shows that exchange-rate diversification acts as a durable procedural shock. It multiplies decision nodes, increases remeasurement volume, and raises evidentiary workload, with professional alerts around IAS 29 in countries such as Argentina and Zimbabwe. By contrast, depreciation and devaluation move the price level of the currency. Once conversion policies are stabilized, their incremental effect on routines is weaker than that of fragmentation itself (illustrative practice reports and standard-setting notes around IAS 29 and multiple rate regimes).

3. Problem Statement and Hypotheses

PC is treated here as an autonomous organizational outcome under a multiple exchange-rate regime. Further, it is modeled as a latent construct that reflects judgmental intensity in conversion decisions, the volume of controls and reconciliations, the granularity of rate-application rules, traceability requirements, and the variability of closing routines across periods.

Additionally, we consider three distinct shocks: exchange-rate diversification (DTC), official-rate devaluation (DETC), and currency depreciation (DMN). The DTC shock is conceptualized as a structural driver of procedural thickening, while the DETC and DMN shocks are expected to operate primarily by influencing proactive foreign-exchange risk controls (GPRC). In this perspective, GPRC functions as the organizational channel

through which price-level shocks are absorbed and translated into internal routines. Lack of exchangeability is understood as a contextual factor that amplifies these dynamics rather than as a separate construct.

The analysis is quantitative and focuses strictly on procedural outcomes, leaving aside financial-reporting results. The general proposition is that monetary shocks contribute to higher levels of GPRC and PC, but the magnitude and significance of these effects remain open to empirical testing.

Based on this reasoning, the following hypotheses are tested:

- H1a. DTC exerts a positive direct effect on PC.
- H1b. DETC exerts a positive direct effect on PC.
- H1c. DMN exerts a positive direct effect on PC.
- H2. Higher levels of GPRC increase PC.

4. Survey

The study focuses on non-financial SMEs in Lebanon and uses a diversified random sampling approach to ensure a representative and unbiased sample. This method combines pragmatic stratification by industry with soft quotas based on firm size and location, allowing the researchers to maximize the variety of the data collected and avoid over-representation of any single sector (Royer & Zarlowski, 2007). The questionnaire was administered online following a Tailored Design protocol to enhance coverage and response quality (Dillman and al., 2014). Out of 250 invitations, 100 complete responses were obtained (40% response rate), with a distribution broadly consistent with the national sectoral structure (43% trade, 45% services, 8% industry, 4% agriculture).

The instrument was pretested with five chartered accountants familiar with multiple exchange rate closings, leading to simplifications in wording, harmonization of scales, and clarification of timestamping. All items were measured on a seven-point Likert scale. Data were collected anonymously and cleaned prior to analysis.

Sample adequacy for PLS-SEM was verified through complementary approaches. The 10× rule suggested a minimum of 40–60 cases given the model structure (Barclay and al., 1995; Chin, 1998). Power analysis indicated sufficient sensitivity to detect medium effects

at $n = 100$ (Cohen, 1988; Faul and al., 2009; Hair and al., 2017, 2019, 2022). PLS-specific methods (Kock and Hadaya, 2018) confirmed adequacy, and recent syntheses support robust estimation around this sample size (Hair and al., 2022; Ringle and al., 2024). Sectoral diversity further enhances external relevance.

5. Methodology

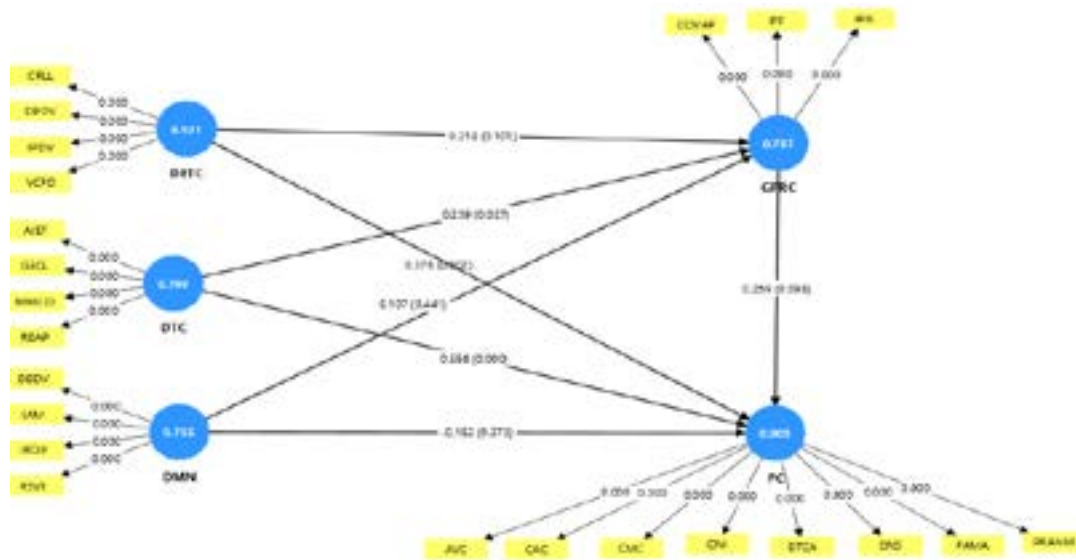
This study adopts a cross-sectional quantitative design and employs partial least squares structural equation modeling (PLS-SEM) using SmartPLS 4. The choice of PLS-SEM is consistent with the predictive orientation of the research, the reflective specification of constructs, and the moderate but adequate sample size (Hair and al., 2017, 2019, 2022; Ringle and al., 2024).

For the analysis, we first cleaned the data, keeping only the complete and coherent responses. Following Churchill's (1979) paradigm, the measurement model was then rigorously assessed to ensure its quality and validity. Exploratory factor analysis (EFA) ensured item adequacy ($KMO \geq 0.60$, Bartlett's test $p < 0.001$; loadings ≥ 0.50). Confirmatory analysis in PLS verified standardized loadings ($\lambda \geq 0.60$), internal consistency reliability using Cronbach's α , ρ_A , and composite reliability (ρ_C) (all within the 0.70–0.95 range), and convergent validity through average variance extracted ($AVE \geq 0.50$). Discriminant validity was examined via the Fornell–Larcker criterion (AVE greater than squared inter-construct correlations) and the heterotrait–monotrait ratio ($HTMT < 0.90$, with bootstrap confidence intervals). Cross-loadings were inspected as an additional check. Collinearity was assessed through inner VIFs, adopting a conservative threshold of 3.3.

The structural model tested the effects of exchange-rate diversification (DTC), market depreciation (DMN), and official devaluation (DETC) on the procedural complexity of accounting practices (PC), as well as the role of proactive foreign-exchange risk management (GPRC) as an organizational mediator. Estimation relied on 5,000 bootstrap resamples (two-tailed, bias-corrected and accelerated confidence intervals, $\alpha = 0.05$). Reported statistics include path coefficients (β), R^2 and adjusted R^2 values, and effect sizes f^2 (with thresholds of 0.02, 0.15, and 0.35). The Tenenhaus GoF is reported for descriptive purposes only. All methodological decisions, from pre-processing to parameter settings, were documented to ensure transparency and replicability.

The following diagram presents the hypothesized relationships among latent variables, without presuming directionality.

Figure 1: Initial model prior to pruning.



6. PLS-SEM Results and Discussion

In line with a parsimony-oriented approach, the structural model was pruned by retaining only paths that satisfied two conditions simultaneously: statistical significance ($p \leq 0.05$) and substantive magnitude ($|\beta| \geq 0.10$). Links not meeting these thresholds were removed. Accordingly, $DMN \rightarrow PC$ ($\beta = 0.152$; $p = 0.373$) and $DETC \rightarrow PC$ ($\beta = 0.107$; $p = 0.441$) were dropped, as their effects were neither significant nor meaningful in size.

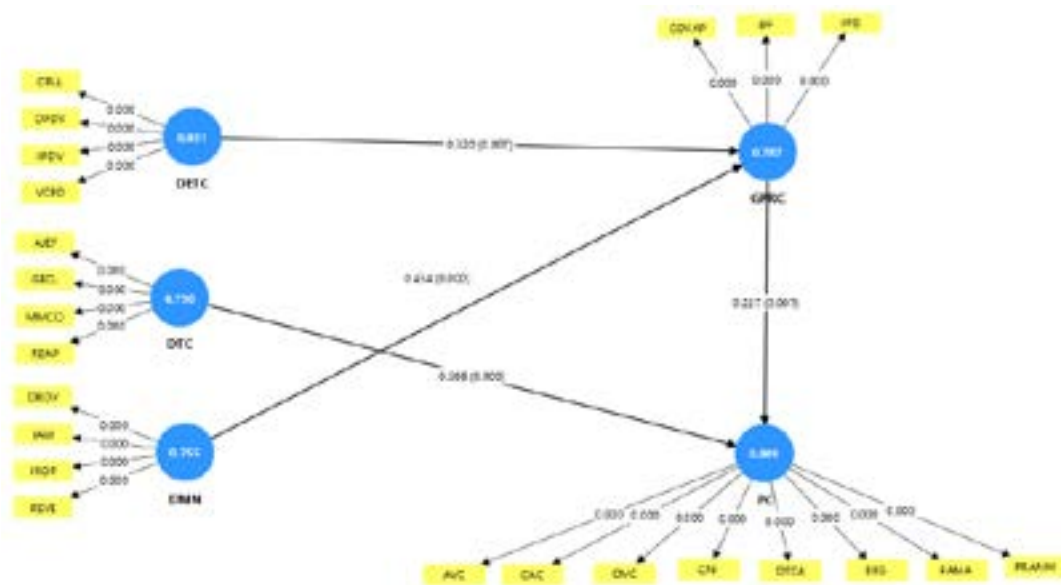
In the initial specification, the co-presence of DTC and DETC as antecedents of GPRC generated a suppression effect: $DETC \rightarrow GPRC$ appeared non-significant ($\beta = 0.214$; $p = 0.101$), while $DTC \rightarrow GPRC$ was significant ($\beta = 0.239$; $p = 0.043$). Consistent with the theoretical rationale—DETC capturing the macroeconomic shock that triggers proactive responses (GPRC) and DTC reflecting procedural frictions that directly affect PC—the $DTC \rightarrow GPRC$ link was removed.

In the re-specified model, $DETC \rightarrow GPRC$ becomes highly significant ($\beta = 0.320$; $p = 0.007$), and $DMN \rightarrow GPRC$ also attains significance ($\beta = 0.434$; $p < 0.001$). Both GPRC

→ PC ($\beta = 0.227$; $p = 0.007$) and DTC → PC ($\beta = 0.566$; $p < 0.001$) confirm that proactive responses and exchange-rate diversification increase procedural complexity. By contrast, the direct effects of DETC and DMN on PC, being marginal and of negligible magnitude, are not retained.

The revised model thus obtained is presented in the following figure.

Figure 2: *Final model after pruning.*



The reliability indices reported in Table 1 confirm satisfactory internal consistency: for all constructs, Cronbach's alpha and composite reliability (ρ_C) exceed 0.75 ($\alpha = 0.755$ – 0.921 ; $\rho_C = 0.841$ – 0.944). Convergent validity is established, with AVEs ranging from 0.572 to 0.809, well above the 0.50 benchmark (Fornell & Larcker, 1981). On the structural side, the endogenous constructs display R^2 values above the 0.24 threshold (GPRC = 0.446; PC = 0.509; Vinzi and al., 2010), while redundancy indices (GPRC = 0.317; PC = 0.318) indicate a non-negligible share of explained information. The overall Goodness-of-Fit (GoF) reaches 0.564 (Tenenhaus and al., 2005), above the 0.36 benchmark of Wetzels and al. (2009), and is reported here for descriptive purposes only.

Table 1: *Quality measures for PLS-SEM model*

| | Cron- bach's alpha | Composite reliability (rho_a) | Composite reliability (rho_c) | Average variance extracted (AVE) | R ² | Communi- ty (AVE) | Redundancy |
|------|--------------------------|-------------------------------------|-------------------------------------|---|----------------|----------------------|------------|
| GPRC | 0.787 | 0.792 | 0.879 | 0.71 | 0.446 | 0.71 | 0.317 |
| PC | 0.909 | 0.93 | 0.928 | 0.625 | 0.509 | 0.625 | 0.318 |
| DETC | 0.921 | 0.925 | 0.944 | 0.809 | | 0.809 | |
| DMN | 0.755 | 0.843 | 0.841 | 0.572 | | 0.572 | |
| DTC | 0.79 | 0.829 | 0.863 | 0.615 | | 0.615 | |
| | | | | | | 0.564 | GOF |

Table 2 highlights positive correlations among all constructs. The strongest associations are observed between DTC and PC ($r = 0.687$), DMN and GPRC ($r = 0.613$), DETC and GPRC ($r = 0.562$), DETC and DMN ($r = 0.558$), and DTC and GPRC ($r = 0.537$). GPRC–PC ($r = 0.530$) and DETC–DTC ($r = 0.548$) fall within the moderate-to-strong range, while DETC–PC ($r = 0.475$) and DMN–DTC ($r = 0.465$) are more moderate. The weakest association is between DMN and PC ($r = 0.332$). Overall, this pattern supports the theoretical framework: rate diversification (DTC) is closely linked to procedural thickening (PC), while exchange-rate shocks (DETC, DMN) co-evolve with managerial responses (GPRC).

Table 2: *Correlations between latent variables.*

| Latent variables - correlations | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|
| | DETC | DMN | DTC | GPRC | PC |
| DETC | 1 | 0.558 | 0.548 | 0.562 | 0.475 |
| DMN | 0.558 | 1 | 0.465 | 0.613 | 0.332 |
| DTC | 0.548 | 0.465 | 1 | 0.537 | 0.687 |
| GPRC | 0.562 | 0.613 | 0.537 | 1 | 0.53 |
| PC | 0.475 | 0.332 | 0.687 | 0.53 | 1 |

Discriminant validity was assessed using the Heterotrait–Monotrait (HTMT) criterion (Henseler, Ringle, & Sarstedt, 2015). All HTMT ratios fall below the recommended thresholds (0.85 for strict, 0.90 for liberal), ranging from 0.380 (DMN–PC) to 0.766 (DTC–PC). Other key associations, such as DETC–DMN (0.634), DETC–GPRC (0.656), DMN–GPRC (0.740), DTC–GPRC (0.665), and GPRC–PC (0.612), remain comfortably within acceptable bounds. These results confirm that the constructs are empirically distinct

and free of problematic conceptual overlap.

Table 3: *Discriminant Validity: HTMT Ratios Between Latent Constructs*

| | DETC | DMN | DTC | GPRC | PC |
|------|-------|-------|-------|-------|----|
| DETC | | | | | |
| DMN | 0.634 | | | | |
| DTC | 0.62 | 0.552 | | | |
| GPRC | 0.656 | 0.74 | 0.665 | | |
| PC | 0.483 | 0.38 | 0.766 | 0.612 | |

Prior to estimating the structural paths, multicollinearity among predictors was examined using inner VIFs in SmartPLS 4. In line with established guidelines (Hair and al., 2017, 2022), we adopt a conservative cutoff of $VIF < 3.3$, although values below 5 are generally considered acceptable.

Table 4: *Inner VIFs*

| Endogenous construct | Predictor | Inner VIF |
|----------------------|-----------|-----------|
| GPRC | DETC | 1.452 |
| | DMN | 1.452 |
| PC | DTC | 1.405 |
| | GPRC | 1.405 |

The lack of multicollinearity ($VIF_{\min} = 1.405$; $VIF_{\max} = 1.452$) supports the validity of the structural path estimates.

Bootstrapping and final structural paths

A bootstrap procedure (5,000 resamples; two-tailed tests; $\alpha = 0.05$) was applied to assess the stability of the path coefficients. In line with the retained criteria ($|t| \geq 1.96$; $p < 0.05$), non-significant links were pruned. The final structural model retains four significant direct relations:

Table 5: *Summary of hypothesis testing*

| | O r i g i n a l s a m p l e (O) | S a m p l e m e a n (M) | Standard devi- ation (STDEV) | T statistics (O/ST- DEV) | P values |
|------------------------|--|--|---|---------------------------------------|-----------------|
| DETC -> GPRC | 0.32 | 0.322 | 0.119 | 2.691 | 0.007 |
| DMN -> GPRC | 0.434 | 0.453 | 0.113 | 3.856 | 0 |
| DTC -> PC | 0.566 | 0.585 | 0.134 | 4.221 | 0 |
| GPRC -> PC | 0.227 | 0.213 | 0.084 | 2.702 | 0.007 |

Note: The significance threshold was set at $\alpha = 0.05$; effects with $0.05 \leq p < 0.10$ are reported as marginal evidence.

The structural model highlights that official devaluation and market depreciation are significant determinants of proactive foreign-exchange risk management. Devaluation has a positive effect on GPRC ($\beta = 0.320$, $p = 0.007$) and depreciation shows an even stronger effect ($\beta = 0.434$, $p < 0.001$). By contrast, the path from diversification to GPRC was dropped during re-specification.

These findings indicate that macroeconomic shocks stimulate defensive managerial routines, while diversification acts primarily as a structural friction rather than a trigger of proactive responses.

Turning to procedural complexity, the outcome of interest, the analysis reveals that rate diversification exerts a strong direct effect ($\beta = 0.566$, $t = 4.221$, $p < 0.001$). Proactive foreign-exchange risk management also contributes positively, although the effect is smaller ($\beta = 0.227$, $t = 2.702$, $p = 0.007$). Both hypotheses regarding $DTC \rightarrow PC$ and $GPRC \rightarrow PC$ are therefore confirmed. By contrast, the direct path from devaluation to PC is not significant ($\beta = 0.073$, $p = 0.056$), and the depreciation $\rightarrow PC$ path was removed for non-significance.

These results indicate that the effects of devaluation and depreciation on procedural complexity are essentially indirect and mediated through proactive management, while diversification remains the dominant direct driver.

These patterns are consistent with theoretical expectations. Continuous depreciation cre-

ates margin uncertainty, institutionalizes protection routines, and validates the mechanism anticipated by relative purchasing power parity, while discrete devaluation shocks trigger rapid, event-driven responses, in line with uncovered interest parity and overshooting dynamics.

At the accounting level, diversification reconfigures measurement by multiplying conversion nodes, generating additional reconciliations, and requiring enhanced documentation in line with IAS 21 and the Lack of Exchangeability amendment. These mechanisms explain why diversification exerts the strongest direct influence on procedural complexity.

Empirically, Lebanese SMEs adapted to devaluation and depreciation by repricing transactions in foreign currency, dollarizing cash holdings, deleveraging in hard currency, and freezing capital expenditures. These strategies preserved liquidity and flexibility but also multiplied accounting decisions and reinforced traceability once integrated into organizational routines.

So, when uncertainty increases, organizations tend to tighten their controls. Proactive risk management, in this context, acts as a procedural amplifier. It speeds up and expands accounting processes, aligning with the principles of contingency theory, which suggests that organizations intensify controls as a response to uncertainty.

7. Conclusion

This study demonstrates that in a multiple exchange-rate regime procedural complexity emerges as a distinct organizational outcome of monetary shocks. Exchange-rate diversification is the strongest direct determinant, as it multiplies conversion decisions, reconciliations, and documentation requirements, thereby institutionalizing procedural workload. Proactive foreign-exchange risk management also contributes positively by amplifying the number of rate-sensitive events across operating cycles.

By contrast, official devaluation and market depreciation do not exert significant direct effects on procedural complexity once diversification and risk management are considered, their influence being channeled indirectly through organizational responses.

The findings contribute to the literature by shifting the focus from macro-financial impacts of exchange-rate shocks to their micro-procedural translation within accounting systems. They distinguish between structural shocks that reconfigure accounting routines and level shocks that activate managerial practices, thereby densifying control and traceability.

Empirically, the study provides micro-founded evidence from Lebanese SMEs, linking monetary instability to observable accounting practices through advanced structural modelling.

From a managerial perspective, the results underscore the need for formal and traceable conversion policies, standardized controls, and proportionate risk-management protocols capable of absorbing shocks without generating excessive closing costs.

At the macro level, the evidence supports the importance of exchange-rate unification under a transparent monetary framework and the daily publication of reliable data, which are essential conditions for restoring the enforceability of financial statements.

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Appendix A – Measurement items and constructs

Table A1 presents the list of constructs used in the PLS-SEM model, along with their associated measurement items and brief descriptions. These items were developed based on the literature review and adapted to the specific context of Lebanese SMEs operating under a multiple exchange-rate regime. Each item corresponds to a reflective indicator measured using a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree).

Table A1: *List of all variables and abbreviations*

| Construct | Item | Description |
|--|-------|--|
| DETC – Currency devaluation | DPDV | Losses from foreign currency operations due to official rate devaluation |
| | CRLI | Higher repayment costs in LBP due to devaluation |
| | VCPD | Increase in book value of foreign currency liabilities after devaluation |
| | IPDV | Reduced capacity to meet foreign currency obligations |
| DTC – Exchange rate diversification | AJEF | Frequent adjustments to financial statements for multiple exchange rates |
| | GECL | More end-of-period accounting entries due to rate changes |
| | MMCO | Adaptation of accounting methods to multiple rates |
| | REAP | Revaluation of assets and liabilities according to the applicable rate |
| DMN – Currency depreciation | IAM | Decline in real value of monetary assets |
| | IROP | Decline in operational profitability from depreciation |
| | RSVE | Reduction in purchasing power due to depreciation |
| | DBDV | Reduced real value of converted FX revenues |
| GPRC – Proactive FX risk management | COVAP | Adjustment of prices in foreign currency to mitigate risk |
| | IPF | Limited access to financing in foreign currency |
| | IPIS | Reduction or postponement of strategic investments |
| PC – Procedural complexity of accounting processes | AVC | Regular update of conversion rates in accounting records |

| Construct | Item | Description |
|-----------|-------|--|
| | CAC | Additional adjustment entries are required due to multiple rates |
| | CEC | Systematic classification of exchange differences in accounts |
| | CMC | Cross-checks and reconciliations between accounting modules |
| | CNI | Maintaining documented procedures to ensure IFRS compliance increases workload |
| | DTCA | Determination of the most appropriate rate for transactions |
| | ERG | Sensitivity analyses of reported profit to the FX rate selected |
| | PAMA | Reassessing depreciation methods when FX effects materially alter cost bases |
| | PRANM | Assessing whether to revalue non-monetary assets under multiple rates |