OXFORD JOURNAL
OF STUDENT
SCHOLARSHIP

Why Small Businesses Fail at Digital Adoption: How to Fix the System

Eli Feiner
elijfeiner@gmail.com

ABSTRACT

More than one in four small businesses in America lack a website, especially those owned by minorities, located in rural areas, and generating annual revenues of less than $100,000. This paper investigates why digital adoption is still very limited amongst small businesses that could greatly benefit from it, even though low-cost website builders and various federal support programs exist. Based on a qualitative field study of approximately 60 substantive conversations with small business owners conducted through Safransky-Feiner Creative (SFC), a web design firm located in Los Angeles focused on service businesses along the West Coast, analysis of national survey data, federal reports, and academic literature on technology adoption, four interrelated barriers to digital adoption were identified. These barriers are: cost structure mismatch between professional website development services and the budget of small businesses, platform design failure, which presupposes the digital savviness that most business owners do not possess, lack of trust due to the predatory nature of service providers, and information asymmetry that prevents business owners from assessing their return on investment. A framework at the systems level for addressing the challenge is proposed, involving micro-agency models, community digital navigators, template models for different industries, and policy interventions. The study contributes to the existing body of knowledge by combining institutional information with real-life examples from practice to provide an insight into the problem of SME digital transformation based on the experience of small business owners.

INTRODUCTION

There are roughly 36.2 million small businesses in the United States. They account for 99.9% of all U.S. businesses and employ 62.3 million Americans, 45.9% of the private-sector workforce (Office of Advocacy, "Frequently Asked Questions"). Yet a significant fraction of these businesses operate with a critical disadvantage: they have no meaningful digital presence. As of 2023, approximately 73% of U.S. small businesses had a website, up from roughly 55% in 2017 (Nash). Other recent surveys place the figure lower; Small Business Majority's 2024 report, drawing on six surveys conducted between October 2022 and April 2024, found that roughly one-third of small businesses still lack a website entirely (Small Business Majority). By either estimate, somewhere between 9 and 12 million U.S. small businesses are

largely invisible to anyone searching for their services online. White-owned businesses maintain websites at a rate of 77%, compared to 65% for BIPOC-owned businesses (Small Business Majority). The divide follows a pattern, tracking along the same fault lines as broader economic inequality in the United States.

The consequences are measurable. Eighty-one percent of consumers research a business online before making a purchase (Ko). Thirty-one percent of U.S. shoppers have decided against purchasing from a small business specifically because it lacked a website (Nash). Small businesses with a website are associated with growth roughly twice as fast as those without them (Nash). Seventy-seven percent of consumers use Google Maps to find nearby businesses (Nash). For businesses that depend on local customers, digital absence translates directly into lost revenue and reduced competitiveness.

This paper makes two contributions to the literature on small business digital adoption. First, it provides evidence from a population that most existing research cannot easily reach: small business owners who have actively decided not to adopt digital tools, captured during the moment of that decision rather than reconstructed afterward through surveys of adopters. The bulk of academic work on SME digital transformation studies firms that have already adopted technology, leaving the non-adopting population underrepresented, despite being the population most relevant to closing the digital divide. Second, the paper documents how four specific barriers reinforce one another at the point of non-adoption decisions, a dynamic the existing literature treats abstractly but has not characterized through direct observation of those decisions. This systemic interaction explains why current interventions, which target individual barriers, have failed to close the gap.

The standard explanation for this gap focuses on individual business owners: they misunderstand technology, they resist change, and they need more training. This explanation is insufficient. Drawing on both field observation and institutional data, I contend that the small business digital divide is fundamentally a systems failure spanning economics, design, education, and market incentives. Existing solutions, including DIY website builders, government digital literacy programs, and freelance marketplaces, fail because they address symptoms rather than root causes. The businesses most in need of a digital presence are structurally excluded by the very tools designed to help them.

LITERATURE REVIEW

Two established frameworks contextualize the analysis. The Technology Acceptance Model (TAM), developed by Fred Davis in 1985, proposes that technology adoption depends on two factors: perceived usefulness and perceived ease of use (Dziak). If a potential user believes a technology will be helpful and manageable, adoption follows; if either factor is weak, adoption stalls. TAM locates the problem not in the technology itself but in the user's perception of it, shaped by prior experiences, available information, and the design of the system. Everett Rogers' Diffusion of Innovations theory complements TAM by identifying five factors that influence adoption: relative advantage, compatibility, complexity, trialability, and observability (Zahari et al.). For small business owners considering a website, relative advantage (will

this actually help my business?) and complexity (how hard is this to set up and maintain?) are the dominant friction points.

A third framework extends this analysis from the individual decision to the firm's trajectory over time. Yao, Wang, and Freeman, who studied digital transformation among traditional-sector B2B and manufacturing SMEs in China as an aspirant emerging market, argue that transformation unfolds cyclically through four phases: exploring, scaling, optimising, and sustaining, each requiring distinct capabilities and frequently stalling when those capabilities are misaligned with the phase a firm currently occupies (Yao et al.).

Nonetheless, these theoretical models tend to look at adoption as an individual decision. Both frameworks overlook the potential of having various barriers interacting with each other and creating systemic exclusion, as well as the role of the processes intended to lower such barriers turning into barriers themselves. For example, a systematic literature review on barriers to digital platform adoption reveals three main categories of barriers: personal (skill deficiency and cognitive resistance), technological (complexity of platforms and infrastructural problems), and organizational (limited resources and process mismatch) (Zahari et al.).

The digital divide itself has three recognized layers. Syracuse University's School of Information Studies identifies the access divide (infrastructure and devices), the skills divide (digital literacy), and the usage divide (how people use technology once they have it) (Syracuse University School of Information Studies). All three affect small businesses. The access divide remains serious in rural areas: according to the Federal Reserve Bank of Cleveland, 1% of urban Americans lack access to broadband, compared to 17% of rural Americans (Zhao). At the 100 Mbps benchmark that small businesses realistically require, 33% of rural areas lack access (Zhao). Rural small businesses earning under $100,000 annually were especially vulnerable: 42% reported difficulty utilizing technology, compared to 25% of their larger counterparts (Zhao).

But the access divide alone fails to explain why a nail salon in the San Fernando Valley, with perfectly adequate broadband, lacks a website. More than half of small business owners reported needing help with technology training, particularly in third-party selling platforms, social media marketing, and cybersecurity (Small Business Majority). The SBA Office of Advocacy's listening sessions found that small business owners consistently described website creation as a significant barrier, citing the number of systems that must be integrated and the costs involved (Office of Advocacy, "U.S. SME Access"). The problem goes beyond internet access; it is that the bridge between internet access and a functional digital presence is longer and more expensive than most policymakers assume.

I write this from direct experience. I co-founded Safransky-Feiner Creative (SFC), a web design studio based in Los Angeles that builds websites for businesses. Through SFC, I have cold-called over 300 small businesses on the West Coast: nail salons, HVAC companies, plumbers, electricians, and auto body shops, of which approximately 60 resulted in substantive conversations with the owner or primary decision-maker. I have built demo sites, priced services, pitched owners, and had blunt conversations

about why their digital presence is nonexistent or broken. The patterns I observed are consistent with what every major dataset on small business technology adoption documents, but they take on a different shape when seen from inside a non-adoption decision rather than reconstructed afterward through a survey of adopters. The analysis uses my fieldwork as a primary lens alongside academic and institutional sources, blending applied observation with formal research.

Read together, these frameworks generate specific predictions about where small business adoption should stall. TAM predicts that perceived usefulness collapses when business owners cannot evaluate what a website will actually do for them, the information asymmetry that becomes Barrier 4. Rogers' complexity dimension predicts that platforms with low nominal barriers to entry can still impose a prohibitive cognitive load, the platform-design failure that becomes Barrier 2. Yao et al.'s argument that capability mismatches stall transformation at the exploring phase predicts that cost objections will be entangled with perceived risk rather than driven by price alone; the cost-structure mismatch that becomes Barrier 1. None of these frameworks directly predicts the trust deficit that becomes Barrier 3, which the field observations suggest is the dominant practical barrier; that gap between theory and what owners actually report is itself a finding.

MATERIALS AND METHODS

This paper draws on qualitative field observations collected through SFC outreach between September 2024 and April 2026. During this period, SFC contacted more than 300 small businesses across the West Coast, primarily in service industries including plumbing, HVAC, electrical, auto repair, nail salons, pressure washing, landscaping, and general contracting. Of these contacts, approximately 60 resulted in substantive conversations of three minutes or longer with the business owner or a primary decision-maker; the remainder were voicemails, gatekeeper interactions, brief refusals, or follow-ups that did not progress past initial outreach. Notes were recorded after each substantive conversation, capturing the owner's stated reasons for current digital presence (or lack thereof), reactions to pricing, objections raised, and any reference to prior experiences with web service providers. Notes were reviewed periodically across the outreach period to identify recurring objection categories. The author was the sole coder; objection categories were grouped inductively as they emerged across conversations rather than coded against a predetermined scheme. A pattern was treated as significant for the purposes of this paper when it appeared in at least one-third of substantive conversations and across many industries.

Field Observation

Systematic collection of firsthand evidence about behaviors in a natural setting is an established method in qualitative research, and the field observations recorded here followed that approach. The institutional data cited alongside those observations is treated as confirming literature rather than as an independently analyzed quantitative dataset. The patterns were as follows: most of the companies approached either lacked a website entirely or possessed outdated, not mobile-friendly websites lacking necessary contact information; price objections were almost universal but accompanied by a belief that a website could

bring no benefits whatsoever. Business owners in trades (plumbing, electrical, HVAC) were more likely to rely exclusively on word-of-mouth and Google Business Profiles, while personal-service businesses (nail salons, barbers) more often used social media as a substitute for a website. This latter pattern is consistent with the Small Business Majority finding that 41% of businesses without a website utilize social media instead (Small Business Majority).

Limitations of Field Data

The observations that have been carried out are mostly from service industry companies, and they have been carried out in relation to the process of selling websites. The sample that has been used in this case is a convenience sample, and it has been skewed towards trade and personal service companies compared to retail and knowledge industries. The observations that have been made can thus only be considered as qualitative information on a pattern that repeats itself regularly, and their strength lies in their consistency across geographical areas.

Secondary Data Sources

Secondary literature drawn on in this paper includes national surveys and reports from the U.S. Chamber of Commerce Technology Engagement Center, Small Business Majority, the Federal Reserve Bank of Cleveland, and the SBA Office of Advocacy, as well as industry pricing data from web development firms and academic literature on technology adoption. Sources were selected based on three criteria: recency (prioritizing data from 2022 onward), institutional credibility (federal agencies, peer-reviewed journals, and established industry research bodies), and direct relevance to the four barriers identified in field observation. Where sources offered conflicting estimates, both are reported, and the discrepancy is noted.

Analytical Approach

The analysis identifies the primary barriers to small business digital adoption as they emerged from both the field observations and the secondary data, then interprets those barriers through TAM and Diffusion of Innovations theory to evaluate why current interventions fall short and what a more effective approach would require.

RESULTS

The field observations and secondary data analysis reveal four interconnected barriers to small business digital adoption. These barriers operate as a system; they reinforce one another in ways that create a self-sustaining cycle of non-adoption.

Barrier 1: Cost Structure Mismatch

From the fieldwork notes, cost was the objection that surfaced earliest in nearly every substantive conversation, but rarely as a flat price complaint. Owners described the spend as a gamble rather than an investment. Across the conversations I conducted, two responses recurred almost verbatim: *"I don't think I need one"* and *"I've been burned before."* What sounded like price sensitivity on first pass was, on closer listening, sensitivity to the absence of any way to evaluate return. Owners had no framework for distinguishing a website that would generate calls from one that would sit dormant, and the price tag was being asked to do work that price tags cannot do.

That reaction has a structural basis. The price of professional web development relative to the budgets of small service businesses creates a genuine affordability problem on top of the evaluation problem. A basic small business website built by a professional agency costs between $2,000 and $9,000, with annual maintenance fees averaging $1,200 (Ko). More complex corporate sites run $10,000 to $35,000 (Ko). For custom web applications, HDWebsoft estimates that costs can range from $5,000 for a simple site to over $500,000 for complex enterprise solutions, with back-end development alone commanding $25,000 to $105,000 for mid-sized projects (Luu). Beyond the initial build, hidden costs accumulate: domain registration, hosting, SSL certificates, content creation, and ongoing maintenance totaling 15 to 25% of the initial build cost annually (Luu).

However, for a local plumber or electrician making between $60,000 and $100,000 annually, investing $3,000-$5,000 in a website is a serious business consideration, especially since the value of such an endeavor cannot be quantified beforehand. Cost concerns did not pertain merely to the price tag but rather to the question of whether the expenditure would produce any measurable benefit.

This insight complicates the message conveyed by numerous industry studies. According to the U.S. Chamber of Commerce Technology Engagement Center, firms with greater technology integration consistently outperform their lower-tech counterparts in terms of sales revenue, profits, and hiring employees (U.S. Chamber of Commerce Technology Engagement Center). Nash cites that small businesses with websites grow at roughly twice the rate of those without one (Nash). These figures, however, describe correlation rather than causation, and they describe businesses that have already successfully adopted and sustained a digital presence. They do not account for businesses that invested in websites that failed to generate returns, or for the selection effects at work: businesses with the resources and knowledge to build effective websites may be the same businesses with the resources and knowledge to grow in other ways. The data on technology-enabled growth, while accurate, may inadvertently obscure the risk that lower-resource businesses face when they invest in digital tools without the surrounding support to make those tools effective.

The DIY alternative, website builders like Wix and Squarespace, lowers the cost but not the other barriers. Wix captured 45% of the website builder market in 2024, with over 8 million live sites worldwide (Ko; Nash). A simple Wix site can cost as little as $16 per month (Nash). However, as the next barrier demonstrates, low price does not equal accessibility for the populations most affected by the digital divide.

Barrier 2: Platform Design Failures

In conversations with owners, the most consistent reaction to a finished demo site was enthusiasm, and the most consistent reaction to learning what maintaining that site would require was withdrawal. I encountered this pattern repeatedly through SFC: when I showed an owner a demo I had built specifically for their business, with their services and their service area, the response was nearly always positive; the moment I explained that the site would need ongoing involvement, whether updating hours, adding photos, or fielding inquiries through a form, interest dropped sharply. The hesitation centered on the role of website maintainer that owners would have to grow into, rather than on the product itself.

Building even a basic website on a builder platform requires choosing a template, customizing the layout, writing copy, selecting and formatting images, setting up a domain, configuring SEO basics, ensuring mobile responsiveness, and integrating forms or booking tools. Each step involves decision points that require knowledge most small business owners have never acquired. The SBA Office of Advocacy documented this pattern through its listening sessions: small business owners consistently described integrating digital systems as a primary challenge, with multiple participants citing specific difficulty building professional websites (Office of Advocacy, "U.S. SME Access"). The digitalLIFT organization, which focuses on digital inclusion programming, reported the same dynamic: even when internet access is available, many small business owners lack “the time, confidence, or know-how to take full advantage of online tools” (Griffiths). The platforms were designed by and for people who already have the digital fluency to navigate them, which means the population the tools claim to serve is structurally excluded by their design.

Barrier 3: Trust Deficit

The small business web services market has generated widespread distrust among its target customers. From the fieldwork notes, in roughly one in three substantive conversations, the owner referenced a prior bad experience with a web or SEO provider before I had described what SFC actually does. Owners described being cold-called by SEO companies promising first-page Google rankings, being charged thousands of dollars for template sites populated with stock photos and placeholder copy, and being locked into renewal contracts they had not understood when they signed them. One owner, the operator of an auto body shop in Van Nuys, described paying $200 a month for two years before discovering that the "SEO services" he was paying for amounted to a single unmodified Google Business Profile listing. The specifics of that story were unusual; the pattern of being burned by a provider was not. The SBA's own listening sessions documented similar patterns: small-business participants described the cost of building a professional website as a primary barrier, and multiple owners reported difficulty finding reliable technical assistance (Office of Advocacy, "U.S. SME Access").

The lack of trust amplifies all other obstacles. A business owner who once had trouble with a service provider will be rightly skeptical of any other person offering their services digitally, even those with good intentions and offering affordable solutions. The problem of asymmetric information is especially pronounced in this industry, and most small business owners would struggle to distinguish a $500 website

from a $5,000 one, or a reputable SEO provider from one looking to rip them off. When the most visible experiences with web services in a community are negative, whether through overcharging, underdelivering, or incomprehensible jargon, those experiences shape how subsequent owners evaluate the entire category of service.

Barrier 4: Information Asymmetry and Misaligned Interventions

Across the substantive conversations I conducted, the pattern that recurred most consistently was an inability to translate generic claims about digital adoption into anything specific to the business in question. Owners could describe their operations in considerable detail; when asked what a website would do for their business in particular, however, the answers were vague or absent, and the conversation usually returned to a question about whether other businesses like theirs had seen results. The information environment around small business technology assumes that owners can perform this translation on their own and has built almost no infrastructure for the cases where they cannot, which is most cases. The fourth barrier is the resulting mismatch between how policy and nonprofit interventions frame the problem, typically as an educational one in which informed owners would adopt, and how owners actually experience it, which is as an absence of business-specific information about whether and how a given technology applies to them. This pattern is not confined to websites. The U.S. Chamber of Commerce Technology Engagement Center's 2025 data on small businesses that do not use AI captures the same dynamic in an adjacent category.

The SBA formed the Small Business Digital Alliance (SBDA) in January 2022. The SBDA is a partnership of the SBA with Business Forward, a nonprofit organization working with small business leaders to promote economic competitiveness (U.S. Small Business Administration). To help small business owners "fully harness the power of technology to fuel growth," the SBDA brought together leaders in business, government, and economic development to offer tools, training, and networking events (U.S. Small Business Administration). While the SBDA is focused on providing access and ensuring that technology can be used in underserved communities, the challenge of reaching small businesses through events poses questions. The fact that small businesses attended those events offers no guarantee that behavior changed or that any changes were introduced into business operations.

For instance, according to the U.S. Chamber of Commerce Technology Engagement Center's 2025 data on small businesses that do not use AI, 39% reported that they do not see how AI would help their business, up from 20% in 2023, while 38% said they do not know enough about it, up from 24% in 2023 (U.S. Chamber of Commerce Technology Engagement Center). Concerns about cost (25% in 2025, down from 30% in 2023) and tool quality (27% in 2025, down from 33% in 2023) declined modestly over the same period. The pattern is significant: as general awareness of AI has spread, the share of non-adopters who cannot articulate a use case for it in their own business has nearly doubled. This suggests that information about whether and how a technology applies to a specific business is itself a structural barrier, distinct from awareness or cost.

The cost barrier, platform complexity, bad provider experience, and lack of appropriate interventions function as a single interconnected system. Each barrier amplifies the others. High costs are a reason for hesitancy; platform complexity confirms one's hesitancy and doubts. A negative experience with certain providers adds to the general lack of trust. Intervention programs fall short because they fail to engage with the barriers business owners actually face.

What makes it especially difficult for such an ecosystem to be changed is the rationality of all the stakeholders that operate in it, including platform companies, web agencies, governmental programs, and the entrepreneurs themselves. Platform companies design solutions for active and lucrative users, not non-users who will probably never pay for premium functionality. Web agencies tailor-fit projects to those businesses that have enough money to afford their services. Governmental initiatives evaluate their outreach and participation rates instead of changes in behavior. Finally, the entrepreneurs, who doubt the efficiency of proposed solutions, see them as expensive and believe that they have been cheated once again.

DISCUSSION

Interpreting the Results Through Adoption Theory

TAM, in its standard formulation, treats perceived ease of use and perceived usefulness as relatively independent variables shaped by the features of the technology. The field evidence suggests they are deeply entangled with external factors. A business owner's perception of ease of use is shaped not only by the platform's interface but by their prior negative experiences with technology providers (the trust barrier) and by the absence of clear information about what a website will actually do for their business (the information asymmetry barrier). TAM, applied in isolation, underestimates the degree to which perceptions are formed by market context rather than product design.

Similarly, the Diffusion of Innovations theory identifies complexity as a barrier and observability as a facilitator. Both are confirmed here: the complexity of building and maintaining a website, even on a "simple" platform, is high, while the observable outcomes of previous technology investments have often been negative. But Rogers' framework, as Zahari et al. note, does not adequately address collective adoption dynamics or the role of institutional structures (Zahari et al.). The digital divide functions as a market structure that systematically fails a defined population, and Rogers' framework lacks the tools to address that. Yao et al. come closest to capturing this dynamic with their finding that SME digital transformation is cyclical, not linear, and that each phase requires different capabilities and institutional supports (Yao et al.). Their concept of a "dynamic digital mindset" as a prerequisite for initiating transformation resonates with what I observed in the field: business owners open to the idea of a website but lacking the cognitive framework to evaluate what they needed, how much it should cost, or whom to trust. The mindset is absent because the system has not given owners the information, experiences, or trust necessary to develop it.

What is particularly notable about the current literature on this subject is an interesting discrepancy within it. In one of its studies, the SBA Office of Advocacy found that many small businesses that reported no barriers to technology adoption were still not using those technologies, suggesting that knowledge of applicability and benefit is itself a major obstacle (Office of Advocacy, "U.S. SME Access"). On the other hand, the position taken by the U.S. Chamber of Commerce Technology Engagement Center presents a much more optimistic picture: according to this organization, the rate of technology implementation among small businesses grows each year; in addition, 84% of small businesses claim that they are going to increase their technology use (U.S. Chamber of Commerce Technology Engagement Center). Both of these claims are equally valid; the aggregate rate of technology implementation improves, yet businesses falling behind in it experience quite different problems compared to the leaders. In fact, the situation is developing in such a way that, while the aggregate rate improves, the gap is growing.

Toward a Systems-Level Framework

If the problem is systemic, the response must be systemic. The following proposals emerge from the synthesis of the field observations, the institutional data, and the theoretical analysis.

Micro-agency models. This first proposal originates in the author's own venture and should be read with that conflict of interest in mind; it is included for completeness about the design space rather than as a recommendation the author is positioned to make objectively. The traditional web development market optimizes for high-value clients because the margins are better, leaving the businesses that most need help unserved. Micro-agencies, small firms that serve specific geographies or industries at price points calibrated to local business budgets, could in theory address several of the identified barriers simultaneously. Lower price points would, if achievable at viable margins, address cost mismatch; local relationships could, in principle, reduce the trust deficit by replacing cold-call distrust with referral-based credibility; and an embedded provider could offer the ongoing maintenance that DIY platforms cannot. Each of these is a prediction the model would have to demonstrate, not a feature it inherently possesses. SFC was founded as one attempt to test this configuration. Whether the model is sustainable at scale, and whether it can reach the lowest-revenue businesses where the digital divide is most severe, remain open questions. The proposal here is that the configuration deserves controlled study, not that any specific implementation has yet proven it works.

Vertical-specific templates. One candidate explanation for the persistence of the platform-design barrier identified in Barrier 2 is that the website builder market is structured around horizontal templates, single frameworks meant to serve all industries, rather than vertical ones built for specific trades. Whether vertical specialization would meaningfully reduce the barrier has not been tested at scale, but the structure of the current market suggests it has not been seriously attempted. A plumber needs a fundamentally different website from a restaurant. A plumber needs a homepage with a phone number, a list of services, a service area, and reviews. Pre-built website kits designed for specific trades, with industry-appropriate

page structures, copy placeholders, integrated booking, and automatic Google Business Profile connection, could plausibly reduce the complexity barrier; whether the reduction would be substantial enough to move non-adopters into adoption is the empirical question a controlled pilot would need to answer. Such kits are technically feasible. Why the market has not produced them at scale is less clear. One plausible explanation is that platform companies generate more revenue from users who spend more time customizing, which would create an incentive against the kind of opinionated, low-friction templates this proposal describes. This is an explanation rather than an established finding, and the proposal does not depend on it.

Community-based digital navigators. California's Connected California Digital Navigators program, which operated through public libraries from 2021 to 2024, demonstrated a promising approach. The program provided free, bilingual digital navigation services, processing over 2,700 service tickets across 67 library jurisdictions, with 70% of community members showing significant improvement in digital skills (California State Library). Los Angeles County expanded on this model in November 2025, awarding $1 million to launch a Digital Navigators program training 100 participants with 300 to 500 hours of hands-on instruction (Los Angeles County Department of Economic Opportunity). These programs address the trust and capacity barriers simultaneously: a navigator embedded in a library or community center is not a salesperson but a trusted intermediary who helps business owners understand their options without a financial agenda. The limitation, as California's program demonstrated when it ended in September 2024, is that without sustained funding, these initiatives remain pilot projects rather than permanent infrastructure.

Policy Interventions. Three policy initiatives would make a huge difference. First, continuous financing for digital navigation initiatives for communities as part of the permanent infrastructure, and not a one-off grant. Allocating $65 billion towards building out broadband networks via the Infrastructure Investment and Jobs Act of 2021 demonstrates the importance of digital infrastructure at a federal level; the same principle can be applied to the human infrastructure needed to assist people using the newly established infrastructure (Zhao). Second, baseline standards for the small business web services market, including standardized service descriptions, price benchmarks, and outcome metrics, would reduce the information asymmetry behind the trust deficit identified in Barrier 3. Standards without enforcement, however, would only repeat the current pattern. The standards should therefore be paired with a small-business web services oversight function under the SBA, modeled on the Consumer Financial Protection Bureau's complaints process, that takes and investigates grievances about predatory contracts, undisclosed renewals, and undelivered work. A board that can refer egregious cases for action would change the incentive structure that produces the trust deficit, not just describe it. Third, integrating digital assistance tools in existing SBA points of contact: if getting a micro-loan meant receiving a free digital tool audit and subsidization of website creation, more people would adopt because of an immediate opportunity to receive professional help. The Cleveland Fed reports that combined investment in rural broadband infrastructure and community technical support funding could enable digital tool adoption gains that, according to a U.S. Chamber of Commerce analysis, would create approximately 360,000 new full-time jobs and add more than $47 billion to the U.S. economy annually (Zhao). The U.S. Chamber of

Commerce's own data reinforces this: 83% of small businesses credit technology with helping them compete with larger companies, and 75% say they would struggle to survive without technology platforms (U.S. Chamber of Commerce Technology Engagement Center).

These four proposals are not equally supported by the evidence available. The community digital-navigator and policy-intervention proposals rest on the strongest base: the California Connected California pilot and the Los Angeles County program provide concrete outcome data for the former, and the Cleveland Fed and Chamber of Commerce estimates quantify the economic case for the latter. The micro-agency and vertical-specific-template proposals, by contrast, remain hypotheses. They follow logically from the four barriers identified in the field, but neither has been tested at scale through any vehicle this paper can cite, including, in the case of micro-agencies, SFC itself, which is too early-stage to constitute evidence for the model. The proposals are included because the design space deserves to be characterized in full; the strength of any individual proposal should be read accordingly.

Limitations

There are a number of significant limitations in the current study. Despite being based on observational data from firms located throughout the West Coast, the data was gathered from only service-oriented organizations, and the observation occurred during the process of conducting business, specifically during sales outreach, and not during an interview-based research study. The trends observed here are confirmed by nationwide statistics, but they shouldn't be treated as statistically representative. The secondary data used is reliable, but not all of it consists of peer-reviewed academic publications; several sources are industry reports and government press releases. The proposed solutions framework is based on synthesis and reasoning rather than empirical testing. The micro-agency model in particular originates in my own early-stage venture, which creates an obvious conflict of interest in proposing it as a solution. I have tried to mitigate this by treating SFC as a source of observational data about non-adopters rather than as evidence that the model itself works, and by framing the proposal as a hypothesis requiring validation. A reader skeptical of the proposal on these grounds is reading it correctly. Future research should test the micro-agency hypothesis through controlled pilots that are not run by parties with a financial stake in the outcome.

CONCLUSION

The small business digital divide is a microcosm of a broader pattern in technology markets: the tools are built for people who already have the resources and literacy to use them, and they structurally exclude those who would benefit most. The four barriers identified in this study, cost structure mismatch, platform design failure, trust deficit, and information asymmetry, do not operate as separate problems. They form a self-reinforcing system that keeps the same businesses offline year after year.

This matters beyond economics. Small businesses anchor local commercial ecosystems. When they cannot reach customers because they are invisible online, the loss is measured not only in revenue but in the erosion of the commercial ecosystems that sustain neighborhoods. The U.S. Chamber of Commerce data shows that businesses with higher technology adoption consistently outperform their peers in sales, profits, and workforce growth (U.S. Chamber of Commerce Technology Engagement Center). Extending those benefits to the businesses currently locked out of the digital economy is both an economic opportunity and an equity imperative.

The solutions proposed in this paper — micro-agency models, digital navigators, vertical-specific templates, and targeted policy interventions — are designed to be operationally feasible at the local level, and several are already being piloted. What they require is a fundamental shift in framing: away from blaming individual business owners for failing to adopt technology, and toward recognizing that the system itself is failing to serve the businesses that need it most. Capturing the perspective of non-adopting business owners during their decision not to adopt, rather than after the fact, reveals that the barriers they describe are not the barriers most interventions are designed to address.

Through SFC, I have observed what often happens when a business owner is met where they are: when shown a demo of the site they actually need, at a price they can actually pay, with a concrete explanation of what it will do for them, resistance frequently drops, and genuine interest follows. The barrier is the system surrounding the technology, not a lack of willingness. The millions of small businesses currently excluded from it cannot afford to wait.

REFERENCES

California State Library. “Digital Navigators.” *California State Library*, www.library.ca.gov/services/to-libraries/digital-navigators/. Accessed 15 Mar. 2026.

Dziak, Mark. “Technology Acceptance Model (TAM).” *Research Starters: Technology*, EBSCO Information Services, 2024, ebsco.com/research-starters/technology/technology-acceptance-model-tam.

Griffiths, Kami. “Closing the Digital Gap for Small Businesses: Why Digital Literacy and Internet Access Still Matter.” *digitalLIFT*, 26 Nov. 2025, digitallift.org/closing-the-digital-gap-for-small-businesses-why-digital-literacy-and-internet-access-still-matter/.

Ko, Allison. “50+ Small Business Website Statistics for 2026.” *Wix Blog*, 7 July 2024, www.wix.com/blog/small-business-website-statistics.

Los Angeles County Department of Economic Opportunity. “DEO Awards $1 Million to Launch Digital Navigators Program.” *Los Angeles County Department of Economic Opportunity*, 13 Nov. 2025, opportunity.lacounty.gov/1milliondigitalnavigators/.

Luu, Hung. "Web Development Costs: Complete Pricing, Timeline & ROI Breakdown." *HDWEBSOFT*, 30 Oct. 2025, www.hdwebsoft.com/blog/web-development-costs.html.

Nash, Bill. "Small Business Website Statistics 2026: 92+ Stats & Insights." *Marketing LTB*, 8 Nov. 2025, marketingltb.com/blog/statistics/small-business-website-statistics/.

Office of Advocacy, U.S. Small Business Administration. "Advocacy Releases Frequently Asked Questions About Small Businesses 2026." *U.S. Small Business Administration*, 3 Feb. 2026, advocacy.sba.gov/2026/02/03/advocacy-releases-frequently-asked-questions-about-small-businesses-2026/.

Office of Advocacy, U.S. Small Business Administration. *U.S. SME Access and Use of Digital Tools: U.S.-E.U. Trade and Technology Council SME Working Group. U.S. Department of Commerce*, 2023, www.trade.gov/sites/default/files/2023-06/SME_Digital_Tools.pdf.

Small Business Majority. "New Research Report: Half of the Smallest Businesses Don't Utilize AI, One-Third Do Not Have a Business Website." *Small Business Majority*, 22 Aug. 2024, smallbusinessmajority.org/press-release/new-research-report-half-smallest-businesses-don-t-utilize-ai-one-third-do-not-have-business-website.

Syracuse University School of Information Studies. "What Is the Digital Divide? Meaning, Causes & Impact." *iSchool, Syracuse University*, 29 Jan. 2026, ischool.syracuse.edu/what-is-the-digital-divide/.

U.S. Chamber of Commerce Technology Engagement Center. *Empowering Small Business: The Impact of Technology on U.S. Small Business.* 4th ed., U.S. Chamber of Commerce, 2025, www.uschamber.com/assets/documents/Empowering-Small-Business-Report-2025.pdf.

U.S. Small Business Administration. "U.S. Small Business Administration and Business Forward Announce Launch of the 'Small Business Digital Alliance.'" *U.S. Small Business Administration*, 21 Jan. 2022, www.sba.gov/article/2022/jan/21/us-small-business-administration-business-forward-announce-launch-small-business-digital-alliance.

Yao, Michael Xiang, et al. "Digital Barriers and Capabilities in Aspirant Emerging-Market SMEs: A Resource-Adaptive Dynamic Capabilities Model of Transformation Phases." *Technovation*, vol. 152, 2026, article 103506, doi.org/10.1016/j.technovation.2026.103506.

Zahari, Nazuha Mohd, et al. "Barriers to Digital Platform Business Adoption: A Systematic Literature Review." *International Journal of Innovation and Industrial Revolution*, vol. 7, no. 20, 2025, pp. 230–47, doi.org/10.35631/IJIREV.720014.

Zhao, Lorien. "How the Digital Divide Affects America's Rural Small Businesses." *Federal Reserve Bank of Cleveland, Notes from the Field,* 7 Sept. 2023, www.clevelandfed.org/publications/notes-from-the-field/2023/nftf-20230907-how-the-digital-divide-affects-americas-rural-small-businesses.