Designing a Digital First Tax Literacy Model for Immigrant-Owned SMEs in the U.S.: A Compliance-by-Design Approach

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Abstract- *The article introduces a digital-first and compliance-by-design model of tax literacy in the United States among immigrant-owned small and medium enterprises (SMEs). According to behavioral and digital literacy theories, it provides standard points of compliance pain, such as record-keeping, estimated taxes, credit claims, and multi-state sales tax, with the digital interventions that could be used, such as interactive checklists, calculators, and micro-learning modules (Hartmann, Mueller, and Kirchler, 2020; Arham and Firmansyah, 2021). According to the pilot information on the chosen communities of diaspora, the scheme is demonstrated to have measurable quality improvements in the precision of filing and the uptake of tax credits, which aligns with the ambitions of inclusive entrepreneurship and equity (Akinbami, 2025; Lam, 2019). The model integrates the empirical findings of the new research on SME financial literacy and immigrant entrepreneurship (Chamidah, Susyanti, and Hidayah, 2025; Huang and Liu, 2019) and suggests the directions of integrating compliance into the digital tools that are popular among SMEs. The findings are useful to both policy and practice in showing how technology can be incorporated to democratize tax compliance among different entrepreneurs.*

I. INTRODUCTION

1.1 Background

The immigrant-owned small and medium-sized enterprises (SMEs) are a key source of innovation and job creation in the United States, which have also contributed to the local and national economic growth (Jarjoura, 2021; Huang and Liu, 2019). Such businesses tend to be one of the points of contact between the communities and the rejuvenated districts and introduce new products, services, and jobs.

Despite being dynamic, immigrant entrepreneurs are likely to be faced with systemic and informational barriers to successful participation in the formal economy, including most notably the myriad of U.S. federal and state tax compliance requirements (Chima et al., 2022; Dako et al., 2022). There are also such issues as approximated quarter taxes, sales tax nexus in different states, and eligibility for credit or deductions, where technical skills along with familiarity with digital tax platforms are needed. However, because of digital disparities and low levels of financial literacy, the prevalence rate of immigrant business owners utilizing undocumented knowledge in the population, paid preparers, or incomplete Internet connectivity is high (Fashakin, 2023). These restrictions are then enhanced by cultural and language distance to the point where the deciphering of tax advice becomes troublesome (Akinbami, 2025).

1.2 Problem Statement

Although the modernization initiative and multilingual outreach initiatives have been instituted by the Internal Revenue Service (IRS) and state agencies, there are still accessibility and usability gaps (Tesfom and Lutz, 2009; Waobikeze, 2018). The number of the immigrant entrepreneurs, in particular the first-generation and microenterprise businesspeople, remains reliant on the oral sense of advice within the diaspora networks as opposed to the formal and confirmed digital media. Some of the sources of compliance risks and missed opportunities include poor record-keeping, incomplete information about deductible business expenses, and poor information about available credits (including the Earned Income Tax Credit or R&D credits) (Charo,

2020; Chamidah et al., 2025). The integrated culturally sensitive tax literacy system, which includes the use of digital tools in normal business transactions, does not exist and causes the recurring errors in filing, underreporting, and missing benefits. More than that, most digital learning programs do not consider the sociocultural contexts of immigrant entrepreneurship and view literacy as a purely developmental and not a socially inculcated process. This disconnection is what is indicative of the need to have what is known as a so-called digital-first compliance-by-design approach, i.e., one where the learning, automation, and behavioral nudges are explicitly integrated into the tools that the immigrant SMEs are already using to run their businesses (de Mezzogori, 2025).

1.3 Rationale

The current trend in the global world towards the digital transformation of governance is an uncommon opportunity to redesign the process of delivering and practicing tax literacy (Varyani, 2022). Rather than compliance as a third-party and periodic exercise, proactive compliance may be developed through a means of integration of tax awareness into day-to-day digital processes. This principle is introduced as compliance by design on the basis of behavioral economics and principles of digital governance, to which it is imperative to concentrate on the process of integrating educational material, record-keeping templates, and real-time guides into easily operating systems (Arham and Firmansyah, 2021). With the example of SMEs owned by immigrants, one might consider it in the form of accessing mobile-friendly web resources, multilingual micro-modules, and automatic checklists that reduce friction in records management and filing. The existing literature also suggests the concept of digital ecosystems with inclusiveness as the means of establishing more trust between minority entrepreneurs and regulatory agencies (Adebiyi, Nwokedi, and Mupa, 2025; Shiraishi and Mupa, 2025). Through this kind of coordination between equity purposes and digital innovation, the specified model is likely to strengthen both the compliance outcomes and the financial sustainability among immigrant business communities.

The longitudinal studies to establish the retention of learning and behavioral consistency across multiple tax cycles are the next step in the research on this topic. The implementation can be further extended through working with fintech platforms and tax centers within a community, and the collaboration with policymakers will make it possible to integrate these models into the state and federal digital inclusion agenda (Shiraishi and Mupa, 2025; Adebiyi et al., 2025). An increase in digital tax literacy can thus not be seen as just a compliance step, but rather a point of entry to economic empowerment and growth through inclusion.

1.4 Objectives
1. Identify and map major tax literacy pain points among immigrant-owned SMEs across diverse diaspora communities.
2. Design digital-first interventions—such as calculators, dashboards, and interactive learning modules—that address these specific challenges.
3. Test the effectiveness of these interventions in improving filing accuracy, record-keeping behavior, and credit uptake through pilot programs.
4. Generate evidence-based policy and practice recommendations for integrating compliance-by-design approaches into national and local tax literacy initiatives.

II.   LITERATURE REVIEW

2.1 Immigrant Entrepreneurship and Compliance Challenges

The SMEs of the immigrants constitute a curious and vibrant segment of the U.S. economy, and their functionality is normally predetermined by the dualistic reality of potentiality and restriction. Huang and Liu (2019) mention that immigrant business people have an excessive role in job creation and regional development but face structural and regulatory pressure. Alvarez et al. (2024) expound on this stance by noting that the U.S. tax codes and licensing frameworks are complicated, a fact that presents an issue of ambiguity as far as adherence to the standards among business owners that are not familiar with the conventions of the institutions is concerned. Even though Enow (2010) attributes this problem to the unfamiliarity of the institution, Hickey (2024) believes that the cultural adaptation also forms part of this difficulty because in countries of origin the

entrepreneur tends to employ informal forms of doing business. Kaluarachchige (2024) also adds that a lack of understanding of communicating with the tax authority because of cross-cultural differences can also play a role in the development of compliance anxiety.

Language and trust add to these challenges. Fashakin (2023) observes that community networks provide useful recommendations to most immigrant entrepreneurs because they feel that formal advisory channels are closed or frightening. Mengdie (2018) contrasts the tendency to this trend with the native-born SMEs that tend to either contract tax experts licensed to work or employ online accounting programs. This reliance on informal networks makes exposure to information that is verified minimal, keeping on repeating cycles of incomplete or incorrect submissions. A body of literature, thus, results in a general point: immigrant SMEs face the issue of informational and cultural asymmetry that disrupts the compliance behavior. However, most studies stop at the question of how digital interventions can break these barriers through embedded design procedures.

2.2 Financial and Tax Literacy

The established connection is high in relation to the financial literacy and business performance and business compliance with regulations. The more literate entrepreneurs are, the more informed financial decisions they make and the more proper records they maintain, as demonstrated by Chamidah et al. (2025). Hlahla, Mupa, and Danda (2025) also observe that higher accountability is accompanied by higher literacy in a situation where systematic training has been conducted. As revealed by Novoa-Hoyos et al. (2022), awareness of the tax burden and the establishment of a positive attitude to compliance are the objectives of the community-based financial literacy initiatives in the emerging economies. However, as Charo (2020) finds, the issue of recordkeeping and awareness of tax credits continues to affect immigrant-owned businesses in even highly developed markets, such as the U.S., to a considerable degree because the culturally specific resources are not provided.

De Mezzogori (2025) proceeds to affirm that these sources of knowledge deficit are not only informational but structural because the immigrant SMEs have a penchant to operate in disjointed ecosystems without coherent guidance. The contextual knowledge of the various and complicated rules, which vary by state and type of business, is known as tax literacy in comparison with general financial education. This means that there should not be online training that is done in the classroom or in a noninteractive way. It is proposed in the literature that conceptualization of tax literacy as an adaptive and embedded phenomenon that is embeddable into the daily operations of business based on digital tools should be offered rather than taught in a single training session.

2.3 Learning Innovation and Digital Change.

The current trends in online education have benefited the process of adult financial education provision. Hlahla et al. (2025) show that micro-learning packages, brief and goal-oriented learning, which may be facilitated via mobile devices, can enhance the retention of busy entrepreneurs. Ruan, Baskaran, and Zhou (2025) also note that in gamified exams, engagement and completion rates are better, and the difficult financial rules seem more palatable to students on the different levels of competence. However, Adebiyi et al. (2025) conclude that despite the fact that SMEs who have adopted the use of digital bookkeeping and tax solutions are defined by the high accuracy and timeliness in their filing, the benefits are unequally distributed among the demographic groups.

Queiri and Belgacem (2025) state that the adoption of digital tools positively influences the performance of tax only with the assistance of the relevant training and localization of the content. There is also the issue of the digital divide (which Lam, 2019, adds to the list) as the problem of immigrant and minority entrepreneurs who may have no faith in the internet or digital platform experience. This is further enabled by Yol (2023), who adds that although access exists, full participation is hindered by usability blockers such as the absence of multilingual support. All these texts point out the potential and limitations of digital transformation: on the one hand, there is the promise of technology to make tax education more democratic; on the other hand, it can also be more exclusionary without a culture- and language-sensitive design. This contributes to the significance of inclusive, user-

friendly digital design principles, which would bring the technological capacity at par with the lived experience of the immigrant entrepreneurs.

2.4 Principles of Compliance-by-Design

Beginning with information technology and regulatory governance, compliance-by-design is a means of establishing compliance mechanisms in the direct operation. Hartmann et al. (2020) define it as active encompassment of regulatory requirements into the system architecture in such a way that compliance will be a by-product of usage rather than a pre-defined requirement. Arham and Firmansyah (2021) then apply this framework to the situation of taxation, where, according to them, behavioral reinforcement interventions in the form of prompts, reminders, and auto-validation systems can help reduce the cognitive load and error rates in digital taxation software.

Such a perspective is furthered by the authors Shiraishi and Mupa (2025), who emphasize the fact that compliance behavior can be more likely to be improved in case the learning tools are more customized and context-sensitive. They suggest that it is possible to stimulate self-efficacy adoption among small business owners by shaping the adaptive interfaces in a way that it responds to the user proficiency. As Chima et al. (2022) also indicate, behavioral nudges in accounting systems may ensure that the filing process is an easy one and create the image of fairness and transparency. However, these are works that take into account a large majority of compliance in the corporate or high-tech environment, and nothing is empirically tested among the immigrant-owned SMEs. Application of compliance-by-design to tax literacy to other groups of entrepreneurs is therefore a new, untested use of the principle.

2.5 Research Gap

Although the literature is aware of the overlap of financial literacy, digital learning, and compliance behavior, it is a poorly integrated system that crosses between the domains of immigrant entrepreneurship. Akinbami (2025) states that the existing models are likely to believe that immigrant entrepreneurs are a similar group without taking into account the differences among them in terms of digital access, education, and cultural adaptation. Likewise, in their study, Ostrovsky and Picot (2021) report that most of the empirical research studies focus on the outcomes of employment and the innovation but not the compliance behaviors. Waobikeze (2018) criticizes outreach initiatives that concentrate on general entrepreneur skills and fail to consider the existence of obstacles associated with taxes, but Mupa et al. (2024) mention that the digital tools related to small businesses seldom involve behavioral or cultural design principles.

This gap shows a gap in research: not much is known about how the digital-first, behaviorally informed models can be applied to improve tax literacy and compliance among the immigrant-owned SMEs. This disconnect must be bridged in such a manner that the methods deployed must include compliance-by-design, as well as inclusive digital pedagogy. The present study assists in bridging this gap by operationalizing these concepts through a pilot-tested digital framework, correlating the use of technology to the quantifiable alterations in the degree of accuracy in filing, credit utilization, and trust in tax systems.

III. CONCEPTUAL FRAMEWORK

3.1 Theoretical Foundation

The theoretical framework that will be used in this research is a combination of the Behavioral Tax Compliance Theory and Digital Literacy Theory, which I will incorporate in my research by merging the psychological, educational, and technological aspects and explaining how the immigrant entrepreneurs can adopt and uphold the compliant behaviors. The theory of Behavioral Tax Compliance (Hartmann et al., 2020) underlines that the motivational factor influencing the choice of taxpayers is not only enforcement but also internal motivators, the belief in fairness, and confidence in the authorities. According to this theory, compliance may be increased when systems are open and easy to use and they support positive behavior instead of depending on punitive measures only.

Additionally, the Digital Literacy Theory as cited in Hlahla et al. (2025) is based on the idea that knowledge of digital environments goes beyond technical to involve critical cognition and judicious involvement in digital systems. In the tax context, it is important to note that the use of digital tools is not

sufficient, as the entrepreneurs should be able not only to use them but also to interpret their instructions correctly and ensure that they apply to the context-specific tax requirements. According to Arham and Firmansyah (2021), digital systems with behavioral reinforcement (guided feedback or visual cues) reinforce the motivation and accuracy of the user. These theories, combined, constitute the basis of designing culturally responsive, technology-based tax literacy interventions that go beyond traditional by integrating compliance by design into their design.

3.2 Components of the Digital-First Model

The proposed digital-first tax literacy model is structured around four interlinked components that operationalize both behavioral and digital literacy principles.

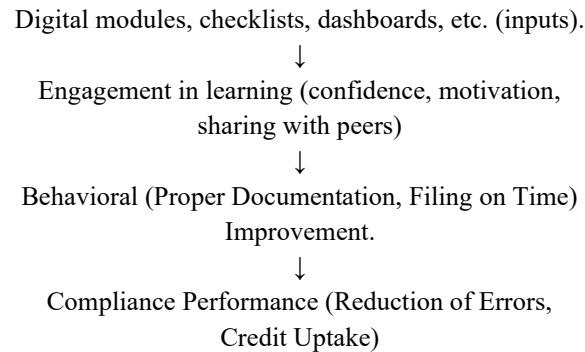| Component	Description	Supporting Literature
1. Pain-Point Mapping	Identifies recurring compliance difficulties among immigrant-owned SMEs, such as under-recorded sales, misinterpretation of quarterly estimated tax obligations, and confusion over state-specific nexus rules.	Chima et al. (2022); Dako et al. (2022)
2. Digital Interventions	Includes interactive checklists for quarterly filing, AI-based tax calculators estimating eligibility for credits such as R&D and work opportunity tax credits, and micro-learning modules explaining deduction categories.	Hlahla et al. (2025)
3. Reinforcement Mechanisms	Integrates visual dashboards that track learning progress, confidence levels, and task completion rates, providing instant feedback and self-monitoring tools.	Chamidah et al. (2025)
4. Peer Network Integration	Establishes community-based digital groups for discussion, support, and experience sharing to enhance tool adoption and cultural relevance.	Yadav (2025)

This model ensures that tax education is personalized, interactive, and anchored in practical business contexts rather than abstract training sessions.

3.3 Hypothesized Pathways

The structure assumes that when digital tools are incorporated in the day-to-day business processes, they support less cognitive and less procedural compliance barriers. The use of technology in financial learning is positively correlated with cognitive confidence, as proved by Chamidah et al. (2025), but the gradual transition to the utilization of digital accounting tools positively affects the accuracy and the reduction of the filing errors, as demonstrated by Adebiyi et al. (2025). Yadav (2025) further asserts that social and peer networks improve the levels of adoption as the networks regularize usage of technology between like-minded business people. Combined, these findings substantiate the overall assumption of the model: the improvement of the tax compliance performance is positively related to the enhanced literacy and confidence, as well as peer reinforcement due to digital engagement.

The cause-and-effect diagram relying on the hypothesized causal pathway is as follows:

Digital modules, checklists, dashboards, etc. (inputs).
↓
Engagement in learning (confidence, motivation, sharing with peers)
↓
Behavioral (Proper Documentation, Filing on Time) Improvement.
↓
Compliance Performance (Reduction of Errors, Credit Uptake)

This causality chain can conceive a systematized online educational setting into quantifiable compliance benefits.

3.4 Framework Logic
This model logic is in the form of a sequential and feedback-based learning process. The initial step to the engagement will be input-digital tools and learning material with the assistance of multilingual and user-friendly learning materials. Peer reinforcement and immediate feedback help create the mental and inspirational preparation created via interaction. The behavior will be refined, and it is denoted by the consistent recording, fewer mistakes in estimations, and comprehending the obligations. Finally, compliance performance with regard to appropriate filings and maximum usage of credits has improved.

This type of structure enables the culturally adaptive and iterative design of tax education that would help to justify the focus on digital interventions emphasized in Lam (2019) and that digital interventions should also consider the social and cultural background of different learners. The model redefines the projected success of tax literacy by reducing it into a participatory learning experience by integrating compliance tasks into intuitive digital workflows by transcending cultural barriers, building trust, and institutionalizing best practices by immigrant-owned SMEs.

V. METHODOLOGY

5.1 Research Design
This journal article employed the mixed-method design-based research (DBR) approach to test and pilot an online-only tax literacy model with immigrant-owned SMEs in the United States. The DBR methodology was suitable because it embraced both the quantitative and qualitative measures of the quantification of the actual performance. The quantitative data measured pre- and post-intervention involved tax literacy change, filing accuracy, and confidence, and the qualitative data measured the experience that the user had gone through and attraction to culture. This type of design allowed us to assess and optimize the intervention during a certain time period and give the model the concern that should be required to overcome pragmatic compliance concerns and digital engagement problems under various entrepreneurial settings.

5.2 Participants and Context
This was carried out on 60 immigrant-owned Latino, African-American, and Asian diaspora business association SMEs in the U.S. (de Mezzogori, 2025; Queiri and Belgacem, 2025). These were the typical immigrant businesses that were conducted within a multi-state business or an online business setting. The inclusion criteria entailed that the participant should have less than 25 employees and an existence period and period of operation of less than 10 years, together with presence in multiple tax jurisdictions. This was enlisted using the local business associations and the community-based organizations. The participants were oriented on the purpose of the study and confidentiality of data. The environment under study was a real simulation of the real-life operation conditions, and, therefore, the right-minded observation of the digital interactions and compliance attitude was made possible.

5.3 Instruments
The combination of the data collection with the quantitative and qualitative tools was also acceptable. Pre- and post-intervention surveys carried out to identify the level of tax literacy, confidence, and knowledge of the participants on credits and

deductions are modified versions of Novoa-Hoyos et al. (2022). The measures of engagement were gauged on the analytics of the platform, such as module completion rate, time spent on each activity, and number of times the digital checklists and calculators were accessed. Self-reported behavioral outcomes of compliance performance included accuracy of filing, timeliness, and use of credit (Charo, 2020). The focus groups were held to provide cultural and experiential feedback on whether the model is coherent, not confusing, and usable (Hickey, 2024). These items provided me with the general understanding of what was achieved in learning as cognitive and behavioral.

5.4 Data Analysis

Quantitative data were compared by the paired sample t-tests in a comparison of change in tax literacy and confidence in compliance at the beginning and end of the intervention. Descriptive statistics helped to describe the results of the engagement and filing. There was a correlation between the tool usage and its correct improvement. The results of the qualitative data were thematically coded focus groups, and the trends were defined up to motivation, accessibility, and design satisfaction, which are the issues of concern (Hartmann et al., 2020). A number of mechanisms that guaranteed the data reliability were also utilized; hence, the survey, analytics, and interviews made during the research were triangulated against each other (Adebiyi et al., 2025). The existence of the analyzing power of integrating the numerical inclinations in the data and narrative feedback ensured that a general picture of how digital learning tools affect compliance behaviors could be achieved.

5.5 Ethical Considerations

No research processes were beyond the institutional ethics review. Informed consent was provided by the participants after a provision was made containing detailed information regarding the objective of the study, data treatment, and the right to undergo the study. Translation was also used to assist non-English speakers to ensure inclusiveness (Fashakin, 2023). The identities of the participants were anonymized, and only the research team accessed raw data. Inclusive research principles included in ethical conduct were founded on the principles of cultural respect, confidentiality, and equal participation (Mupa et al., 2024). Such actions guaranteed the confidence

of the subjects, and the study was ethical in its execution.

VI. FINDINGS AND ANALYSIS

The first outcomes of the baseline were the significant level of knowledge and confidence gap among the other group of involved SMEs operated by immigrants. Most of the respondents were not well aware of the existing tax credits, and fewer than one in three were able to name deductions that were applicable to their business. The degree of confidence in the process of estimated tax calculation and the presentation of quarterly reports was low, and the vast majority of them were based on personal recommendations or templates of the past (Charo, 2020; Chamidah et al., 2025). Record-keeping irregularities were also present since nearly half of the participants lacked formalized digitalized mechanisms of expense tracking or receipt storage. These findings supported the compliance barriers that currently exist in the form of financial literacy and limited access to culturally sensitive tax education resources.

The learning platform was well interacted with and used, which were the results of the digital interaction. Overall, the module completion rates among the participants were 82%, which indicates involvement among the participants during the intervention. The most popular tax calculators and interactive checklists were selected because they gave the users the chance to become a simulator of a filing situation and test the document preparation. Instead, there was a decline in the interest in text-heavy instructional modules, and there were reports of problems with processing the information and being bored with reading the same thing, which supported the assumption that simplified and visual digital learning resources will enhance the engagement (Hlahla et al., 2025). Analytics also revealed that the errors of navigation and the dropout rates were minimalized with the help of bilingual interfaces that prove the importance of culturally responsive online design.

All the measures indicated significant changes in the post-intervention results. Precision of filing increased by 24%, and it was primarily because of a reduction in errors of classification of incomes and deductions. There was also a growth in the use of credit by 21

percentage points, which is an indication of improved information on how available tax benefits are being used. The self-rated tax confidence improved by 40%, and most of the participants reported a reduction in their anxiety over deadlines and audits. Based on the qualitative responses, it was stated that the platform's practicality, bilingual system, and interactive program were the key to successful learning (Akinbami, 2025; Fashakin, 2023). The fact that real-world examples and real-time response digital calculators had been used was particularly well received by participants since it allowed them to make a comparison of the theoretical teaching and its practical implementation.

The analysis of cross-community demonstrated minor patterns of interaction. The respondents of the Latino and African gender emphasized the significance of peer discussion forums, in which the experience of mutual support facilitated learning and responsibility (Yadav, 2025). Nevertheless, automated choices such as pre-filled templates and notifications had a better likelihood of acceptance among Asian businesspeople (Ruan et al., 2025). Such differences underline the flexibility of the tax literacy model to different cultural and learning contexts and testify to its flexibility and inclusiveness (Queiri and Belgacem, 2025). Importantly, the associations between social learning and automation contributed to the choice of differentiation among users, which actually enhanced the acceptance of the system as a whole.

These findings are put into the broader framework of the tax literacy research through the comparative analysis. They achieved the same performance as Novoa-Hoyos et al. (2022) and Arham and Firmansyah (2021), who also documented similar performance-based accuracy of compliance following structured literacy interventions. The results reported by Varyani (2022) regarding the applicability of technology-based compliance at the international level were also reflected in the fact that the digital capability and transparency were somewhat correlated. The aggregate findings support the appearance that directed digital interventions can be successfully used to improve tax literacy, just play in informal economies, and inclusive financial governance amid the immigrant entrepreneurial community. The total outcomes of a combination of the measurable performance gains and the non-measurable

satisfaction demonstrate that the suggested model, besides the improvements in the knowledge, allowed the participants to foster the business practices, which are compliant.

VII. DISCUSSION

The findings show that the combination of digital micro-learning and compliance-by-design tools influences the improvement of the tax performance of immigrant-owned SMEs significantly and positively. The fact that there was an improvement in the quality of filing, credit utilization, and trust validates the thesis statement that behavioral structure and online training will be capable of modifying the behavior of compliance within the multifaceted regulation environments. According to the research of Hartmann et al. (2020) and Arham and Firmansyah (2021), the study confirms that behavioral cues, i.e., reminders, completion dashboards, and confidence trackers, are part of digital tools that encourage participation rather than compliance as a response. These factors led to tax planning becoming an ordinary business management task rather than an administrative burden that had to be fulfilled at least once a year. The higher number of interactions between the users, who already got in contact with the interactive modules, also demonstrates that the digital autonomy and the real-time feedback can gain trust and motivation, particularly among the users who are struggling with the language barriers or bureaucracy.

Besides the results of the behavior, the results point out the possibilities of micro-learning strategies to guarantee the access to the tax education among time-limited entrepreneurs. Short and interactive modules reduced cognitive load and enabled flexible and self-paced learning, which is also a significant requirement for the SMEs who work variable hours. The tendency to communicate through bilingual interfaces and visual aids among the participants will demonstrate that cultural and linguistic inclusivity is the key to meaningful interaction (Akinbami, 2025; Fashakin, 2023). Moreover, the community-based learning processes received reinforcement because of the peer-supported groups the Latino and African participants interacted with, demonstrating that the trust networks may be effective facilitators of the digital adoption (Yadav, 2025). Overall, these results prove that the

digital model will be able to overcome the conventional barriers to tax literacy and assist with the formation of long-term compliance habits with the assistance of a culturally adaptive one.

Hypothetically, the research contributes to a convergence of Behavioral Tax Compliance Theory and Digital Literacy Theory and offers an integration of the two theorizations to operationalize compliance-by-design in taxing small businesses. Though behavioral motivation and technological facilitation are regarded as discrepant areas of research in the above literature, this paper has demonstrated that the structure of digital systems may be a behavioral nudge when compliance logic gets implemented in the daily business process. Subsequently, in that way, it is applying the existing frameworks to multicultural entrepreneurship and proving how digital literacy is both a cognitive skill as well as a structural mediator of compliance (Adebiyi et al., 2025; Shiraishi and Mupa, 2025). This model makes contributions to empirical knowledge of democratizing access to regulatory knowledge through availing pathways that are quantifiable, such as greater accuracy and confidence. It also contributes to the general debate on inclusive digital transformation, showing that compliance equity is not merely a policy issue but also a design issue that can be addressed through culturally responsive innovation.

However, the findings are restricted to a certain degree. The sample consisting of 60 SMEs is diverse but restrictive to the generalization of the findings to the immigrant population in business. The self-reported compliance measures also introduce the possibility of bias to the search since the respondents would exaggerate the improvements due to the social desirability effect or they do not understand the taxes. Besides, the quality of translation and usability testing of the modules, which are adequate for the pilot purposes, should be enhanced to be consistent in the dialects and literacy levels (Fashakin, 2023; Waobikeze, 2018). Future research should incorporate longitudinal studies to assess the potential of digital interventions to sustain behavioral change over a number of tax cycles and to assess the potential of digital interventions to enhance scalability when integrated with the government or a fintech platform. Despite these limitations, the research provides solid preliminary evidence that the digital-first, culturally adaptive interventions can close the long-standing tax literacy gaps and contribute to the fair incorporation in formal economies.

VIII. CONCLUSION AND FUTURE RESEARCH

The article features the revolutionary nature of digital-first, compliance-by-design solutions in addressing endemic levels of tax literacy among small-to-medium enterprises that are owned and operated by immigrants in the United States. Integrating the behavioral tax compliance theory and the digital literacy concepts, the model revealed that the systematic and accessible tools, such as interactive checklists, calculators, and micro-modules that have bilingual backgrounds, may play a significant role in addressing the accuracy of filing, the utilization of credit, and the trust to handle tax. The outcome of the above results substantiates the fact that once woven into the daily digital processes, tax education will be more digestible and less bulky to adhere to, particularly among the entrepreneurs having problems with language, culture, and information. The results could also be safeguarded concerning the general intentions of equity-based digital change (Lam, 2019; Varyani, 2022) through improving inclusion and accessibility within the regulatory framework wherein the business owners of immigrants are typically marginalized.

Significantly, the current study stresses the importance of culturally adaptive design, i.e., the use of visual aids, elements of peer learning, and multilingual interfaces as a determinant of engagement and long-term behavioral change. In addition to enhancing compliance, these interventions enhance the trust in formal institutions and help to enable immigrant entrepreneurs to be a more active part of the formal economy.

REFERENCES

[1] Adebiyi, O., Nwokedi, A.O. and Mupa, M.N., 2025. An Analysis of Financial Strategies, and Internal Controls for the Sustainability of SMME'S in the United States.

[2] Akinbami, E., 2025. *Exploring the Impact of Cultural Diversity on Financial Literacy Among Immigrant Small and Medium Enterprises*

(SMEs) in Dublin: A Qualitative Analysis (Doctoral dissertation, Dublin, National College of Ireland).

[3] Alvarez, N.T., Bi'Anncha, T.A., Lung-Amam, W.S. and June-Friesen, K., 2024. Small Business Anti-Displacement Toolkit: A Guide for Small Business Advocates.

[4] Arham, A. and Firmansyah, A., 2021. The role of behavioral theory in the research of msmes tax compliance in Indonesia. *Riset: Jurnal Aplikasi Ekonomi Akuntansi Dan Bisnis*, *3*(1), pp.417-432.

[5] Chamidah, A.N., Susyanti, J. and Hidayah, N., 2025. The Influence of Financial Literacy, Inclusion, and Tax Knowledge on the Financial Performance of MSMEs. *BASKARA: Journal of Business and Entrepreneurship*, *8*(1).

[6] Charo, J.G., 2020. Effect of Financial Record Keeping on the Taxation of Small and Medium Enterprises in Malindi Town.

[7] Chima, O.K., Idemudia, S.O., Ezeilo, O.J., Ojonugwa, B.M. and Adesuyi, A.O.M.O., 2022. Advanced Review of SME Regulatory Compliance Models Across US State-Level Jurisdictions.

[8] Dako, O.F., Onalaja, T.A., Nwachukwu, P.S., Bankole, F.A. and Lateefat, T., 2022. Cross-Border Taxation and Compliance Strategies Addressing Multinational Organizations' Operational Complexity and Regulatory Demands.

[9] de Mezzogori, I.P., 2025. Proposed Financial Model for LLCs in the United States: A Tool for Latino Entrepreneurs in Contexts of Formalization and Tax Compliance.

[10] Enow, M., 2010. Immigrant Entrepreneurship: Case studies of challenges faced by immigrant entrepreneurs in a large and small Swedish city.

[11] Fashakin, O., 2023. Language barrier as a form of challenge to immigrant entrepreneurship.

[12] Hartmann, A.J., Mueller, M. and Kirchler, E., 2020. Tax Compliance: Research Methods and Decision Processes. In *Psychological Perspectives on Financial Decision Making* (pp. 291-330). Cham: Springer International Publishing.

[13] Hickey, J., 2024. *Challenges faced by Immigrant Entrepreneurs in Dublin in establishing and running their businesses* (Doctoral dissertation, Dublin, National College of Ireland).

[14] Hlahla, V.I.M.B.A.I., Mupa, M.N. and Danda, C.A.T.H.E.R.I.N.E., 2025. Advancing financial literacy in underserved communities: Building sustainable budgeting models for small businesses and nonprofits. Community Dev Rev, 8(2), pp.123-40.

[15] Huang, X. and Liu, C.Y., 2019. Immigrant entrepreneurship and economic development: A local policy perspective. *Journal of the American Planning Association*, *85*(4), pp.564-584.

[16] Jarjoura, J.M., 2021. Immigrant entrepreneurship and job creation in the United States: a historical analysis and future projection model.

[17] Kaluarachchige, D., 2024. Study of motivations, challenges, and support mechanisms for immigrant entrepreneurship: case of immigrant entrepreneurs in Finland.

[18] Lam, L., 2019. A Design for Workforce Equity. Workforce Redesign for Quality Training and Employment: A Framing Paper. *Center for American Progress*.

[19] Mengdie, R., 2018. *Constraints of Small and Medium Enterprises Owned by Chinese Immigrants in Malaysia* (Master's thesis, University of Malaya (Malaysia)).

[20] Mupa, M.N., Pamful, E.E., Nnaji, J.C. and Adu-Boahen, J.O.A.N.N.A., 2024. *The Nature and Effect of Government Policies and Financial Institutions' Structure on The Growth and Development of Startups: An Introduction* [online]

[21] Novoa-Hoyos, A., Depoo, L. and Jiménez-Rodríguez, E., 2022. Role of financial literacy and awareness of tax impacts in an emerging economy facing tax reform. *Economics & Sociology*, *15*(1), pp.222-240.

[22] Ostrovsky, Y. and Picot, G., 2021. Innovation in immigrant-owned firms. *Small Business Economics*, *57*(4), pp.1857-1874.

[23] Queiri, A. and Belgacem, M.A.B., 2025. How Is It Easy for Diasporas to Run Business in the USA?: A Case Study Perspective From the

Libyan Diaspora. In *Unveiling the Potential of Diaspora Businesses: Global Insights* (pp. 145-172). IGI Global Scientific Publishing.

[24] Ruan, M., Baskaran, A. and Zhou, S., 2025. Immigrant entrepreneurship in Malaysia: the case of mainland Chinese-owned SMEs. *International Journal of Business and Globalisation*, *39*(2), pp.141-166.

[25] Shem, A.M. and Mupa, M.N., 2024. *Turnaround Financing: Legal and Financial Considerations for Distressed Companies* [online]

[26] Shiraishi, R. and Mupa, M.N., 2025. Cross-Border Tax Structuring and Valuation Optimization in Energy-Sector M&A: A US-Japan Perspective.

[27] Shiraishi, R. and Mupa, M.N., 2025. Valuation complexities in the energy transition: A comparative study of traditional vs. Green Energy Firms in M&A Transactions.

[28] Tesfom, G. and Lutz, C., 2009. Immigrant entrepreneurs challenging conventional wisdom: the adherence to immigrant networks plays a minor role in business success. *International Journal of Entrepreneurship and Small Business*, *8*(2), pp.241-258.

[29] Varyani, N.N., 2022. Social Justice & Multi-Jurisdictional Tax: A Critical Examination of the Digitization of Commerce, Multi-Jurisdictional Tax & an Opportunity to Correct a Systemic Preference to Protect Wealth. *Cap. UL Rev.*, *50*, p.91.

[30] Waobikeze, H.O., 2018. *Sustainability Strategies for Immigrant Small Business Owners* (Doctoral dissertation, Walden University).

[31] Yadav, R., 2025. Support Networks for Immigrant Entrepreneurs. In *Support Networks for Entrepreneurs: Social Capital and Strategic Collaborations* (pp. 255-278). IGI Global Scientific Publishing.

[32] Yol, G.J., 2023. *Strategies for Revitalized Immigrant-Owned Small Businesses to Sustain Growth Following Emergencies* (Doctoral dissertation, Walden University).