

Why Small Businesses Struggle to Adopt AI: A Financing Problem, Not a Price ProblemAuthor: Karim Alhoum¹*Affiliation:*

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Abstract:

Small and medium-sized enterprises (SMEs) are much slower than large firms to start using artificial intelligence, and the reason usually given is that AI costs too much. This paper argues that the real issue is not the price tag but where small firms sit in the financing order. Using pecking order theory from corporate finance, it explains that small firms depend on their own cash because lenders and investors cannot easily judge how risky they are, so the same purchase that a large firm covers without thinking becomes a financing decision for a small one. The paper reviews seven studies covering SME financing and AI adoption, including research from Lebanon and Jordan. Interestingly, the studies that actually test cost as a variable find it is not significant, while things that need funding, such as infrastructure and training, are. That points to access to capital being the deeper problem. The finding matters for banks, policymakers, and anyone selling AI services to small firms in markets like Lebanon, where credit is hard to get.

Keywords:

AI adoption, SME financing, capital structure, pecking order theory, Lebanon

Introduction:

AI tools are no longer something only big companies can use. A small accounting office can automate its reconciliations, and a small shop can forecast demand, without hiring anyone new. Even so, surveys keep showing that small and medium-sized enterprises are far behind large firms in actually using these tools (OECD, 2026). The usual explanation is that AI is too expensive for them.

That answer is not wrong, but it skips a step. Why does the same AI subscription barely register for a mid-sized firm while it turns into a real decision for a smaller one? Finance already has an answer to a very similar question about how firms fund themselves in general. Pecking order theory (Myers & Majluf, 1984) says firms use internal cash first, borrow second, and issue equity last, because outsiders cannot verify how good the firm really is and charge for that uncertainty. Small firms are younger, smaller, and less transparent, so they sit at the bottom of that order (Abdulsaleh & Worthington, 2013).

The problem is that these two areas of research barely talk to each other. Studies on AI adoption list cost as one barrier among many, next to skills and infrastructure, without asking whether cost works differently for a firm that cannot easily raise money in the first place. This paper asks: does a firm's position in the financing order help explain why AI adoption is so uneven among SMEs, beyond what the word "cost" captures?

This is a finance question, not a general management one, and it has real consequences. Lebanon is a clear example. Since the 2019 banking crisis, many local firms cannot reliably access their own deposits, let alone open a new credit line. That is an extreme version of the constraint this paper is describing. For anyone trying to bring AI tools to Lebanese businesses, knowing whether the obstacle is price or access to funding changes how you would try to fix it.

Literature Review:

Two areas of research matter here, and they have mostly developed separately.

The first is SME financing, which starts with pecking order theory (Myers & Majluf, 1984). Because managers know more about their own firm than outside investors do, firms prefer internal cash, since it avoids the discount that lenders and investors apply when they cannot verify the story. Abdulsaleh and Worthington (2013) reviewed years of SME financing research and found this holds even more strongly for small firms. With little collateral, short credit histories, and thin financial reporting, small firms are often refused credit outright rather than simply charged a higher rate. In Lebanon, Makdissi and Tannous (2020) documented the same thing: local SMEs grow slowly because they rely on self-financing and struggle to reach formal credit. That was written before the banking crisis, so the situation has almost certainly become worse. Regardless of the difficulty in acquiring financial capital, SMEs may increase their performance through better sustainable circular business models (Khalife et al., 2024). Companies may also outsource financing through a proper project description (Yin et al., 2025). Technology also allows a better prediction of economic quadrants, which is particularly important for companies selling luxurious products (Nasser et al., 2025) or those that are heavily elastic reference the business cycle. Sometimes to better benefit from the increase in technology, internal organizational redesign may be needed, (Subrahmanyam & Saber, 2027), combined with proper business experience (Chaanine et al., 2023). Existing literature also links financing and success with proper environmental, social and governance practices (Athari et al., 2024), this is especially significant for modern firms where equity financing is closely related to sustainability (Kaspard et al., 2026).

The second area is technology adoption, and the recent results there are surprising. Almashawreh et al. (2024) surveyed 364 Jordanian SME owner-managers and found that employee IT knowledge, infrastructure, management commitment, and training predicted attitudes toward AI, rather than price. Abaddi (2024), also in Jordan, found something stronger: perceived cost had no significant effect at all on whether firms intended to adopt AI, while perceived benefits and infrastructure did. Closer to home, Dallal and Sankari (2025) surveyed 120 accountants and auditors at SMEs in Tripoli and found that trust mattered more than ease of use or usefulness in predicting actual adoption, and that firms reported weak infrastructure, limited training, and restricted financial resources as their obstacles. Globally, the OECD (2026) surveyed over 2,000 SMEs in twelve countries and found 61% use at least one AI tool, though 76% of those users are still doing simple, isolated tasks rather than anything integrated.

Putting the two sides together produces an odd picture. The financing research says small firms are credit-constrained almost no matter what they are trying to fund. The adoption research says that when you actually test cost, it often comes back insignificant, while infrastructure, training, and trust carry the explanation. One way to reconcile this is that cost is not working the way survey questions assume. It is not a price signal a respondent reacts to. It sits further upstream: where a firm sits in the financing order decides whether it can fund the infrastructure and training that adoption actually depends on. Cost still matters, but through funding access rather than through the sticker price. None of the studies above test that directly, and that is the gap this paper addresses.

Methodology:

This paper uses secondary data rather than collecting new data. The goal is to connect two established bodies of research, so reviewing existing published findings is the appropriate approach, and more reliable than a small survey run under time pressure would have been.

Sources were selected on three criteria. First, recency: published in 2020 or later, with the two foundational finance papers as deliberate exceptions since they are the theoretical base. Second, regional relevance: priority given to the Middle East, particularly Lebanon and Jordan, since the argument concerns credit-constrained markets. Third, empirical content: each source had to report actual findings, such as coefficients, significance tests, or survey percentages, so that results could be compared on similar terms rather than on opinion.

Seven sources met these criteria: two on capital structure and SME financing theory (Myers & Majluf, 1984; Abdulsaleh & Worthington, 2013), one on Lebanese SME financing (Makdissi & Tannous, 2020), one on technology adoption in Lebanese SMEs (Dallal & Sankari, 2025), two on AI adoption in Jordan (Almashawreh et al., 2024; Abaddi, 2024), and one multi-country survey (OECD, 2026).

The analysis was done as a structured comparison. For each source, three things were recorded: what barrier or driver it examined, whether that variable was statistically significant where significance was reported, and the sample and country context. These were then compared across the two literatures to see where findings agreed, where they conflicted, and what neither had tested. This kind of comparative synthesis is standard when the aim is to build a proposition that later research can test, rather than to test a hypothesis directly. The main weakness of the design, that it cannot prove causation on its own, is stated openly in the conclusion.

Results:

Table 1 sets out what each source found.

Table 1

Comparison of financing and AI adoption findings across the seven sources

Study	Who / where	What they found about cost or money
Myers & Majluf (1984)	Theory paper	Firms use their own cash first, then borrow, and only sell equity as a last resort.
Abdulsaleh & Worthington (2013)	Review of SME financing research	Small firms often get refused credit outright, not just charged more for it.
Makdissi & Tannous (2020)	Lebanese SMEs	Growth is held back because firms fund themselves and can't reach formal credit.

Dallal & Sankari (2025)	Lebanon, Tripoli, 120 firms	Trust was a significant driver ($\beta = .227$). Firms also named weak infrastructure and limited money as obstacles.
Almashawreh et al. (2024)	Jordan, 364 firms	IT knowledge, infrastructure and management support mattered. Cost was not tested as a driver.
Abaddi (2024)	Jordan, micro and small firms	Perceived cost had no significant effect on whether firms intended to adopt AI.
OECD (2026)	12 countries, 2,018 firms	61% use at least one AI tool, but 76% of those are still basic users.

The pattern is consistent. In both studies that tested cost directly as a predictor of AI adoption, it performed weakly or not at all (Abaddi, 2024; Almashawreh et al., 2024). What did perform significantly were infrastructure, training, management commitment, and trust. From a finance perspective this is the interesting part, because every one of those is an investment that has to be funded before it exists, and funding investment is exactly what pecking order theory says small firms struggle with (Abdulsaleh & Worthington, 2013).

The Lebanese evidence lines up with this. Financing constraints there are documented as long-standing and structural rather than temporary (Makdissi & Tannous, 2020), and Lebanese SMEs report precisely the barriers a credit-constrained firm would be expected to report, namely weak infrastructure and limited financial resources (Dallal & Sankari, 2025). The OECD figures add a further detail worth noting: adoption is widespread but shallow, with 76% of users still at a basic level (OECD, 2026). Shallow use is what you would expect from firms that can afford a low-cost subscription out of pocket but cannot fund the larger investment in systems and training that deeper integration requires.

Taken together, the evidence is consistent with financing position acting as an upstream determinant of AI adoption, working through a firm's capacity to fund infrastructure and training rather than through the price of the tools. It is worth stating plainly that this is a consistent pattern across studies, not proof of causation.

Discussion and Conclusion:

This paper asked whether pecking order theory could explain something the AI adoption literature has observed without fully accounting for: cost performs poorly as a predictor when tested directly, while infrastructure and training, both of which require funding, predict adoption well. The synthesis supports a reframing. The binding constraint is not whether AI tools are affordable but where a small firm sits in the financing order, which determines whether it can fund the investments that adoption depends on.

There is a practical implication. If the problem were price, cheaper products would solve it. If the problem is funding access, they will not. Approaches that pair the product with a way to pay for it, such as phased payments, vendor financing, or working with microfinance lenders, are more likely to work in markets like Lebanon than discounting alone. For banks and policymakers, it suggests that SME digitalisation programmes built around subsidies for tools may be aiming at the wrong target if credit access is left unaddressed.

This study has clear limitations. It synthesises existing findings rather than testing the mechanism directly, and none of the datasets reviewed measure both financing position and AI adoption in the same firms, so the link remains a proposition rather than a demonstrated result. The regional evidence is concentrated in Lebanon and Jordan, so it may not carry over to markets with stronger credit systems. And because none of the studies were designed with this question in mind, the argument relies on adjacent findings rather than direct tests.

Future research should test this properly with a survey that measures both a firm's financing position and its stage of AI adoption at the same time, which would allow the relationship to be tested statistically instead of inferred. Running that study specifically on Lebanese SMEs would be valuable, both because the financing constraint there is unusually severe and because the results would be immediately useful to anyone building AI services for that market.

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