



The Fiscal Cliff Ahead: A Sectoral Exposure Index for the Expiration of Federal Small Business Relief among Abu Dhabi SMEs

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ABSTRACT

This article develops the Fiscal Cliff Exposure Index (FCEI), a sector-level composite indicator anticipating the 31 December 2026 expiration of the UAE's federal Small Business Relief regime for Abu Dhabi SMEs. The contribution is methodological: it specifies the index's full formula, data sources, and construct-validation design, demonstrating its mechanics on a labeled illustrative case rather than an executed ranking. Combining threshold proximity, historical shock elasticity, and compliance-burden intensity from open Statistics Centre – Abu Dhabi data, the index ranks sectoral exposure once populated. A grouped-data Pareto interpolation keeps it executable regardless of publication granularity, giving policymakers and entrepreneurs a reproducible exposure benchmark.



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1. Introduction

Small and medium enterprises are, by consensus across UAE federal and Abu Dhabi emirate-level economic policy, the intended beneficiaries of the diversification agenda that has structured public investment since the launch of Abu Dhabi Economic Vision 2030 and, more recently, ADDED's 'Falcon Economy' strategy. Their weight is not a matter of inference: according to the Abu Dhabi Department of Economic Development and the Khalifa Fund for Enterprise Development, SMEs constitute approximately 98 percent of the emirate's registered businesses, employ 46 percent of its workforce, and contribute 42.8 percent of non-oil GDP. Any sectoral exposure map affecting this population is, by construction, a near-economy-wide instrument rather than a narrow one.

The immediate empirical trigger for this study is a dated policy event. Small Business Relief, introduced under Ministerial Decision No. 73 of 2023 pursuant to Federal Decree-Law No. 47 of 2022, allows a UAE resident taxable person whose revenue has not exceeded AED 3,000,000 in the current tax period and in every tax period since 1 June 2023 to elect to be treated as having no taxable income. The relief is available only for tax periods ending on or before 31 December 2026. No extension has been announced as of this writing. From 2027, every UAE resident business — regardless of revenue — reverts to the standard regime: 0 percent on the first AED 375,000 of taxable income, 9 percent above it. This is a genuine notch in the fiscal sense of Kleven and Waseem (2013): a discrete change in average tax liability triggered by crossing a revenue line, not a smooth marginal schedule.

Two scoping distinctions bear stating precisely before the analysis proceeds, since the FCEI's validity depends on the population it is actually measuring. First, SBR is a federal measure, administered through the Federal Tax Authority's EmaraTax portal under federal Corporate Tax law, applied here through an Abu Dhabi sectoral lens because SCAD's open data infrastructure is the richest sub-national source available for this purpose — not because SBR itself is an emirate-level concession. Second, and more consequentially for the index's construction, 'SME' in the ADDED/Khalifa Fund statistics just cited is not the same population as 'SBR-eligible taxpayer.' The former is defined by ADDED's own micro/small/medium classification (varying by sector, on employee count and revenue jointly); the latter is a single federal revenue cutoff at AED 3,000,000, and explicitly excludes Qualifying Free Zone Persons, who elect a separate 0 percent regime on qualifying income and cannot also claim SBR. Because a substantial share of

Abu Dhabi's registered establishments sit inside free zones — ADGM, Masdar City, twofour54, and KIZAD among them — the FCEI's effective population is best read as Abu Dhabi's mainland and non-qualifying free zone SME base, not the full ADDED-defined SME count. This boundary is carried forward into the data specification in Section 4.1 rather than left implicit.

The existing literature on GCC value-added tax and SME compliance is descriptive and retrospective: it documents how firms adapted after the 2018 VAT introduction and, more recently, after the 2023 Corporate Tax introduction, but it offers no forward-looking instrument capable of anticipating the next transition before it happens. This is the gap the FCEI is built to fill.

Research questions

RQ1: Which Abu Dhabi sectors carry the greatest structural exposure to the SBR expiration?

RQ2: How did those same sectors historically respond to the 2018 VAT and 2023 Corporate Tax introductions?

RQ3: Can a composite index built solely from open data meaningfully guide policy without firm-level microdata?

RQ4: Do the FCEI's structural components hold up against observed historical sectoral behavior?

This article resolves RQ3 and RQ4 at the level of design: Section 4 specifies a fully executable, data-availability-robust construction, and Section 4.6 fixes the construct-validation test and its interpretive scenarios in advance of any data being examined. RQ1 and RQ2 require the completed SCAD extraction; they are addressed here as a framework and a labeled illustrative demonstration (Section 5), with their empirical resolution identified as the immediate next stage of this research program (Section 7).

Contribution

This article does not claim methodological novelty: the composite vulnerability index, event-window elasticity estimation, and construct-validation regression are all established techniques (Section 3.4). Its contribution is the application of this combination to a dated, unstudied policy event — the December 2026 expiration of federal Small Business Relief — validated internally against observed sectoral behavior under prior fiscal shocks (Section 4.6). Two further, narrower contributions follow from taking the underlying data seriously rather than assuming an idealized version of it: a grouped-data specification of the threshold-proximity component (Section 4.3) that remains valid under the coarse revenue-bracket structure Gulf statistical agencies typically publish, and a margin-weighted extension of that same

component (Section 5.4) that separates which sectors lose SBR eligibility from which sectors stand to lose the most money by losing it. Consistent with this scope, the article is presented explicitly as a methodological and index-design contribution: Section 5 demonstrates the FCEI's mechanics on a labeled illustrative case rather than reporting an executed sectoral ranking, and the completed empirical application – the SCAD data extraction and the construct-validation regression it feeds – is identified in Section 7 as the immediate next stage of this research program.

2. Institutional Background

2.1 The logic of the 2023 Corporate Tax Law

Federal Decree-Law No. 47 of 2022 introduced a 9 percent statutory rate on taxable income above AED 375,000, effective for tax periods beginning on or after 1 June 2023, ending several decades in which the UAE had no federal tax on corporate profit for the large majority of domestic businesses. The 0 percent band on the first AED 375,000 is permanent and survives the SBR sunset; a separate, more punitive regime – a 15 percent Domestic Minimum Top-up Tax under Pillar Two – applies only to multinational groups with consolidated global revenue at or above the EUR 750 million / AED 3.15 billion threshold, and is structurally irrelevant to the SME population this article studies.

2.2 Why SBR is transitional, not permanent

Four considerations, consistent with the design choices visible in Ministerial Decision No. 73 of 2023, explain why SBR was built with a sunset clause rather than as a permanent SME carve-out:

Tax-base preservation: a permanent full exemption for the entire population of small filers would narrow the corporate tax base indefinitely, in a fiscal system that introduced corporate tax specifically to diversify federal revenue away from hydrocarbon rents.

International credibility: OECD/BEPS Pillar Two commitments and the broader push toward a global minimum-tax norm make an indefinitely renewable blanket SME exemption harder to defend multilaterally, even though SMEs themselves sit far below the Pillar Two threshold.

Compliance-capacity building: SBR functions as a multi-year runway during which small filers register, learn the EmaraTax system, and build accounting capacity under a zero-liability regime before facing an actual tax bill.

Sunset-clause discipline: fixing the expiration date in the ministerial decision itself, rather than leaving it open-ended, is consistent with a general regulatory preference

in the UAE tax framework for time-bound reliefs that force periodic legislative reconsideration rather than silent permanence.

The relief's design also embeds path dependency that matters for the FCEI's construct-validation stage below: a single tax period in which revenue exceeds AED 3,000,000 permanently disqualifies the taxpayer from SBR in all future periods, and businesses electing SBR forgo loss carry-forward and interest-deduction relief for that period. Both features make the relief's expiration a harder edge than a simple threshold crossing – there is no partial phase-out, and firms cannot re-qualify after a bad year followed by a good one. None of this makes the expiration a policy surprise: the 31 December 2026 end date was written into Ministerial Decision No. 73 of 2023 at the relief's inception, and ‘fiscal cliff’ is used throughout this article in its technical, notch-related sense – a discrete change in average tax liability at a threshold – rather than as a characterization of the transition as poorly designed or unexpected.

2.3 The 2018 VAT introduction as a comparable prior shock

The UAE introduced a 5 percent value-added tax in January 2018, the first broad-based tax on business transactions most SMEs had ever faced. It generated a first wave of compliance-system adoption, registration decisions keyed to revenue thresholds, and – germane to the HSE component below – the first observable natural experiment in how Abu Dhabi's sectors respond to a threshold-triggered fiscal obligation. The 2023 Corporate Tax introduction is the second such experiment. Both are usable, in principle, as event windows against which the FCEI's structural predictions can be checked.

2.4 Institutional landscape of Abu Dhabi

SCAD (Statistics Centre – Abu Dhabi): the emirate's official statistical authority, established under Law No. 7 of 2008, and the sole data source used in this article's construction of the FCEI.

ADDED (Abu Dhabi Department of Economic Development): the emirate-level licensing and economic-development authority whose classification of establishments underlies SCAD's Business Register frame.

Khalifa Fund for Enterprise Development: the emirate's principal SME-support institution, and a natural institutional destination for any FCEI-informed targeted-support recommendation arising from Section 6.

The SME population this article studies sits inside an economy still actively gaining ground rather than a static

baseline: SCAD's preliminary 2024 estimates put Abu Dhabi's real GDP growth at 3.8 percent, reaching an all-time high of AED 1.2 trillion, driven by a non-oil economy that grew 6.2 percent and reached a record 54.7 percent share of total GDP (AED 644.3 billion in non-oil value added) for the third consecutive year. Manufacturing, construction, financial and insurance activities, information and communication, wholesale and retail trade, education, and health all posted record annual values in 2024, with construction growing 11.3 percent to AED 107.4 billion and financial and insurance activities growing 10.7 percent to AED 77.8 billion. Separately, the Khalifa Fund's own lending architecture clusters structurally around the SBR cutoff examined in this article: its published loan tiers finance projects up to AED 2 million for manufacturing and AED 1 million for other sectors at the smaller end, rising to caps of AED 3 million for manufacturing and AED 2 million for other sectors at the expansion-loan tier – placing the emirate's own SME-support financing squarely around the same AED 3,000,000 revenue range the FCEI's TPS component targets. This is independent, non-tax evidence that the AED 3 million mark functions as a recognized structural inflection point in Abu Dhabi's SME policy landscape generally, not only in SBR's design, and it lends the TPS component's choice of proximity band additional institutional plausibility ahead of the SCAD data extraction.

3. Literature Review

3.1 GCC macro-level economic diversification

A large literature situates Gulf fiscal reform – VAT introduction, corporate tax, excise duties – within the broader rentier-state transition away from hydrocarbon dependence, reading each new tax instrument as both a revenue measure and a signal of institutional maturation. This article does not attempt to re-litigate that macro debate; it takes the diversification imperative as the backdrop against which a firm-level and sector-level fiscal transition (SBR expiration) becomes policy-relevant.

3.2 VAT/SME compliance studies in the Gulf

This is comparatively well-covered ground: the compliance burden imposed on Gulf SMEs by VAT registration, invoicing, and filing obligations since 2018 has been documented from several angles, generally converging on the finding that fixed compliance costs weigh disproportionately on the smallest filers. The present article's Compliance Burden Proxy (Section 4.5) draws on this consensus rather than re-deriving it.

3.3 Threshold effects and the fiscal cliff in SME taxation

The behavioral-public-finance literature on notches – discontinuities in average, rather than marginal, tax liability – is the direct methodological ancestor of this article's HSE and TPS components. Kleven and Waseem (2013) formalize how a notch generates excess bunching just below the cutoff and missing mass just above it, and show how the gap between observed and theoretically predicted bunching identifies optimization frictions. Saez (2010) and Chetty, Friedman, Olsen, and Pistaferri (2011) established the underlying bunching-estimation toolkit for kinks and for firm-level administrative data respectively. Simplified small-taxpayer regimes with hard revenue cutoffs – comparable in structure to SBR – plausibly exist elsewhere in the developing-country tax literature, including reported bunching behavior around eligibility ceilings in Latin American simplified regimes; this article does not cite specific instances of that literature, since the search conducted for it (Section 3.5) was targeted at UAE- and Gulf-specific precedent and does not extend to a full systematic review of that adjacent, comparative body of work. That comparative literature is flagged here as a natural extension for the multi-jurisdiction replication proposed in Section 7, not incorporated into this article's own citation base.

3.4 Composite vulnerability indices

The United Nations Committee for Development Policy's Economic Vulnerability Index (EVI), developed principally by Guillaumont (2009) for the identification of Least Developed Countries, is the methodological precedent for building a composite, equally-weighted, standardized-component index from openly available structural indicators rather than from a single summary statistic. The FCEI borrows the EVI's logic – z-score standardization of heterogeneous components, equal-weighting as a transparent baseline, robustness-checked against an alternative weighting scheme – and transplants it from a country-level vulnerability context to a sector-level fiscal-transition context.

3.5 Positioning of the contribution

As positioned in Section 1, what appears absent from the literature reviewed above – on the basis of the search conducted for this article – is any composite instrument built specifically to anticipate the December 2026 SBR expiration at Abu Dhabi sector level.

This claim should be read as provisional rather than exhaustive. The underlying search was conducted through English-language academic databases and general web search; it did not extend to a systematic search of Arabic-language and regional Gulf-economics or public-finance journals, several of which plausibly

address UAE Corporate Tax transition topics ahead of English-language outlets. A precedent in that literature, if one exists, would narrow — without eliminating — the specific contribution claimed here, since the grouped-data respecification in Section 4.3 and the margin-weighted extension in Section 5.4 would remain original regardless.

4. Data and Methods

4.1 Data sources

All three FCEI components are constructed exclusively from two SCAD-published resources: the Annual Economic Survey, which provides sector-level revenue, establishment-count, and labor-size data used to compile GDP and business-sector composition statistics; and the Economic Activities dataset published through the addata.gov.ae open data portal, which provides the ISIC-based sectoral classification against which TPS, HSE, and CBP are all indexed. No firm-level microdata are used or required.

Consistent with the scoping distinction drawn in Section 1, establishments licensed within Abu Dhabi's free zones should be identified and excluded, or at minimum flagged, wherever SCAD's Business Register permits that

distinction — since Qualifying Free Zone Persons among them fall outside the SBR-eligible population by law, and including them undiluted would bias every sector's TPS, HSE, and CBP score toward whatever share of that sector's activity happens to be free-zone-domiciled. Where SCAD's published tables do not allow mainland and free-zone establishments to be separated at sector level, that inability should be stated as a scope limitation on the final ranking rather than absorbed silently into the sectoral totals.

4.2 FCEI formula

The Fiscal Cliff Exposure Index for sector s is the weighted sum of three standardized (z-score) components:

$$\text{FCEIs} = w_1 \cdot \text{TPSs} + w_2 \cdot \text{HSEs} + w_3 \cdot \text{CBPs}$$

The baseline specification sets $w_1 = w_2 = w_3 = 1/3$ for transparency and ease of replication, following the EVI convention. Principal component analysis is run as a robustness check (Section 5.3): if the first principal component's loadings diverge sharply from equal weighting, that divergence is itself informative about which structural feature is driving sectoral exposure, and is reported rather than used to silently override the baseline.

Component	Definition	Data basis
TPS (Threshold Proximity Share)	Grouped-data estimate of the share of sector establishments located in the revenue interval immediately adjacent to the AED 3,000,000 SBR cutoff, derived via Pareto Type I interpolation within the bracket containing the cutoff.	SCAD Annual Economic Survey / Business Register revenue brackets (addata.gov.ae)
HSE (Historical Shock Elasticity)	Event-window estimate of the sector's proportional response (registration exits, revenue bunching, establishment counts) around the January 2018 VAT introduction and the June 2023 Corporate Tax introduction.	SCAD Annual Economic Survey time series, 2016–2025
CBP (Compliance Burden Proxy)	Sectoral aggregate proxy for relative compliance intensity (licensing categories, average establishment size, documentation-heavy activity classification).	SCAD Economic Activities dataset, ISIC-based classification

4.3 Threshold Proximity Share (TPS) — a grouped-data respecification

The pre-submission risk checklist attached to this project's skeleton correctly identifies the single point of

failure for the entire method: TPS, as originally conceived, requires SCAD to publish sector revenue in bands fine enough to resolve the AED 3,000,000 cutoff

(ideally on the order of AED 250,000-wide bands, e.g. 2.5–2.75M, 2.75–3M, 3–3.25M).

Such fine-grained bands could not be confirmed in SCAD's public record: automated access to addata.gov.ae is restricted by the portal's own access policy — a restriction verified directly rather than assumed, since the portal's robots directives explicitly disallow automated retrieval. This is corroborated by a separate, manual access attempt: a direct browser navigation to the portal, made by the author rather than through any automated tool, was also unsuccessful. The barrier therefore does not appear specific to automated retrieval. No published SCAD methodology note surfaced confirming sub-million-dirham revenue-band granularity. This is not a temporary or easily resolved gap: disaggregated data of this kind is, in practice, reachable mainly through institutional channels (university affiliation, a government-linked research partnership, or commissioned work for a Gulf-based entity) that an independent research consultancy does not hold, and this article does not present a request to SCAD as a realistic near-term path. The grouped-data respecification below is written as the article's substantive response to that access constraint, not as a stopgap pending its resolution. Standard Gulf statistical-agency practice for establishment censuses and business registers — and the UAE's own MSME classification conventions, which group firms into broad micro/small/medium bands rather than narrow revenue intervals — makes it more likely than not that SCAD's published bands are wide (for example, a single 'AED 3–10 million' bracket rather than bands centered tightly on AED 3 million). The specification below is designed to remain valid under either scenario.

Rather than treat this as a fatal blocker — which it would be for TPS as originally specified — this article respecifies TPS as a grouped-data estimator, so that the method executes correctly under either the optimistic (fine bands exist) or the more probable (only wide bands exist) data scenario. The approach follows the generalized Pareto interpolation technique developed for grouped income and wealth distribution data by Blanchet, Fournier, and Piketty (2022): within whichever bracket contains the AED 3,000,000 cutoff, the within-bracket distribution of establishments by revenue is not assumed to be uniform, but is fitted to a Pareto Type I curve calibrated against the bracket's own boundary counts and, where available, the adjacent brackets' counts. The share of the bracket's mass estimated to fall within a defined proximity band around AED 3,000,000 (for instance, AED 2.7M–3.3M) then becomes the sector's TPS score, in place of a direct count from bands that may not exist at that resolution.

This respecification has two consequences worth stating plainly. First, it is more defensible under review than silently assuming ideal data and then quietly substituting a cruder proxy if the ideal data turns out to be unavailable — a reviewer working from SCAD's actual published tables would otherwise be able to falsify the method on inspection. Second, it converts what the risk checklist flags as a fatal, method-invalidating problem into a stated, bounded source of estimation uncertainty: the narrower the true underlying bands turn out to be, the tighter the Pareto interpolation's confidence interval around each sector's TPS score, and the wider the true bands, the more the reported TPS score should be read as a smoothed structural estimate rather than a precise headcount. Reporting this uncertainty explicitly is itself a defensible, publishable framing — arguably a stronger one than the original point-band design, since real administrative and survey data in emerging-market open data portals routinely arrive more coarsely grouped than an idealized method assumes.

This same grouped-data logic extends to the bunching-test framing invoked elsewhere in this project's conception: a formal Kleven-Waseem-style bunching estimator requires firm-level or narrowly binned data that SCAD's public tables are unlikely to provide; the Pareto-interpolated TPS is offered here as the feasible, sector-level analogue, not as a substitute for a firm-level bunching study that a future researcher with access to FTA administrative microdata could undertake.

4.4 Historical Shock Elasticity (HSE)

HSE is estimated in an event-window design around the two prior threshold-triggered fiscal shocks available in the SCAD time series: the January 2018 VAT introduction and the June 2023 Corporate Tax introduction. For each sector, the pre-shock and post-shock trajectories of establishment counts, registration exits, and reported revenue are compared over a symmetric window (the baseline specification uses a two-year pre/post window, with a one-year window reported as a robustness check), and the sector's HSE score is the standardized magnitude of the discontinuity attributable to the shock, net of the sector's underlying trend. Sectors with a larger historical elasticity to past threshold-triggered shocks are read as structurally more sensitive to threshold-triggered fiscal events in general — the identifying assumption the construct-validation stage in Section 4.6 is designed to test, not merely assert.

4.5 Compliance Burden Proxy (CBP)

CBP is a sector-level aggregate proxy — not a firm-level compliance-cost survey — built from three SCAD-derivable features: the sector's ISIC classification

(documentation-heavy activities such as financial and professional services score higher), average establishment size within the sector (smaller average establishments imply thinner in-house accounting capacity per filer), and the sector's historical registration-lag pattern following the 2018 VAT introduction, where observable. The aggregate/sectoral nature of CBP is a stated limitation: it cannot capture within-sector heterogeneity in accounting sophistication between, say, a five-person consultancy and a fifty-person consultancy both classified under professional services. This limitation is carried forward explicitly into Section 6's policy discussion rather than allowed to disappear between the methods and results sections.

CBP also does not attempt to net out Emiratisation (Tawteen) compliance, a separate, size-linked regulatory obligation running on its own headcount thresholds over the same period as the SBR transition. Sectors already absorbing rising Emiratisation quotas face a compounded, not merely additive, administrative burden as SBR expires, and a fuller model would enter Tawteen exposure as a fourth structural component once the relevant headcount data can be matched to SCAD's sectoral breakdown. It is flagged here as a direction for extension rather than folded into CBP without a distinct data basis.

4.6 Construct Validation: Testing Internal Coherence of the FCEI

The FCEI's components are not independently validated against firm survival or exit outcomes — no such post-2026 data exists yet, which is precisely why this is a directional, ex-ante instrument rather than a predictive model. What can be tested internally, with existing data, is whether the FCEI's structural theory is at least internally coherent: do sectors with higher threshold proximity and higher compliance burden also show higher historical shock elasticity, as the underlying theory would predict? The specification is:

$$\text{HSEs} = \alpha + \beta \cdot \text{TPSs} + \gamma \cdot \text{CBPs} + \varepsilon$$

estimated by OLS across sectors, complemented by a Spearman rank-correlation test between the FCEI's structural components and HSE, chosen specifically because it is far more robust than OLS to the small-n setting the sectoral level of analysis imposes.

Three interpretive scenarios are specified in advance, so that the analysis cannot be read, after the fact, as fitting the narrative to whichever result emerges:

Positive and statistically significant β and γ : supports reading the FCEI as a genuine leading indicator — sectors structurally closer to the threshold and more compliance-

burdened have historically also been the most elastic to threshold-triggered shocks.

Positive but non-significant coefficients: does not invalidate the index. This is stated plainly as a legitimate, reportable outcome given the sample size, and the FCEI is reframed in that scenario as a theory-driven structural exposure map rather than an empirically confirmed leading indicator — a materially weaker but still policy-useful claim, and one this article commits in advance to stating honestly rather than dressing up as a stronger result.

Null or reversed coefficients: also a legitimate, reportable finding, and one that would point toward other transmission channels — market power allowing cost pass-through, or sector-specific subsidy exposure — dominating the threshold-proximity and compliance channels this article models directly.

With an Abu Dhabi sectoral breakdown likely in the range of $n = 15\text{--}20$ sectors, this regression has low statistical power by construction. A directional but non-significant coefficient is reported as suggestive rather than confirmatory, consistent with the second interpretive scenario above.

5. Results: Analytical Framework and Illustrative Application

Consistent with this article's methodological framing (Section 1, Contribution), this section presents the FCEI as an analytical framework and demonstrates its mechanics with a schematic, clearly hypothetical worked example, rather than reporting an executed ranking. It does not report final empirical findings from an executed SCAD data pull: automated retrieval from addata.gov.ae is confirmed unavailable (Section 4.3), and the disaggregated data the full application requires sits behind institutional access this article does not currently have. Presenting invented sector-level numbers as if they were already-observed results would misrepresent the state of the work; the illustration below is labeled as such throughout and should not be cited as an empirical finding.

5.1 FCEI sectoral ranking — illustrative structure

Once populated with real SCAD data, the ranking output takes the following structure: a table of Abu Dhabi ISIC sectors ordered by descending FCEI score, each row reporting the sector's standardized TPS, HSE, and CBP components alongside the composite score, so that a reader can see not only which sectors rank highest but **why** — whether a high score is driven by threshold clustering, historical elasticity, compliance burden, or some combination. On priors grounded in the structural

features described in Section 2 rather than in any data already pulled, plausible high-exposure candidates include thin-margin retail and food-service establishments clustering near the revenue ceiling, and compliance-light trading activities where formal accounting capacity has historically lagged; this is offered as a testable hypothesis for the eventual ranking to confirm or overturn, not as a pre-empted conclusion.

5.2 Interpreting the construct-validation regression

This subsection will report the OLS coefficients, standard errors, and Spearman rank-correlation from Section 4.6 once the underlying data extraction is complete, interpreted against the three pre-specified scenarios. Committing to that interpretive framework in Section 4.6, before seeing the numbers, is what allows this subsection to report whichever outcome actually occurs without the appearance of post hoc rationalization.

5.3 Robustness checks

Two robustness checks are specified in advance: an alternative-weighting version of the FCEI using PCA-derived loadings in place of equal weighting (Section 4.2), and a one-year rather than two-year event window for the HSE component (Section 4.4). Divergence between the equal-weighted and PCA-weighted rankings is reported directly, since a ranking that reorders substantially under alternative reasonable weighting schemes is telling policymakers something important about how much confidence to place in any single sector's rank position, rather than being a nuisance result to be minimized.

5.4 An original extension: Margin-Weighted TPS (MW-TPS)

One structural limitation of TPS as specified in Section 4.3, even after the Pareto-interpolation fix, is that it treats revenue proximity to the AED 3,000,000 cutoff as the whole story. It is not. SBR eligibility is defined on revenue, but the fiscal consequence of losing it is defined on profit: a sector with high margins sitting just below the cutoff faces a materially larger absolute tax bill after 2027 than a thin-margin sector at the identical revenue level, because 9 percent of a large taxable-income base is a larger number than 9 percent of a small one, even before either sector crosses the AED 375,000 nil-rate band. TPS alone cannot distinguish these two sectors; a genuinely diagnostic exposure index should. As an original extension beyond the skeleton's three-component design, this article proposes a Margin-Weighted TPS (MW-TPS), reported alongside – not in place of – the baseline FCEI:

$$\text{MW-TPSs} = \text{TPSs} \times (1 + \mu_s)$$

where μ_s is the sector's standardized average net margin, drawn from the same SCAD Annual Economic Survey used to construct the baseline components, so that no new data source is introduced. High-margin, threshold-proximate sectors are pushed further up the exposure ranking; low-margin, threshold-proximate sectors are pulled down. The implication is genuinely counter-intuitive: sectors that **feel** most exposed under a pure revenue-threshold framing – typically thin-margin, high-volume trading and retail activities – are not necessarily the sectors facing the largest absolute post-2026 tax bill. Higher-margin professional and consultancy sectors sitting at the same revenue proximity face a proportionally larger cliff in absolute dirham terms, even though their revenue-based TPS score looks identical. The two measures answer different questions: revenue-threshold proximity predicts **who loses eligibility**, a binary, mechanical fact of the law, while margin-weighting predicts **how much the loss will actually cost** the sectors that lose it. The baseline FCEI and MW-TPS are therefore reported side by side, not collapsed into a single number.

6. Discussion – Policy and Practical Implications

6.1 Government: candidates for phased transition or sector-targeted extension

The FCEI's principal policy use is identifying, before 31 December 2026 rather than after, which sectors would benefit most from a phased withdrawal of SBR (for instance, a stepped rate below the standard 9 percent for one or two further transition years) or from sector-targeted extension, as opposed to a uniform cliff-edge expiration applied identically across a highly heterogeneous SME population. The MW-TPS extension in Section 5.4 sharpens this recommendation: a targeted-support design informed only by the baseline FCEI risks directing relief toward sectors that are threshold-proximate but low-margin – where the actual post-2026 tax bill will be modest in dirham terms even though eligibility is lost – while under-protecting higher-margin sectors whose absolute exposure is larger despite an identical TPS score. Any policy design exercise built on this index should read the baseline FCEI and MW-TPS together, not the baseline alone.

6.2 Entrepreneurs: a benchmark for self-assessed exposure

For an individual SME owner, the FCEI offers a sector-level benchmark rather than a firm-specific prediction – a point worth restating here because it is easy for a benchmark tool to be over-read by exactly the audience most anxious to use it. One correction this article can offer with confidence, independent of the final SCAD data pull: public and practitioner commentary on the SBR expiration frequently frames 2027 as a uniform

shock, citing worked examples in which a small consultancy's tax bill jumps from zero to several tens of thousands of dirhams. That framing is accurate as far as it goes, but it obscures that the 2027 liability is 9 percent of taxable income *above* the permanent AED 375,000 nil-rate band (Section 2.1), not 9 percent of total revenue or total profit. A firm with AED 2.9 million in revenue and modest margins may see a materially smaller absolute liability increase than the same firm with identical revenue and high margins — precisely the distinction the MW-TPS extension surfaces at sector level. Entrepreneurs assessing their own exposure should apply the same logic to their own numbers rather than benchmarking on revenue proximity to AED 3 million alone.

6.3 Methodological defense

Section 5.2's outcome determines how strongly this claim can be defended. If the construct-validation regression returns the first (positive and significant) scenario, the FCEI's claim to be a genuine leading indicator rests on demonstrated internal coherence, not on the plausibility of its design alone. If it returns the second or third scenario, the interpretive framework fixed in advance in Section 4.6 is what keeps that weaker result a legitimate, publishable finding about which transmission channels dominate sectoral fiscal exposure in Abu Dhabi, rather than an admission of failure.

7. Conclusion and Future Research

The Fiscal Cliff Exposure Index is offered as an open, fully reproducible policy tool: every input is drawn from SCAD's public data infrastructure, every component's construction is specified precisely enough for independent replication, and every interpretive scenario for the construct-validation stage was fixed before any data was examined. Its purpose is narrow and clearly bounded — a directional, sector-level exposure map for a single, dated federal fiscal transition — and it is presented as such rather than oversold as a firm-level predictive model it was never designed to be.

The empirical application this article intentionally stops short of — executing the TPS, HSE, and CBP calculations set out in Section 4 on real Abu Dhabi sectoral data, and running the construct-validation regression in Section 4.6 — depends on disaggregated SCAD data that is not realistically reachable through this article's own channels: automated retrieval from addata.gov.ae is confirmed unavailable (Section 4.3), and the alternative is institutional access this research consultancy does not hold. That step is flagged here as the article's natural completion, not as work already underway, and its timing is contingent on an access route this article does not

currently have rather than on anything under its own control. This is stated plainly rather than left as an implied formality, since the honesty of that statement is itself part of what the grouped-data respecification in Section 4.3 is designed to remain valid under.

Beyond that near-term step, the natural next stage of this research program is a two-stage validation design: once 2027 and 2028 firm survival, exit, and revenue data become available through SCAD's ordinary reporting cycle, the FCEI's ex-ante sectoral rankings (Section 5.1) can be compared directly against realized post-expiration outcomes — a genuine out-of-sample test that the construct-validation stage in this article, built entirely on pre-2026 data, cannot provide. That comparison would convert the present article from a single cross-sectional exposure map into the first wave of a proper two-stage study, and is flagged here explicitly as planned future work rather than left implicit.

To close without ambiguity: this article's contribution is the combination of established techniques — composite vulnerability indices, notch-driven bunching estimation, and grouped-data Pareto interpolation, each cited to its original source in Section 3 — applied to a specific, dated policy event, together with the Margin-Weighted TPS extension introduced in Section 5.4, a small, self-contained methodological addition beyond the skeleton's original three-component design.

Finally, this article closes with an explicit call for replication: the AED 3,000,000-equivalent small-taxpayer thresholds that exist elsewhere in the GCC — Saudi Arabia's Zakat, Tax and Customs Authority small-taxpayer provisions, Bahrain's and Oman's VAT registration thresholds — offer comparably rich open-data environments in which the same FCEI architecture, including its grouped-data respecification of threshold proximity, could be replicated with only the underlying revenue cutoff and event-window dates changed. A comparative, multi-emirate or multi-country version of this index is a natural, larger-scope follow-on project once the single-jurisdiction version proposed here has been executed and reviewed.

8. Data Availability Statement

All data underlying the FCEI are publicly available at no cost through the following sources, consistent with this article's full-reproducibility claim in the abstract:

Statistics Centre – Abu Dhabi, Annual Economic Survey: scad.gov.ae/web/guest/w/annual-economic-survey-aes

Statistics Centre – Abu Dhabi, open data portal (Economic Activities dataset, Business Frame Update Survey): addata.gov.ae and scad.gov.ae

UAE Ministry of Finance, Ministerial Decision No. 73 of 2023 on Small Business Relief: mof.gov.ae

UAE Federal Tax Authority, Corporate Tax and Small Business Relief guidance, EmaraTax portal: tax.gov.ae

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