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Original Article

A Framework for the Adoption of Marketing Automation Strategies by Impact Tech Start-ups in South Africa

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Abstract: This study investigates the critical factors influencing the adoption and sustainability of marketing automation tools among Impact Tech Startups (ITS) in South Africa. Amid accelerating digital transformation, marketing automation offers startups a pathway to scale operations, personalize customer engagement, and optimize limited resources. Employing a qualitative methodology, the research draws on in-depth interviews with sixteen ITS founders and managers to explore internal and external factors shaping adoption decisions and long-term sustainability outcomes. Findings highlight internal enablers such as leadership commitment, financial support, and employee capability as foundational to successful adoption. Leadership and funding were key drivers, while employee readiness emerged as both a challenge and an opportunity for capacity building. Externally, customer demands for personalized, real-time interactions and competitive market pressures strongly influenced adoption behavior. Although some participants reported experiencing persistent vendor marketing, reactions varied, ranging from appreciation to resistance, underscoring the importance of trust, timing, and relevance in vendor outreach. Marketing automation is broadly perceived as enhancing the sustainability of ITS by increasing brand visibility, improving operational efficiency, and enabling scalable customer acquisition. For early-stage startups, these tools have become essential to achieving business continuity and growth through cost-effective marketing strategies. This study expands the limited literature on marketing automation in emerging markets and startup contexts. It provides practical insights for startup founders, policymakers, and technology vendors seeking to support digital adoption. Ultimately, the research emphasizes the need for context-sensitive strategies and policy frameworks that align with the dynamic challenges faced by startups in resource-constrained environments.

Keywords: Marketing Automation; Impact Tech Startups (ITS); Digital Transformation; Sustainability; Adoption Factors.

1. Introduction

One of the most pressing global challenges today is ensuring the sustainability of our planet. In response to this, the International Council for Science (ICSU, 2015), as cited in Leal-Filho et al. (2018), noted that the United Nations (UN) introduced the Sustainable Development Goals (SDGs) as a comprehensive strategy to "end poverty, protect the planet, and ensure prosperity for all." These goals were formally adopted by the global community at the United Nations

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General Assembly in 2015, culminating in the development of seventeen (17) SDGs (Smidt & Jokonya, 2022). Leal-Filho et al. (2018) further categorize these goals into six overarching themes: dignity, people, planet, partnership, justice, and prosperity. In alignment with these objectives, scholars such as Skala (2022), Gidron et al. (2021), and Cherroun and Cherroun (2022) have identified a new category of enterprises known as Impact Tech Start-ups (ITSs) mission-driven technology ventures that aim to contribute directly to the achievement of the SDGs. These startups play a critical role in addressing complex sustainability challenges (Vadera, 2019, as cited in Swartz, Scheepers & Toefy, 2022). In the South African context, Bosma et al. (2000, as cited in Swartz et al., 2022) observe that 70% of entrepreneurs are driven by a social purpose. Supporting this view, Mokwena (2022) highlights that South African ITSs actively tackle diverse socio-economic challenges, including unemployment, education, healthcare, and financial inclusion.

However, like many new ventures, ITSs are vulnerable to high failure rates due to factors such as limited skills, inadequate resources, and constrained access to finance (Muathe & Otieno, 2022). Marivate (2014, as cited in Mboweni, 2022) points out the consistently high failure rate among small, medium, and micro enterprises (SMMEs) across various sectors in South Africa. According to Carrigan (2020, as cited in Keogh & Johnson, 2021), while the literature offers numerous explanations for business failure, it remains insufficient given that approximately 90% of start-ups fail. Similar trends are echoed by Pena (2002, as cited in Kalyanasundaram, 2018), who notes the low survival rate of ITSs, with Forbes (2015, cited in Kalyanasundaram, 2018) estimating that 90% of startups fail within their first five years, a pattern that likely extends beyond the United States. Giardino et al. (2014, as cited in Teberga, Oliva & Kotabe, 2018) further reinforce that startups are inherently characterized by high risks and failure rates. Additionally, Muathe (2010); Muathe, Wawire & Ofafa (2013); and Muathe & Muraguri-Makau (2020), as cited in Muathe & Otieno (2022), argue that competition from well-established firms poses significant threats to the viability of SMMEs. A common obstacle identified by researchers (e.g., Metelka, 2014; Naude, 2013; Marivate, 2014; Masondo, 2018; Lloyd, Mey & Ramlingum, 2014) is the difficulty that South African SMMEs face in securing capital for operations and growth.

To enhance the survival and sustainability of startups, particularly those with a social impact mission, digital marketing and marketing automation in particular has emerged as a potential enabler (Mannel, 2019). Anon 2 (2021) describes marketing automation as a suite of digital tools designed to simplify and improve marketing processes. This includes software solutions that automate various aspects of campaigns such as email marketing, social media engagement, content creation, and website management, thereby making these tasks more efficient and results-driven. According to Anon (2021), such technologies empower companies to design strategic and creative marketing campaigns that yield measurable outcomes. This study investigates how the adoption of electronic marketing strategies, guided by the Technology-Organization-Environment (TOE) framework, influences the sustainability of South African Impact Tech Start-ups aligned with the United Nations SDGs. Within the TOE framework, technological factors considered include perceived relative advantage, technological complexity, and associated costs. Organizational factors encompass top management support, financial resource availability, and employee competency. Environmental factors include competitive pressure, customer expectations, and vendor influence.

2. Literature Review

Over the years, ensuring the sustainability of the planet has become an urgent global priority. The United Nations' Sustainable Development Goals (SDGs) aim to address key challenges such as poverty, climate change, and equitable access to quality education (Leal-Filho et al., 2018). In this context, Impact Tech Start-ups (ITSs) have emerged as enterprises that not only pursue commercial objectives but also prioritize social and environmental outcomes (Gidron et al., 2021). Despite their potential, ITSs face high failure rates similar to other start-ups (Muathe & Otieno, 2022). The predominant challenges confronting start-ups include sustainability and scalability (Gidron et al., 2021). Chakraborti, Dutta, and Jana (2022) attribute many failures to a lack of marketing skills, which often results in weak branding and inadequate marketing strategies. According to Telukdarie et al. (2022), small enterprises frequently struggle to implement complex digital tools, while Jalala (2022) observes that many entrepreneurs focus primarily on product development and often lack the marketing and sales expertise necessary for growth. Consequently, there is a pressing need for ITSs to build competencies in digital marketing to remain viable in the digital economy.

The advent of the internet has significantly transformed marketing practices, prompting organisations to invest in digital marketing capabilities. Nyagadza (2020) emphasizes that tools such as social media and search engine marketing (SEM) enable firms to effectively reach and engage target audiences. However, many start-ups lack the necessary resources and personnel to manage comprehensive digital marketing efforts. Marketing automation (MA) has been identified as a potential solution to this constraint. Despite its growing relevance, there remains limited research on the factors influencing the adoption of marketing automation within the context of ITSs, especially in South Africa. Although several studies have examined e-marketing adoption among SMEs (Otika et al., 2022), the specific issue of marketing automation adoption by South African ITSs has not been sufficiently addressed. Otika et al. (2022) highlight the necessity of exploring various forms of e-marketing adoption in small businesses. Furthermore, Chakraborti et al. (2022), as cited in El-Shihy and Mohamed (2023), point to a research gap concerning the drivers and barriers to digital marketing adoption by start-ups. This study aims to fill this empirical gap by focusing specifically on the adoption

of marketing automation strategies by ITSs, diverging from the broader SME-oriented literature. Additionally, little attention has been given to the application of the Technology-Organisation-Environment (TOE) framework in analyzing this adoption process.

Given that both marketing automation and the ITS model are relatively nascent concepts, there is limited scholarly work investigating their intersection. Sweeny (2008), as cited in Murphy (2018), underscores the increasing relevance of marketing automation, predicting that investments in this area would double to $25 billion by 2023. However, academic exploration of the subject remains limited. Teixeira et al. (2018) affirm that various models have been developed to study the adoption and implementation of new technologies in enterprises, which assist in identifying the key factors that influence such processes. Therefore, this study aims to contribute conceptually and practically by providing a structured understanding of how marketing automation strategies are adopted by ITSs in South Africa. The findings are expected to enhance the sustainability and commercial viability of these start-ups while supporting their efforts to contribute to the achievement of the United Nations' SDGs. Marketing automation has been praised for its affordability and ability to enhance operational efficiency by streamlining marketing activities (Pandey & Tilak, 2022). Chakraborti, Dutta, and Jana (2022), as well as Patil, Navalgund, and Mahantshetti (2022), identify marketing automation as a viable tool for improving start-up survival. Searle (2023) supports this view, noting that automation allows businesses to maximize the productivity of existing staff and reduce operational costs. In the South African context, Searle argues that automation is particularly effective in enhancing customer experience.

Marketing automation is particularly advantageous for ITSs, as it facilitates business growth while simultaneously lowering marketing costs (Skiera, 2022; Nath, 2017, as cited in Hammoud et al., 2022). Anon 2 (2021) asserts that automation helps businesses tackle significant challenges, automate tasks, and achieve long-term cost reductions. According to Mannel and Engelen (2019), although the small scale of start-ups may hinder customer outreach, marketing automation tools can provide valuable customer insights and generate leads efficiently with minimal staff involvement. The internet, in this regard, offers numerous low-cost or even free tools that can enhance marketing efforts. The rapid digital transformation brought about by the Fourth Industrial Revolution has placed increasing pressure on SMEs to adopt digital technologies (Maroufkhani et al., 2022, as cited in Rawashdeh et al., 2023). Nevertheless, the adoption of digital marketing technologies remains low among SMEs. Otika et al. (2022) express concern over this limited uptake, despite the recognized benefits. Similarly, Musa et al. (2013), as cited in Smidt and Sokonya (2022), highlight the broader challenges faced in adopting digital technologies, including limited infrastructure, lack of digital literacy, and inadequate access to electricity, particularly in rural settings.

3. Materials and Methods

This study adopted a qualitative research design, utilizing data collected through 16 semi-structured interviews with founders and employees of Impact Tech Start-ups (ITSs) located in Johannesburg, Cape Town, Durban, and Mafikeng. The interviews were guided by a discussion framework refined through two preliminary pilot interviews to ensure clarity and relevance. While many of the participating start-ups operate within digital and innovation hubs, a number of them maintain independent business premises. The sampling frame was derived from databases of ITSs affiliated with established innovation ecosystems, including 22 on Sloane Digital Hub in Johannesburg, Innovation City in Cape Town, independently operated ITSs in Durban, and the Mafikeng Digital Hub. For the qualitative phase of the study, purposive sampling was employed to ensure the selection of participants with relevant knowledge and experience. In contrast, random sampling was applied in the subsequent quantitative phase. The qualitative data were analyzed using thematic analysis. Atlas.ti software facilitated the coding and organization of data. Open and axial coding techniques were employed to identify recurring themes and patterns that emerged from the interviews, providing a structured and in-depth understanding of the factors influencing marketing automation adoption among South African ITSs.

4. Results

4.1. Demography Profile of Participants

Table 1 presents the demographic and professional profile of the 16 Impact Tech Start-up (ITS) executives who participated in the qualitative phase of the study. These participants were selected from a broader population of approximately 450 tech start-ups operating across South Africa.

Table 1. Profile of Qualitative Study Participants

Participant	Position	Industry	Location
1	CEO	eCommerce	Cape Town
2	Founder	Real Estate	Durban
3	Fonder	Health Tech	Johannesburg

4	Founder	Software Tech Startup	Johannesburg
5	Founder	Education Tech	Durban
6	Founder	Agri Tech	Mafikeng
7	Founder	Education Tech	Mafikeng
8	CEO	Digital Marketing	Cape Town
9	Founder	Education Tech	Mafikeng
10	Chief Operating Officer	Sustainability Startup	Cape Town
11	Founder	eCommerce	Durban
12a	Founder	eCommerce	Durban
12b	Founder	eCommerce	Durban
13	Chief Operating Officer	Real Estate	Cape Town
14	Founder	Education Tech	Johannesburg
15a	Portfolio Manager	Education Tech	Cape Town
15b	Head of Marketing	Education Tech	Cape Town
16	Head of Marketing	Online Recruitment	Cape Town

Prior to each interview, participants were briefed on a comprehensive set of ethical guidelines. These included a clear explanation of the study's purpose, assurance that participation was entirely voluntary, the right to withdraw at any time without consequence, and a guarantee of anonymity to protect their identities. Interviews commenced only after each participant confirmed their informed consent and willingness to proceed. To ensure clarity and mutual understanding, the researcher read and explained each question at the beginning of the interview sessions. All interviews were audio-recorded using an Olympus voice recorder, with a mobile phone used as a backup device. The recorded audio files were then submitted to an independent transcriber for verbatim transcription. The transcribed data were subsequently analyzed by an independent analyst using ATLAS.ti software.

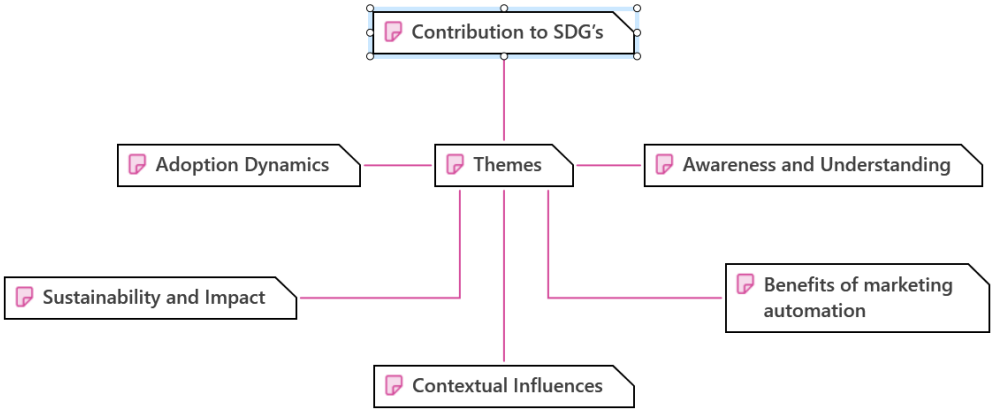

Figure 1. Emergent Themes Identified through ATLAS.ti Analysis

Upon uploading the transcripts into the software, the data were coded through open and axial coding methods, which facilitated the identification of themes and sub-themes. A co-occurrence analysis was also conducted to explore relationships between codes. The researcher collaborated closely with the analyst to review and refine the themes, with similar or overlapping themes consolidated where appropriate. A total of 286 pages of transcribed interviews were analyzed. The analysis yielded 224 distinct codes and 477 quotations. Additionally, six memos and seven overarching themes were generated during the coding process. The findings of the study are presented in two parts: first, a thematic analysis outlining the major themes, sub-themes, and associated codes (illustrated in Figure 1 and detailed in Table 2); second, a summary of participant responses to the research questions, which are organized into tables corresponding to each question. Figure 1 visually represents the key themes that emerged from the data. Figure 1 captures six overarching themes that were identified from the qualitative data analysis using ATLAS.ti software. These themes are awareness and understanding, benefits of marketing automation, adoption dynamics, contextual influences, contribution to the Sustainable Development Goals (SDGs), and sustainability and impact. Each theme captures a key dimension of the participants' experiences and perceptions regarding the adoption of marketing automation in Impact Tech Start-ups (ITSs) in South Africa. The thematic structure is further elaborated in Table 2, which outlines the main themes, corresponding sub-themes, and associated codes derived from the interview transcripts.

Table 2. Summary of Theme, Sub-themes and Codes

Themes	Sub-themes	Codes
Theme 1: Awareness and understanding	Knowledge of Marketing Automation	Level of awareness on marketing automation Level of understanding of marketing automation
	Perception of Marketing Automation	Perception of importance Perception complexity
Theme 2: Benefits of marketing automation	Perception	Perceived vs actual
Theme 3: Adoption Dynamics	Adoption Process	Adoption factors Adoption of marketing automation Drivers to the adoption of automation Barrier to adoption
Theme 4: Contextual Influences	Impact of organizational factors	Top management support, financial support, and employee capability
	Impact of technological factors	Perceived relative advantage, complexity, and cost)
	Impact of environmental factors	Customer pressure, vendor pressure, and competitive pressure
Theme 5: Contribution to SDG's	2 or 3 Cluster SDG's	Education, health, job creation, no poverty, gender equality,
Theme 6: Sustainability and Impact	Perceptions of sustainability	Perceived vs actual

The qualitative analysis of interviews with Impact Tech Startup (ITS) executives in South Africa revealed six key themes, each comprising several sub-themes and specific codes that collectively offer insight into the adoption and implementation of marketing automation (see Table 2). The first theme, Awareness and Understanding, addresses the foundational knowledge and perceptions ITSs hold regarding marketing automation. This includes the level of awareness and understanding of such tools, as well as participants' perceptions of importance and complexity. Many respondents had varying degrees of familiarity with MA, with some perceiving it as highly beneficial yet technically complex. The second theme, Benefits of Marketing Automation, explores the perceived and actual advantages of adopting MA. It highlights a contrast between expectations, such as enhanced efficiency, customer targeting, and scalability, and actual outcomes experienced post-adoption, which were often aligned but occasionally limited by inadequate implementation or resource constraints.

Adoption Dynamics emerged as the third theme, shedding light on the processes, drivers, and barriers involved in MA adoption. This includes internal and external adoption factors, such as strategic objectives, technical readiness, and the presence of drivers like operational efficiency, customer engagement, and competitive advantage. Conversely, barriers such as limited digital skills, high costs, and resistance to change were also noted. The fourth theme, Contextual Influences, considers how organizational, technological, and environmental factors shape adoption decisions. Organizational factors include top management support, financial resources, and employee capabilities. Technological factors cover perceptions of MA's relative advantage, complexity, and cost, while environmental factors pertain to external pressures from customers, vendors, and competitors.

The fifth theme, Contribution to Sustainable Development Goals (SDGs), reflects the alignment of ITSs with global development priorities. Many participants emphasized their contributions to SDGs such as quality education, healthcare, job creation, poverty reduction, and gender equality, framing marketing automation as a tool that could enhance their social impact by expanding reach and efficiency. Finally, the sixth theme, Sustainability and Impact, deals with perceptions of the startups' long-term viability and the actual impact of MA on achieving sustainability objectives. Participants often contrasted their perceived outcomes with actual results, noting both the potential and challenges of leveraging MA to sustain business operations while fulfilling their broader social missions. Together, these themes offer a nuanced understanding of how marketing automation is understood, perceived, adopted, and evaluated within the context of South African Impact Tech Startups, providing a valuable framework for both academic inquiry and practical strategy development. Research Question 1 sought to explore: "What is the level of awareness and understanding of marketing automation among South African Impact Tech Startups (ITS)?" To address this, participants were asked about their familiarity with marketing automation concepts and tools. Table 3 presents selected verbatim responses that

illustrate the varying degrees of awareness and understanding among ITS executives, highlighting both informed perspectives and knowledge gaps.

4.2. Awareness and Understanding of Marketing Automation among ITS Executives

The participants provided valuable insights into their awareness and understanding of marketing automation, as reflected in Table 3. These responses shed light on the varying levels of familiarity with marketing automation tools and strategies among executives of South African Impact Tech Startups (ITS). The table presents a range of responses, from those who demonstrated a high level of awareness to those who acknowledged a more basic understanding of marketing automation, highlighting the diversity in their knowledge and engagement with this technology.

Table 3. Summary of Participant Responses for Awareness and Understanding

Participant	Codes	Supporting quotes
1	High awareness Understanding	*"So, in our context where we do a bit of marketing automation is connecting systems. We use a bit of Zapier to connect this to that, so that's on a basic level, just keeping things in the right bucket. From a CRM side of things, automations on follow-ups and e-mail or sales journey automation."*
3	High awareness	*"I know there's CRM but I'm not that clued up on that one.. We started with HubSpot. Very new but we're not on the pro one. We're on the free one. We started it in January.*
6	High awareness	*"We know about Mailchimp, Zoho, HubSpot, Salesforce."*
7	High awareness	*"Ja, they are but that's why I was just familiar with one, which is Zapier, because I've interacted with it on multiple occasions"*
10	High awareness	*"I think automation is the first point of call, to be totally honest, for most people. Everyone wants to automate".*
14	High awareness	*"So, with marketing automation, these are tools that help us reach our clients or potential clients and be able to acquire them, retain them, and exchange value. So, there's obviously the Google suite of products and I think a big worth noting is something like HubSpot."*
15	High awareness	*"Just tools that help you automate various tasks and various things within the marketing realm."*

The findings presented in Table 3 indicate a generally high level of awareness and understanding of marketing automation tools among the sampled Impact Tech Startups (ITS) in South Africa. Most participants demonstrated familiarity with various marketing automation tools and described how these tools were being applied within their organizational contexts. Participant 1, for example, showcased a strong operational understanding of marketing automation by referring to specific applications such as the use of Zapier to integrate systems, as well as CRM-related automations involving follow-ups and sales journey management. This reflects both technical proficiency and strategic application, suggesting an advanced level of engagement with automation tools. Participant 3 acknowledged some limitations in expertise ("not that clued up"), but nonetheless demonstrated practical experience by mentioning HubSpot, which their startup had adopted, albeit at a basic, non-premium level. This highlights a developing awareness and an intent to scale as their needs evolve. Participant 6 listed a suite of popular automation platforms including Mailchimp, Zoho, HubSpot, and Salesforce, reflecting broad awareness of mainstream tools and indicating exposure to a diverse marketing automation ecosystem.

Similarly, Participant 7 expressed familiarity with Zapier, emphasizing repeated interactions with the tool across different contexts. This suggests a hands-on understanding of its functionality and relevance in automating routine tasks. Participant 10 emphasized that automation was perceived as a priority for many startups, describing it as a "first point of call." This sentiment underscores the strategic importance attributed to marketing automation in enabling operational efficiency and scalability. Participant 14 provided a comprehensive description, identifying automation tools as enablers for customer acquisition, retention, and value exchange. Specific mention of the Google suite and HubSpot highlights awareness not only of tools but also of their strategic implications for client engagement and business growth. Participant 15 offered a concise yet accurate definition, stating that marketing automation comprises "tools that help you automate various tasks within the marketing realm." This response illustrates an understanding of the functional purpose of such tools, even if not elaborated in technical detail. Overall, the responses suggest that South African ITS leaders possess a commendable degree of awareness and understanding of marketing automation. While the level of

technical depth varies, there is a shared recognition of the relevance and potential benefits of automation in enhancing marketing efficiency and supporting business growth. These findings indicate that marketing automation is not only known but actively explored and, in many cases, implemented within these start-ups, thereby positioning them to leverage technology for improved sustainability and scalability.

4.3. Drivers and Barriers to the Adoption of Marketing Automation

The responses from the participants regarding the drivers and barriers to the adoption of marketing automation strategies are summarized in Table 4. These responses provide insight into the factors influencing the decision-making process among South African Impact Tech Startups (ITS) when it comes to adopting marketing automation tools. The table highlights both the positive drivers that encourage adoption and the obstacles that hinder its widespread implementation.

Table 4. Summary of Participant Responses for Driver and barriers to adoption

Participant	Codes	Supporting quotes
4	Barriers Drivers	*"Very much life-stage. I want to fully validate a couple of the solutions. I don't want to make too much noise before we have enough, I suppose, endorsements from people using the solutions because I think I've made that mistake some ten/eleven years ago."*
5	Barriers Resource constraints	*"It is the cost. It is largely the cost because I think the setup and management is quite easy."*
7	Barriers Cost	*"As much as I do value it and see its impact, but I have that perception that it's a bit expensive, especially to startups."*
8	Barriers	*"So, I think people think that, if they are in control, it will be better. So, I think the control is an issue for people who wanna do it themselves and automation takes that responsibility away from them and they still somehow wanna hold onto it."*
10	Driver Complexity	*"Complexity of these tools sounds like a barrier but it actually is probably an advantage to understanding it. So, I think it's definitely not a barrier."*
11	Barriers Drivers	*"I'd say the drivers are very much time…to reduce time and to acquire customers. I think it's also efficiency. The barriers are the complexity of the tool in the usage, it's useability. I think that's a big factor. And then, as well, price. I think as you're starting up, you might not see the benefit of paying some of those upfront costs."*
12	Barriers Drivers	*"So, one thing of a driver would be the user's knowledge and that's one of the things that we always get*
13	Barriers Complexity	*"So, if you don't know that, then that kind of adds to the complexity because then it's just digital marketing maybe harder then. Cost is a barrier."*
14	Barriers Drivers	*"The drivers are the data-driven approach of marketing automation, it allows you to make informed decisions, there's no thumb-sucking, and some of the tools give you a way to do experiments, like AB testing."*
16	Drivers	*"There's a lot of opportunity in the CRM space. Lack of knowledge is a barrier."*

Table 4 shows that the interviews revealed a complex interplay of both drivers and barriers influencing the adoption of marketing automation (MA) among South African Impact Tech Startups (ITS). While participants acknowledged the strategic benefits of automation, various organizational and perceptual barriers continue to constrain widespread adoption.

4.3.1. Barriers to Adoption

A recurring theme in the responses was cost, especially for startups operating under resource-constrained environments. Participant 5 cited cost as a primary barrier, stating that although implementation and management of automation tools might be straightforward, the financial outlay remains a significant concern. Similarly, Participant 7 echoed this sentiment, highlighting that despite valuing MA and recognizing its potential impact, the perception of high

costs discourages adoption at the early stages of startup growth. Another barrier identified is control and trust in automated systems. Participant 8 pointed out that some entrepreneurs prefer to retain manual control over processes, which leads to reluctance in adopting systems that may appear to undermine their direct involvement. This psychological resistance can delay the transition to automation, especially among founders who equate manual oversight with quality and accountability. Complexity also emerged as a critical barrier. Although Participant 10 challenged the assumption that complexity is inherently negative, viewing it as an opportunity to gain deeper understanding, others, such as Participants 11 and 13, associated complexity with reduced usability and clarity, which hinders effective implementation. Participant 13 stressed that a lack of digital knowledge adds to this complexity, reinforcing the need for capacity-building and technical training. In addition, Participant 4 described organizational maturity or "life-stage" as a barrier, expressing reluctance to deploy MA tools before validating their solutions in the market. This cautious approach stems from prior negative experiences and illustrates how past mistakes can shape future technology adoption behaviours.

4.3.2. Drivers of Adoption

Despite these challenges, participants also identified several compelling drivers that encourage the use of marketing automation. Chief among these are efficiency gains, time savings, and customer acquisition benefits. Participant 11 noted that automation reduces the time needed for repetitive tasks and improves efficiency in reaching target audiences. Data-driven decision-making was highlighted by Participant 14, who praised marketing automation for enabling evidence-based marketing. Tools such as A/B testing and performance analytics allow for experimentation and refinement, moving decision-making away from guesswork. This ability to measure outcomes aligns with the strategic goals of most ITS, particularly those focused on scalability and sustainability. Knowledge and awareness were also cited as enabling factors. Participant 12 indicated that the user's knowledge base is crucial to driving adoption, as familiarity with tools enhances confidence and willingness to integrate MA into daily operations. Participant 16 added that while there is substantial opportunity within the CRM space, the lack of knowledge remains a persistent barrier—implying that targeted educational interventions could accelerate adoption. Interestingly, Participant 10 reframed complexity as a motivator rather than a deterrent, emphasizing that understanding sophisticated tools provides a competitive edge rather than acting as an obstacle.

4.4. Perceived relative advantage on the adoption of marketing automation by South African Impact Tech Startups (ITS)

The impact of technological factors such as the perceived relative advantage on the adoption of marketing automation by South African Impact Tech Startups (ITS), is summarized in Table 5. The table presents participants' views on how the perceived benefits of marketing automation, in terms of improving efficiency, effectiveness, and customer engagement, influence their decision to adopt these tools. The participants' quotes reveal varying perceptions of the relative advantages, with some highlighting the efficiency gains, while others reflect concerns over the perceived complexity and costs of these technologies.

Table 5. Summary of Participant Responses for Perceived Relative Advantage

Participant	Codes	Supporting quotes
2	Relative advantage	*"Yes, definitely, especially if I can quantify the relative advantages, like I can tell most likely this is the return on investment or this is the conversion rate that I can expect, I'll be more likely to try it."*
3	Advantages	*"I think it can impact it greatly because, as a startup, the end goal may be to be scalable, and for people, especially your target market, they must know that we exist."*
6	Advantages	*"I would think, if small businesses would adopt such processes such as automated marketing, you would be actually increasing your competitiveness in the market, meaning you would be now appealing to more customers, making more sales, creating more revenue."*
8	Advantages	*"So, I think HubSpot is great from a funnel perspective, specifically for small businesses."*
11	Perceived advantages	*"It's also useful on the customer service side. So, especially ticketing, responding to queries, getting notified on social media if someone has highlighted something wrong, I think it improves the customer experience if you have marketing automation."*

Participant	Codes	Supporting quotes
12	Relative advantages	*"So, one of our things was delivery notifications, marketing automation is one of our main drivers. We wouldn't be able to do what we do without automation."*
14	Perceived advantages	*So, the first and foremost thing is that most marketing automation tools are self-service. You self-serve. You don't need to talk to a salesperson, so that's an advantage because it quickens the time to adoption. So, that helps a lot.*

Table 5 presents participants' views on the perceived advantages of adopting marketing automation, which were seen as influencing their decisions to implement these technologies. A significant number of participants identified return on investment (ROI) as a key factor in their decision to adopt marketing automation tools. Participant 2 emphasized that quantifiable benefits, such as conversion rates and ROI, would increase their likelihood of adopting marketing automation. This indicates that the perceived financial advantage of these tools, in terms of improving sales or generating leads, plays a critical role in decision-making. Similarly, Participant 3 highlighted the importance of scalability, stating that marketing automation could help a startup gain visibility and reach more people, especially its target market. This reflects the idea that marketing automation can help ITSs grow by expanding their customer base and creating more opportunities for success, further emphasizing its perceived value. Participant 6 noted that the adoption of marketing automation could enhance a small business's competitiveness, allowing it to attract more customers, increase sales, and ultimately generate more revenue. This perception of competitive advantage aligns with the general view that marketing automation helps startups stay relevant and effective in a crowded market.

For Participant 8, the benefits of marketing automation were tied to its effectiveness as a funnel management tool. They mentioned that tools like HubSpot are particularly beneficial for small businesses, helping them manage the customer journey from acquisition to conversion efficiently. Participant 11 recognized the utility of marketing automation in enhancing customer service, particularly through features like ticketing and social media notifications. This reflects an understanding of how automation can improve the customer experience by ensuring timely responses and better engagement with customers. Participant 12 also emphasized that marketing automation was essential for their operational needs, particularly in managing delivery notifications. This quote underscores that for some ITS, marketing automation is not just an optional tool but a core driver of their business processes, enabling them to perform tasks that would otherwise be unmanageable. Finally, Participant 14 pointed out that many marketing automation tools are self-service, which they saw as an advantage because it reduces the need for interaction with a salesperson, thereby accelerating the adoption process. This view highlights the user-friendliness and accessibility of marketing automation tools, particularly for startups with limited resources. Thus, the responses suggest that the perceived relative advantages of marketing automation, such as improving customer acquisition, increasing revenue, enhancing competitiveness, and streamlining business processes, are crucial factors driving the adoption of these tools among ITS in South Africa.

4.5. Perceived complexity of marketing automation tools

The impact of technological factors, such as perceived complexity, on the adoption of marketing automation by Impact Tech Start-ups (ITS) was explored. Table 6 presents participants' responses and associated codes that provide insight into how the complexity of marketing automation tools influences their adoption decisions.

Table 6. Summary of Participant Responses for Perceived Complexity

Participant	Codes	Supporting quotes
1	Complexity	*"I think complexity for the right reason is attractive to me because then I can customise but complexity in terms of a user experience or UI or that point of view is not good."*
2	Complexity	*"It's a hindrance. In the midst of everything as a founder, you do most things."*
3	Complexity	*"Even if it's complex, it's not going to affect my decision to run with it. That's why, even with this HubSpot one, I told our marketing lady, let me play around with it before we sign up for the pro. So, once I get a chance to play around with it, I will know. If it's not user-friendly… If it's a lot of moving parts, I get disinterested because I can see now it's going to sap our energy, because time is very important for us."*
4	Complexity	*"Complexity does affect adoption however I'm very lucky in that I'm a tech-first founder.".*

7	Complexity	*"So, I think the complexity, because I know some people think…because marketing, even if you do it yourself, sometimes it may be complex.. So, it might make people not want to go there because it's difficult to do it on your own as it is right now."*
8	Complexity	*"I think there is definitely a perception that it is complicated but all the evidence shows that it's not."*
10	Complexity	*"I think complexity is a barrier probably from an onboarding perspective."*
11	Complexity	*"I think you have to be tech-savvy. It does take a bit of time to get accustomed with them. I find that the platforms with templates are the ones that are easier to adopt."*
12	Complexity	*"But for the people that don't have the formal education to understand all of these systems, statistics, and the analytics and the web HTML jargon, it might be difficult for them."*
14	Complexity	*"So, if something is…you get to the website and you see that it's easy, it's…and it looks complex, I don't think a lot of people are going to try. That's where now you see your bounce rate is very high or there are no signups, people are coming and leaving, even if you do paid thing."*
16	Complexity	*"So, for example, ClickUp is quite a complex system but having a champion within the business can help with that quite a lot. So, perceived complexity is a consideration but if you've got somebody who is eager to own it and champion it and really believes in it, that's a really good starting point that can help mitigate that particular challenge."*

Table 6 presents a selection of responses that highlight the varying perceptions of complexity among participants. For some participants, complexity was not viewed solely as a barrier but also as a potential attraction. Participant 1 acknowledged that complexity, if it enables customization, could be beneficial. However, they emphasized that user interface (UI) complexity could be detrimental, as it negatively affects the user experience. This suggests that while complexity in functionality can be desirable, it should not hinder ease of use. Participant 2, on the other hand, viewed complexity as a hindrance in the busy life of a startup founder, where the founder is often required to manage multiple tasks simultaneously. This aligns with a common concern in startups: the lack of time and resources to deal with overly complex tools. Participant 3 also considered complexity a potential barrier but noted that their approach was to experiment with tools before fully committing. They highlighted their desire to play around with platforms like HubSpot to ensure that they are user-friendly before deciding to adopt them. If tools were found to have too many moving parts, it would likely lead to disinterest and frustration, as the time and energy required to manage the tools could be overwhelming.

For tech-savvy founders, like Participant 4, complexity was less of a deterrent. Their ability to handle technical challenges allowed them to overlook the difficulties associated with adoption. However, Participant 7 highlighted a common concern for those less familiar with the technical aspects of marketing: the perceived complexity of marketing automation could prevent people from even considering it as an option, especially when traditional marketing is already challenging. Interestingly, Participant 8 provided a different perspective, arguing that while there is a perception that marketing automation is complex, evidence shows that it may not be as difficult as some believe. This suggests that once startups gain exposure and experience with marketing automation tools, they may overcome initial misconceptions about complexity. For others, like Participant 10, complexity was seen as a barrier, particularly from an onboarding perspective. The learning curve associated with new tools can slow down the adoption process, as startups may struggle to implement and integrate these systems effectively. Participant 11 also noted that being tech-savvy was a crucial factor in overcoming the complexity of marketing automation tools. They found platforms with pre-built templates easier to adopt, as they simplified the process for users without technical expertise. However, for those without formal education in technology, as Participant 12 pointed out, the technical jargon associated with marketing automation, such as HTML, statistics, and analytics, could make the tools difficult to navigate, thus becoming a significant barrier for adoption.

Finally, Participant 14 observed that the visual appeal and perceived complexity of a tool's interface could impact user adoption. If users encounter a platform that appears too complex, they may quickly abandon it, leading to a high bounce rate and low sign-up rates, even if the marketing efforts are paid. Participant 16 offered a more optimistic view, suggesting that even complex systems like ClickUp could be successfully adopted if there is a champion within the organization. Having a motivated individual who understands the tool and is passionate about using it could help mitigate the challenges posed by perceived complexity. In summary, while perceived complexity is often considered a

significant barrier to the adoption of marketing automation tools, it is not always a decisive factor. For some startups, complexity is manageable, especially when the tools offer customization or come with templates that simplify the process. For others, the challenges of onboarding, the lack of technical expertise, and the user interface design play crucial roles in determining whether these tools are ultimately adopted.

4.6. perceived costs of marketing automation tools and their impact on adoption by Impact Tech Start-ups (ITS)

The impact of technological factors, such as the perceived **cost** of marketing automation tools, on their adoption by Impact Tech Start-ups (ITS) was addressed. **Table 7** displays participants' responses along with relevant codes, highlighting how the cost of marketing automation tools is perceived as either a barrier or a consideration in their decision to adopt these tools.

Table 7. Summary of Participant Responses for Perceived costs

Participant	Codes	Supporting quotes
1	Cost	*"Cost definitely plays a part."*
4	Cost	*"If folks could just have line of sight of an ROI, then cost can be justified. It's a driver."*
5	Cost	*"It is the cost. It is largely the cost because I think the setup and management is quite easy."*
7	Cost	*"I think marketing automation, as much as I do value it and see its impact, but I have that perception that it's a bit expensive, especially to startups. So, I think the funds, for me, I just think it's a bit expensive at first."*
8	Cost	*"So, I don't know why people have this understanding that it's…or perception that it's expensive."*
10	Cost	*"So, I think that cost, the spend, is definitely a driver."*
12	Cost	*"So, for our CRM, I think Salesforce and stuff like that is a bit too expensive for us at the moment, but we definitely use HubSpot."*
14	Cost effectiveness	*"So, if the price is right, it's self-service and easy to use, then adoption by startups will be quick."*
15	Cost effectiveness	*"That's a barrier for me but it is a definite barrier because it will take more time for you to learn the programme."*

The responses captured in Table 7, addressing the perceived costs of marketing automation tools and their impact on adoption by Impact Tech Start-ups (ITS), show a range of opinions, with cost playing a significant role in both encouraging and discouraging adoption. Several participants identified cost as a key barrier to the adoption of marketing automation tools, especially for startups that often operate with limited financial resources. For instance, Participant 7 expressed that while marketing automation holds significant value, the perceived cost remains a major concern, particularly for startups. They mentioned, "I think marketing automation, as much as I do value it and see its impact, but I have that perception that it's a bit expensive, especially to startups. So, I think the funds, for me, I just think it's a bit expensive at first." Similarly, Participant 12 highlighted the high cost of advanced tools like Salesforce, noting that it was beyond their financial reach at the time, even though they use more affordable tools such as HubSpot. They said, "So, for our CRM, I think Salesforce and stuff like that is a bit too expensive for us at the moment, but we definitely use HubSpot." This underscores the financial challenges faced by ITS when it comes to adopting higher-end tools.

On the other hand, cost was also seen as a driver for adoption, particularly when its value can be demonstrated. Participant 4 mentioned that if there is a clear return on investment (ROI), the cost can be justified, transforming it into a motivating factor. They stated, "If folks could just have line of sight of an ROI, then cost can be justified. It's a driver." This suggests that ITS may be more willing to adopt marketing automation tools if they can see measurable benefits. Moreover, cost-effectiveness emerged as a crucial factor for adoption, particularly when the tools are self-service and easy to use. Participant 14 emphasized that if the price is right and the tool is simple to operate, adoption would be quicker among startups. They noted, "So, if the price is right, it's self-service and easy to use, then adoption by startups will be quick." This reflects the general sentiment that affordability combined with usability can make marketing automation tools more attractive to startups. Finally, some participants, like Participant 15, pointed out that cost could also act as a barrier to adoption due to the additional time and effort required to learn and implement new tools. They shared, "That's a barrier for me. But it is a definite barrier because it will take more time for you to learn the programme."

Thus, the perceived cost of marketing automation tools is seen as both a driver and a barrier to adoption, with ITS being motivated to adopt these tools when the potential for ROI is clear and the tools are affordable and easy to use. Conversely, high upfront costs and the complexity of certain tools can discourage adoption, especially for startups with limited resources.

4.7. Perspectives on the role of top management support in the adoption of marketing automation tools by Impact Tech Startups (ITS)

Table 8. Summary of Participant Responses for Top management support

Participant	Codes	Supporting quotes
1	Top management support	*"I'm all for it. From my perspective of support to the staff, I wish they'd come to me with more tools, to be honest, and ways to improve processes or automate this or…I actually actively encourage it weekly. They just think of it differently to how I do."*
3	Top management support	*"I think top management must be very supportive. You must give people space. That's why…because she came with an idea and I was like "let's try it but, if it's right, we're going to sign up, if it's not, we're not going to sign up."*
4	Top management support	*"A directive say from the leadership team does impact adoption."*
7	Top management support	*"I think management also plays a huge role*
11	Top management support	*"I think it's important that the top management is the one that drives the adoption."*
13	Top management support	*"It's a hundred percent. You're either so small the top management is kind of doing everything."*
14	Top management support	*"Normally their support is crucial because, without that, you'll find that success is almost tough. Sometimes the Managing Director is a stumbling block because he's not giving them budget. So, without budget, it's a lost case. And they have a good product that could actually scale online very well."*
16	Top management support	*"Less of an issue I think because it's a…it depends on how broadly it's gonna be used in the business. So, if it's gonna be rolled out across to the rest of the business, then obviously you need top-management support. If it's a marketing-only tool, then not really."*

Table 8 presents participants' perspectives on the role of top management support in the adoption of marketing automation tools by Impact Tech Startups (ITS). The findings reveal a strong consensus that top management plays a crucial role in influencing whether marketing automation tools are adopted and successfully implemented. Several participants explicitly emphasized the importance of proactive involvement and endorsement from top leadership. For example, Participant 1 expressed enthusiastic support for innovation and automation within the organization, stating: *"I actually actively encourage it weekly. They just think of it differently to how I do."* This statement highlights how leaders can act as champions of technological change, creating a culture that encourages experimentation with new tools to improve efficiency. Similarly, Participant 3 noted the importance of empowering employees and being open to their ideas: *"You must give people space... if it's right, we're going to sign up, if it's not, we're not."* This reflects a participatory leadership approach, where top management supports grassroots innovation but ensures accountability and strategic alignment. Participant 4 acknowledged that a directive from leadership can influence adoption decisions, suggesting that formal leadership backing is often necessary for marketing automation to be considered seriously within the organization. This view was echoed by Participant 7, who simply stated: *"I think management also plays a huge role,"* underlining a general understanding that leadership is a key enabler.

More emphatically, Participant 11 stressed that top management must drive the adoption process, reinforcing the idea that strategic direction and operational prioritization depend heavily on leadership involvement. Participant 13 brought attention to the organizational size and structure, noting that in small startups, top management is often directly involved in all business functions: *"You're either so small the top management is kind of doing everything."* This underscores that in ITS, where resources and personnel may be limited, leadership often has a hands-on role in digital

tool adoption. Participant 14 provided a nuanced view by tying top management support to budgetary allocation and strategic buy-in: *"Sometimes the Managing Director is a stumbling block because he's not giving them budget. So, without budget, it's a lost case."* This highlights that managerial support is not just about encouragement, but also involves providing the financial resources and authority needed to implement technology effectively. On the other hand, Participant 16 offered a conditional perspective: *"If it's gonna be rolled out across to the rest of the business, then obviously you need top-management support. If it's a marketing-only tool, then not really."* This suggests that the perceived necessity of managerial involvement may vary depending on the scope of the tool's usage within the organization. If confined to a specific department like marketing, top-level endorsement might be less critical; however, for organization-wide adoption, leadership support becomes essential. This study underscores that top management support is perceived as a critical enabler of marketing automation adoption among ITS. This support can manifest in various forms — encouragement, empowerment of employees, provision of budget, and strategic alignment. While some variation exists depending on organizational structure and tool scope, the general consensus suggests that without leadership backing, adoption efforts are likely to falter. This finding aligns with existing literature that identifies top management support as a pivotal organizational factor in technology adoption.

4.8. Availability of financial support for the adoption of marketing automation tools by ITS

Table 9. Summary of Participant Responses for Availability of financial support

Participant	Codes	Supporting quotes
2	Financial support	*. "But definitely, if there's finances…I'm an experimentation kind of person. If there's finances and we can trial it and we can document it and we can quantify the results, then I'm good."*
6	Financial support	*"The issue of finance is a bit tricky because a lot of small businesses are not actually getting the finance that they need. So, this discourages them from adopting such technology."*
7	Financial backing	*"So, the financial support, I think it actually boosts adoption because now when we actually have a budget for some things, you can actually see that maybe let's use ten percent of this amount just for marketing."*
8	Financial backing	*"It's definitely a driver."*
9	Financial backing	*"Financial support definitely impact adoption of these tools because without funds, you have no means of starting."*
12	Financial support	*"Yes. So, the main thing would be finances on an organisation, whether they would have the budget for a plan to implement, and…but if they have a budget to test, that's different as well."*
15	Financial support	*"If the budgets were tighter…and not that money is free flowing, but if the budgets were tighter, it probably wouldn't even be on my list of things. But because I know there potentially is budget or I could motivate, it is something that I could definitely look at.*
16	Financial support	*"It does affect adoption quite it is a lot, asking a startup to pay the same as a big business. So, it would be wonderful if there was some kind of price tiering."*

Table 9 highlights the participants' perceptions regarding the role of financial support in the adoption of marketing automation tools by Impact Tech Startups (ITS). The responses indicate that financial support is widely recognized as a significant driver or constraint in adoption decisions. Most participants emphasized that access to adequate funding or budget allocation can directly influence whether marketing automation is trialed, implemented, or even considered by ITS. Participant 2 underscored the role of funding in enabling experimentation and data-driven decision-making, noting: *"If there's finances and we can trial it and we can document it and we can quantify the results, then I'm good."* This comment reflects how financial support empowers startups to test new technologies without incurring critical risks, thus facilitating innovation and iterative learning. In contrast, Participant 6 pointed to a structural issue in the startup ecosystem: *"A lot of small businesses are not actually getting the finance that they need. So, this discourages them from adopting such technology."* This statement highlights that lack of access to finance is a barrier to technological advancement and can hinder the growth and competitiveness of startups. Several participants, such as Participant 7, directly associated budget availability with increased adoption, stating: *"When we actually have a budget... maybe let's*

use ten percent of this amount just for marketing." This illustrates how even modest budget allocations can support marketing automation initiatives, promoting strategic investments in digital tools.

Participants 8 and 9 were more direct in identifying financial support as a key enabler, with Participant 9 noting: *"Without funds, you have no means of starting."* This reflects the foundational role that finance plays in any form of innovation adoption — without capital, even the most promising technologies remain out of reach. Participant 12 elaborated on the difference between full implementation budgets and testing budgets, suggesting that access to limited funds could still be useful for pilot projects. This aligns with lean startup methodologies where experimentation precedes full-scale deployment. Participant 15 shared a nuanced view, expressing that the perceived availability of budget influences prioritization: *"If the budgets were tighter…it probably wouldn't even be on my list."* However, knowing that a budget exists — or could be justified — makes adoption more feasible. This suggests that financial flexibility and internal advocacy can also play an important role. Lastly, Participant 16 drew attention to cost equity issues, observing that startups are often charged the same as larger enterprises, which may discourage adoption: *"It is a lot, asking a startup to pay the same as a big business."* The suggestion of price tiering models for startups indicates that financial barriers could be alleviated through policy or pricing innovations from vendors.

4.9. Perceived employee capability on the adoption of marketing automation tools by ITS

Table 10. Summary of Participant Responses for Perceived Employee Capability

Participant	Codes	Supporting quotes
2	Employee capability	*"Honestly speaking, yes and no because, if they don't have the necessary capabilities, then of course we go about upskilling our staff to actually get to that point of being capable to actually utilise and leverage as we see."*
3	Employee capability	*"It does sway because you don't want to buy something or sign up for a software and nobody knows how to use it and then you're just paying."*
4	Employee capability	*"Absolutely, because I'm thinking now, the possible downtimes for kind of upskilling the team…because it's not a once-and-done thing. It's a gradual and very intentional sort of exercise."*
8	Employee capability	*"They will try everything, every automation in the world, and that would be across the company. So, in my company, my intern is showing me this new notetaker. It summarises everything. I'm like let's try it. Done."*
11	Employee capability	*"So, it's an initial barrier but it's also an opportunity to train them and get them accustomed. So, again, when you're an early-stage business, you're working with…you're not hiring the most experienced people in the market."*
13	Employee capability	*"At times it's like do you train someone up or do you outsource it? I think it's worth training, knowing from scratch, but if you don't have the capability and you're happy with your team, it is something you can quite quickly outsource, if you're willing to pay."*
14	Employee capability	*"There is a relationship because you'll find that employee capability drives the optimal use of some of these platforms."*
16	Employee capability	*"It's not so much of an issue and, obviously, software nowadays is designed and marketing automation tools are designed to be user-friendly, so not as much of a concern.. I think generally in a startup, especially a tech startup like we are, the staff generally tend to…and also just working with Gen Z, they're much more tech-savvy."*

Table 10 provides insights into how perceived employee capability influences the adoption of marketing automation tools among Impact Tech Startups (ITS). The responses demonstrate a diversity of perspectives, with some participants viewing capability as a critical barrier, while others see it as an opportunity or even a negligible concern due to the inherently tech-savvy nature of startup environments. Participant 2 offered a balanced perspective, acknowledging that while employee capability might initially be lacking, this can be addressed through upskilling: *"We go about upskilling our staff to actually get to that point of being capable."* This highlights the proactive role of training in overcoming human capital limitations and ensuring the successful use of marketing automation tools. Participant 3 emphasized the practical risk of adopting tools without corresponding skills, stating: *"You don't want to buy something… and nobody knows how to use it and then you're just paying."* This underscores the importance of aligning adoption decisions with actual or anticipated employee proficiency to avoid wasted investment. Participant 4 expanded on the

resource demands of skill development, noting that upskilling is a gradual and intentional process. Their comment—*"It's not a once-and-done thing"*—emphasizes that capability building requires ongoing support, suggesting that adoption strategies must include continuous learning plans rather than one-time training.

Conversely, Participant 8 portrayed a startup culture of enthusiastic experimentation, where employees—regardless of formal training—take initiative: *"My intern is showing me this new notetaker... Done."* This suggests that in some startup contexts, innate curiosity and initiative may compensate for formal skill gaps, especially among younger or more digitally native staff. Participant 11 viewed employee capability as both a barrier and an opportunity, particularly in early-stage businesses where teams may lack experience: *"You're not hiring the most experienced people in the market."* However, they saw this as a chance to develop internal talent, reinforcing the idea that startups can build capacity internally over time. Participant 13 addressed the make-or-buy decision, highlighting that while training is ideal, outsourcing can be a viable short-term alternative if internal capacity is lacking: *"It is something you can quite quickly outsource, if you're willing to pay."* This reflects the strategic flexibility required of startups when facing capability constraints. Participant 14 directly linked employee capability to the effective use of marketing automation platforms, reinforcing that technical proficiency enhances value realization from such tools: *"Employee capability drives the optimal use."*

In contrast, Participant 16 downplayed the importance of capability barriers, citing user-friendly software design and a generational shift toward tech-savviness: *"Software nowadays is designed…to be user-friendly,"* and *"Working with Gen Z, they're much more tech-savvy."* This suggests that for tech-driven startups with younger workforces, capability may not significantly hinder adoption. Thus, it means that employee capability is a multifaceted factor in the adoption of marketing automation by ITS. While some startups face initial capability gaps that require deliberate upskilling efforts or outsourcing, others benefit from internally driven adoption fueled by digital fluency and curiosity. Most participants agree that employee capability influences the efficiency and effectiveness of tool usage, though the extent of this influence varies depending on the startup's team composition, culture, and approach to training. The findings suggest that policy interventions or support programs aimed at enhancing digital literacy and marketing automation skills, particularly for early-stage employees, could play a key role in improving adoption rates and ensuring the sustainable use of these technologies in the ITS ecosystem.

4.10. Perceived competitive pressure on the adoption of marketing automation tools by ITS

Table 11. Summary of Participant Responses for Perceived Competitive Pressure

Participant	Codes	Supporting quotes
1	Competitive pressure	*"I think it's a hard curtain to see past in terms of their automation but, if I do learn about a trick that they've got up their sleeve, I'll definitely explore it. But I think it's quite hard to understand what the competitor is automating without an inside source."*
4	Competitive pressure	*"From an SEO perspective, definitely. There are some tools that I make use of to see which keywords are being hit on more than others, etcetera. So, we're definitely looking at what competitors are doing and competing."*
5	Competitive pressure	*"There's definitely competitor pressure but we don't look at them."*
7	Competitive pressure	*"I think the pressure from our competitors is actually leading us to use these things because, also us, we get automated e-mails from our top competitors."*
8	Competitive pressure	*"I haven't really seen any competitive pressure."*
10	Competitive pressure	*"No, competitive pressure doesn't influence me at all. I don't think so. Not at all."*
13	Competitive pressure	*"It depends on the result. Is it working for them? If it's working, ja. If you're kind of fighting for customers and you don't wanna drop your prices or get into a price war, then probably."*
14	Competitive pressure	*"Yes. Most of our competitors are using automation. I've seen platforms like GetSmarter. They use HubSpot for their content, for their scheduled social media, and also they do a lot of affiliate marketing through third parties. I know they use a company called impact.com. So, almost every other competitor is using automation."*

Table 11 explores how perceived competitive pressure influences the adoption of marketing automation tools among Impact Tech Startups (ITS). The responses demonstrate a spectrum of views, ranging from strategic monitoring of competitors to complete indifference, highlighting that the perceived influence of competitors varies based on industry type, market dynamics, and individual startup strategy. Participant 1 articulated a challenge in evaluating competitive automation practices, noting: *"It's a hard curtain to see past in terms of their automation…"* While this participant acknowledged an interest in learning from competitors, they also highlighted the lack of transparency around competitors' automation strategies. This suggests that unless competitive intelligence is accessible, the influence of competitive pressure remains limited or speculative. Participant 4 took a more active approach, citing search engine optimization (SEO) tools as a mechanism for monitoring competitor actions: *"We're definitely looking at what competitors are doing and competing."* This indicates that data-driven benchmarking can heighten perceived competitive pressure and potentially guide the adoption of similar tools for strategic parity or advantage.

Participant 5 presented an interesting contradiction, acknowledging the presence of competitor pressure—*"There's definitely competitor pressure"*—yet dismissing its influence by stating: *"But we don't look at them."* This may reflect an internal strategic focus or an intentional detachment to maintain innovation and originality rather than chasing market trends. Participant 7 provided clear evidence of competitive influence, observing: *"The pressure from our competitors is actually leading us to use these things."* This suggests that direct exposure to competitor automation tactics, such as receiving automated communications, can act as a catalyst for adoption among startups striving to remain competitive. In contrast, Participants 8 and 10 expressed little to no influence from competitive pressure. Participant 8 stated: *"I haven't really seen any competitive pressure,"* while Participant 10 was more emphatic: *"Not at all."* These responses highlight that some ITS founders either operate in less competitive niches or prioritize internal needs and goals over external benchmarking when making technology adoption decisions. Participant 13 offered a conditional perspective, linking competitive pressure to tangible outcomes: *"It depends on the result. Is it working for them?"* This reflects a pragmatic approach—startups may adopt automation if competitors are demonstrably benefiting from it, especially in price-sensitive environments where non-price differentiation becomes essential.

Finally, Participant 14 provided detailed observations about competitors' use of automation tools: *"Most of our competitors are using automation. I've seen platforms like GetSmarter… They use HubSpot…"* This suggests that visible, platform-specific competitive practices can exert a strong influence on adoption. By citing specific tools and use cases, this response shows how transparency in competitor strategies can increase awareness and potentially stimulate similar adoption behaviours. The results revealed that perceived competitive pressure plays a variable role in driving the adoption of marketing automation tools among ITS. For some startups, especially those in highly digital or performance-driven sectors, competitive practices are closely monitored and significantly influence adoption strategies. In these cases, automation is seen as a necessary response to maintain or improve market position. However, for others, competitive pressure is minimized or irrelevant, either due to strategic orientation, limited visibility into competitor operations, or because the startups prioritize internal capacities and customer needs over market mimicry. These findings suggest that while competitive pressure can act as a motivator, its influence depends largely on market transparency, startup mindset, and sectoral dynamics. For policymakers or ecosystem enablers, improving market intelligence platforms or facilitating peer-learning forums might enhance visibility and promote best-practice diffusion, encouraging more widespread and effective adoption of marketing automation in the sector.

4.11. Perceived customer pressure on the adoption of marketing automation tools by ITS

Table 12. Summary of Participant Responses for Perceived Customer Pressure

Participant	Codes	Supporting quotes
1	Customer requests Customer pressure	*"We get a lot of it., we get a lot of requests for integrations with Klaviyo or with, a simple example, syncing your newsletter contacts to Mailchimp. So, we get a lot of it requested from customers, which we put into a feature vote."*
2	Customer pressure	*"Yes because everyone has an expectation of customisation and personalisation. They want it here."*
4	Customer pressure	*"Not at this point, to be quite honest. I think, when we start onboarding, especially with some of the fintech solutions, because my previous startup was in the fintech space and we did quite well."*
5	Customer pressure Customer engagements	*"That's the driver."*

6	Customer pressure	*"Yes. The customer is always right. What the customer needs, the customer should get."*
10	Customer engagement Customer pressure	*"I think customer pressure from a way to reach them point of view, I think there is 'I didn't hear about that. I wish you had told me about that."*
11	Customer engagement	*"Automation is also useful on the customer service side. So, especially ticketing, responding to queries, getting notified on social media if someone has highlighted something wrong, I think it improves the customer experience if you have marketing automation."*
16	Customer pressure	*"Because clients are such a big driver in our business because of the fact that they provide the jobs, we have to make sure that we're using tools that are aligned with their expectations and that work for them. So, I think in our business that would be a big driver."*

Table 12 presents participant responses that illustrate how perceived customer pressure significantly influences the adoption of marketing automation tools among Impact Tech Startups (ITS). The data reveal that customer-related factors, ranging from integration requests to demands for personalization, responsiveness, and enhanced engagement—are key drivers in shaping automation adoption decisions. Participant 1 emphasized that direct customer requests often act as a catalyst for adoption. These include requests for integrations with platforms like Klaviyo and Mailchimp, demonstrating that customers, particularly in digital and e-commerce sectors, are increasingly technologically informed and expect seamless compatibility with widely used systems. Such requests not only apply pressure but also contribute to ongoing product and process innovation, often formalized through mechanisms like feature voting. Participant 2 further underscored the growing expectation for customized and personalized experiences, reflecting broader market trends in consumer behavior. These demands suggest that startups that fail to implement automation tools may struggle to meet client expectations, potentially resulting in decreased satisfaction or loss of business. Thus, for ITS seeking growth or customer retention, marketing automation becomes a strategic necessity.

However, the influence of customer pressure appears to vary based on the startup's industry or developmental stage. Participant 4, for example, indicated that they had not yet experienced significant pressure from customers. Nonetheless, they anticipated that this would change, particularly with the onboarding of fintech clients—a sector known for high digital expectations. This response highlights the dynamic nature of customer pressure and suggests that its intensity may grow alongside market maturity and sectoral shifts. For some participants, customer pressure was described as the primary motivator behind automation adoption. Participant 5 succinctly stated that customer demand is "the driver," reinforcing its role as a central consideration in shaping technology adoption strategies. Participant 6 echoed this sentiment with a customer-first perspective, asserting that "the customer is always right," thus positioning automation as a necessary response to evolving service expectations and communication needs.

Other responses broadened the scope of customer pressure to include the importance of maintaining strong engagement and communication channels. Participant 10 noted that clients often express frustration when they are not adequately informed, implying that automation helps prevent communication lapses and enhances organizational visibility. Similarly, Participant 11 discussed the operational benefits of marketing automation for customer service, especially in areas such as ticketing systems and social media responsiveness. These insights illustrate that automation is not only about marketing efficiency but also about delivering timely and effective customer support. Finally, Participant 16 emphasized that client expectations directly shape operational decisions, particularly in business models where clients play a critical role in revenue generation. This suggests that adopting tools aligned with customer preferences is not merely a matter of convenience but one of strategic alignment essential for sustainability and growth. Thus, this study reveals that customer pressure, whether through direct requests, expectations for personalization, or service responsiveness, is a major determinant in the adoption of marketing automation by ITS. While the degree of pressure varies across contexts, startups consistently acknowledge the necessity of aligning their technological strategies with evolving customer needs to remain competitive and customer-focused.

The responses reflect that customer demands and expectations are significant drivers of technology adoption, although the intensity and nature of this pressure vary across startups. Several participants acknowledged that direct customer requests, particularly for integrations with platforms such as Klaviyo and Mailchimp, frequently prompt startups to adopt marketing automation tools. These requests are often formalized through internal systems like feature voting, indicating a structured approach to addressing customer needs. Participants also emphasized that modern customers expect a high level of customization and personalization, which automation tools can facilitate. This expectation creates a strong incentive for startups to adopt technologies that allow them to deliver personalized experiences efficiently. For instance, one participant mentioned that such expectations are becoming standard, reinforcing the notion that failing to

adopt automation may lead to customer dissatisfaction or lost opportunities. On the other hand, a few participants noted that customer pressure is currently minimal in their specific contexts. For example, one startup in the early stages of fintech onboarding did not yet feel significant pressure but anticipated that expectations would rise as their customer base grew and diversified. Others acknowledged that while they may not currently respond directly to competitor actions, they remain alert to customer preferences and behaviors as primary motivators for automation.

Participants also highlighted that customer engagement, especially in terms of communication and responsiveness, plays a critical role in shaping adoption decisions. Automation is seen as a tool not only for marketing but also for enhancing customer service, such as ticketing, follow-ups, and real-time social media responses. This is particularly important for startups aiming to maintain a professional and timely relationship with their clients. Furthermore, some founders noted that clients are central to their business operations and revenue streams, making it imperative to adopt tools that align with client expectations. In such cases, customer pressure becomes a strategic consideration, influencing both operational decisions and long-term planning. In summary, perceived customer pressure, manifesting through direct feature requests, expectations for personalization, communication preferences, and service standards—is a key factor in the adoption of marketing automation among ITS. While the degree of pressure varies, most startups recognize its importance in staying competitive, responsive, and aligned with market demands. These findings underscore the need for startups to remain agile and customer-focused in their technology strategies and highlight an opportunity for policy support in the form of training, resources, and financial incentives to help startups meet evolving customer expectations through automation.

4.12. Perceived vendor pressure on the adoption of marketing automation tools by ITS

Table 13. Summary of Participant Responses for Perceived vendor pressure

Participant	Codes	Supporting quotes
1	Vendor pressure	*"Very rarely will I passively adopt something. I don't stumble across many tools that I go'that looks cool, let me use it.' I'll more actively be searching for a tool with a specific purpose."*
4	Vendor pressure	*"If a vendor were to come in with some incentives, we'd jump. We'd definitely jump."*
6	Vendor pressure	*"They actually do e-mail me a lot. I get a lot of e-mails. Even when I pop in on social media, you would find these posts. Because I do search about things that are related to automation, so I would get a lot of e-mails. Some I read, some I don't read, some I read, some I actually follow through with them."*
11	Vendor pressure	*"We actually haven't had too much pressure from the vendors themselves. Salesforce put a lot of pressure on us but, again, the problem was the upfront cost to adopt the platform and, if they were to give you a free trial, it was only once and, so, if you wanted to get another free trial to get a better feel."*
13	Vendor pressure	*"I get spammed all the time on LinkedIn because of whatever my title is."*
14	Vendor pressure	*"That's hectic. So, every day, if I'm on LinkedIn, if I'm on my e-mail, everywhere, I'm getting solicitations from vendors. It gets tiring. So, there's this vendor fatigue and it's across the board where you are over-marketed to such an extent that you don't know an apple from an orange, literally."*
16	Vendor pressure	*"Oh, no, they can jump. Absolutely no impact on our adoption decision."*

Table 13 presents selected responses that offer insights into how perceived vendor pressure influences the adoption of marketing automation tools among Impact Tech Startups (ITS). The responses reflect varying degrees of vendor influence—from active solicitation and promotional tactics to skepticism, fatigue, and outright rejection—highlighting a complex and often ambivalent relationship between ITS and marketing automation vendors. Participant 1 indicated a proactive rather than reactive approach to tool adoption, stating that they rarely adopt tools passively and typically seek out platforms to meet specific needs. This perspective suggests that vendor pressure alone is insufficient to drive adoption unless it aligns with a clearly defined business requirement. In contrast, Participant 4 acknowledged that incentives from vendors could significantly influence decision-making. The participant noted, "If a vendor were to come in with some incentives, we'd jump," suggesting that strategic offerings such as discounts, free trials, or bundled services can effectively stimulate interest and encourage adoption, particularly among cost-conscious startups.

Participant 6 described frequent vendor outreach through email and social media, attributing this to their online activity around automation-related topics. While this constant communication can sometimes lead to adoption, it is evident that its impact is inconsistent. The participant reported engaging selectively with vendor messages, indicating that while vendor pressure is present, its influence depends on the perceived relevance and timing of the offer. Participant 11 provided a more nuanced view, noting that although some vendors—like Salesforce—applied significant pressure, the effectiveness of this pressure was limited by the cost structure and inflexible trial terms. This highlights a recurring theme: vendor pressure is only effective when it is accompanied by accessible, user-friendly, and cost-effective options. Without these, pressure can become a barrier rather than a motivator.

Others, like Participant 13, expressed frustration with unsolicited vendor outreach, particularly through platforms such as LinkedIn. They reported frequent spam messages due to their job title, implying that vendor pressure often feels impersonal and intrusive. Similarly, Participant 14 elaborated on this sentiment by describing a sense of "vendor fatigue," brought on by relentless marketing efforts across multiple channels. This oversaturation can diminish the effectiveness of vendor outreach and may even erode trust in vendor communications. Finally, Participant 16 offered a firm dismissal of vendor influence, asserting that vendor efforts have “absolutely no impact” on their adoption decisions. This response underscores that some ITS, particularly those with strong internal decision-making frameworks or clear technological strategies, remain unaffected by external marketing pressures. Thus, it suggests that vendor pressure has a varied and context-dependent influence on ITS adoption of marketing automation tools. While incentives and targeted offers can be effective under the right conditions, excessive or misaligned vendor outreach can lead to fatigue, skepticism, or outright resistance. These findings indicate that vendors must adopt a more strategic, personalized, and value-driven approach if they hope to influence adoption decisions among discerning startup founders and managers.

4.13. Adoption of marketing automation tools impacts the sustainability of ITS

Table 14. Summary of Participant Responses for Sustainability of ITS

Participant	Codes	Supporting quotes
1	Sustainability	*. “I think it’s enormous in terms of what it can do for you if deployed in the right way, understood and deployed in the right way. It’s so enormous.”*
2	Sustainability	*“So, I definitely agree. I’ve seen the benefits.”*
3	Sustainability	*“I think it can impact it greatly because, as a startup, the end goal maybe is to be sustainable and for people, especially your target market, they must know that we exist.”*
4	Sustainability	*“I suppose it’s super dependent on when these interventions are applied. We’ve seen in the past, at least in my experience, where we’d use a lot of these credits or incentives, etcetera, at a time where they couldn’t really move the needle.”*
5	Sustainability	*“It’s a game-changer. Like I said, how do you go from zero to seventeen thousand users in two weeks with a budget of a hundred thousand? It works.”*
6	Sustainability	*“So, automation has a positive impact, holistically. All of our small businesses actually need to adopt such. It’s a positive thing. It has a positive impact.”*
8	Sustainability	*“So, if they are open to spending marketing in the early ages, especially in Minimum Viable Product (MVP), I think that it could increase their chances of survival by fifty percent, as bolshy as that, and the reason why is because of the results that you get when you start using AI.*
11	Sustainability	*“The opportunity is large. So, if they’re not using tools like marketing automation, they actually reduce that opportunity to get customers.”*
12	Sustainability	*“It’s fundamental. I think it’s fundamental because, if these tools didn’t exist, we wouldn’t be able at all to do what we do.”*

Table 14 presents a collection of responses that address the perceived relationship between marketing automation and the sustainability of Impact Tech Startups (ITS). The responses consistently reflect a strong belief among participants that marketing automation plays a pivotal role in enhancing startup resilience, operational efficiency, and long-term viability. The insights gathered suggest that when strategically implemented, automation can significantly bolster startup survival and growth, especially in competitive and resource-constrained environments. Participant 1

described the potential impact of marketing automation on sustainability as "enormous," emphasizing that its benefits are contingent on correct understanding and deployment. This underscores the importance of both knowledge and strategic implementation in maximizing the return on automation investment. Participant 2 offered a simple yet powerful affirmation: “I’ve seen the benefits.” This personal validation implies that firsthand experience with marketing automation has demonstrated tangible advantages in sustaining business operations and improving outcomes.

Similarly, Participant 3 linked automation directly to the core startup objective of becoming sustainable. They stressed the importance of visibility and market presence, suggesting that automation contributes significantly to brand awareness and customer acquisition, key pillars for startup longevity. Participant 4 provided a more nuanced view, noting that the timing of automation interventions is critical. Their experience suggests that even beneficial tools can fail to generate value if introduced at an inopportune stage of the startup lifecycle. This points to the importance of aligning automation initiatives with business readiness and strategic milestones. Participant 5 described marketing automation as a "game-changer," referencing a real-world example where automation helped scale user acquisition dramatically within a short time and limited budget. This highlights automation’s capacity to support rapid growth, a crucial factor for ITS seeking to prove traction to investors and stakeholders. Echoing this sentiment, Participant 6 framed automation as a universally beneficial solution, particularly for small businesses. Their statement reinforces the idea that automation can level the playing field by equipping startups with tools traditionally available to larger firms.

Participant 8 further quantified this optimism by suggesting that effective use of automation during early phases, particularly at the Minimum Viable Product (MVP) stage, could boost a startup’s survival chances by as much as 50%. This bold assertion highlights the perceived transformational potential of early marketing investment supported by automation and artificial intelligence (AI). Participant 11 pointed out that ignoring marketing automation tools effectively limits a startup's opportunity to acquire customers. This reinforces the idea that automation is not merely advantageous but essential for maximizing market reach and maintaining competitiveness. Finally, Participant 12 described automation as "fundamental," noting that the absence of such tools would make their business model unfeasible. This sentiment encapsulates the critical dependency that some ITS have developed on automation, particularly when operating in high-scale, digital-first environments. These findings suggest a strong consensus: marketing automation is deeply intertwined with the sustainability of ITS. While timing, strategy, and capability remain important mediating factors, the overall narrative positions automation as an enabler of scalability, efficiency, and market relevance—key drivers of long-term success in the startup ecosystem.

5. Discussion

The high failure rate of impact tech startups (ITS) and their relatively low adoption of marketing automation tools necessitate an investigation into the drivers and barriers to the adoption of these tools within such organizations. According to Skala (2022) and Gidron et al. (2021), ITS are technology-focused enterprises committed to achieving the United Nations' Sustainable Development Goals (SDGs). The findings from this research suggest that marketing automation tools are considered beneficial by ITS executives for streamlining marketing efforts, enhancing efficiency, improving customer satisfaction, and supporting both pre-sell and post-sell activities. These benefits align with existing literature. For instance, Nath (2017), as cited in Hammoud et al. (2022), emphasized that marketing automation is particularly valuable for small businesses by handling tasks that might otherwise require substantial human resources, thereby enabling business growth without significantly increasing the budget. Similarly, Todor (2016) and Mannel (2019) noted that marketing automation supports marketers in achieving mass customization and personalization at scale.

Although limited research specifically addresses the adoption of marketing automation by ITS, some studies have explored the adoption of e-marketing by small businesses. Chakraborti et al. (2022), as cited in El-Shihy and Mohamed (2023), identified a lack of awareness regarding the benefits of marketing automation as a key barrier to adoption. Otika et al. (2022) affirmed that factors such as the perceived usefulness, ease of use, skilled IT personnel, and financial support play a crucial role in influencing the adoption of e-marketing. Chong et al. (2018) further reinforced the importance of top management support in facilitating e-marketing adoption. In a study by Abbasi et al. (2022), which applied PLS-SEM methodology and the Technology-Organization-Environment (TOE) Framework, the perceived relative advantage was found to positively influence the intention to adopt social media marketing, whereas perceived cost was negatively associated with adoption. Interestingly, the study found that the perceived complexity of social media marketing did not significantly impact adoption intentions, as social media was considered familiar and not complex for Malaysian SMEs. This finding aligns with the views of Participant 4, who, as a machine learning engineer, did not consider marketing automation to be complex. Similarly, Participant 8 argued that marketing automation is not complex, and Participant 16 emphasized that perceived complexity does not hinder adoption, provided that employees are willing to learn and champion the technology within their organization.

Cost was identified as a significant barrier to the adoption of marketing automation tools by many participants in this study. This observation mirrors the findings of Abbasi et al. (2022), where perceived cost had a negative impact on social media marketing adoption. Moreover, Maduku et al. (2016) and Ramayah et al. (2016), as cited in Abbasi et al. (2022), similarly found that cost could deter adoption. However, Searle (2023) argued that the long-term benefits of

marketing automation outweigh its initial costs. A majority of participants in this study highlighted the role of top management in driving the adoption of marketing automation tools. This finding is consistent with prior research, including studies by Ahmad et al. (2018), Alshamaila et al. (2013), Alsharji et al. (2018), and Oliveira et al. (2014), which emphasized the critical role of leadership in the adoption of technological innovations. The availability of financial support was also seen as a crucial factor by many participants in this study. However, Abbasi et al. (2022) found no significant relationship between financial resources and the adoption of social media marketing. This is likely due to the perception that social media marketing tools are relatively affordable compared to other marketing technologies.

Regarding employee capability, some participants in this study felt that the presence of young, tech-savvy employees reduced the importance of this factor in adoption decisions. This view is supported by Abbasi et al. (2022), who found that employee capability did not significantly influence social media marketing adoption due to employees' familiarity with the technology. However, other participants noted that a lack of digital skills could pose a barrier to adoption, aligning with the findings of Musa et al. (2013), as cited in Smidt and Sokonya (2022), who highlighted the role of digital skills in the adoption of new technologies. Competitive pressure emerged as another key factor influencing adoption decisions. This was consistent with the findings of Abbasi et al. (2022), where SMEs in Malaysia reported that competitive pressure positively influenced their decision to adopt social media marketing. Lin (2014) and Wang and Cheung (2004), as cited in Abbasi et al. (2022), also supported this notion. Similarly, customer pressure was identified as an important factor in the adoption of marketing automation, a view shared by Ghobakhloo and Tang (2015), Maduku et al. (2016), and Matikiti et al. (2018), as cited in Abbasi et al. (2022). However, Abbasi et al. (2022) found that industry competitiveness moderated the relationship between customer pressure and technology adoption, indicating that customer pressure influences adoption primarily in competitive industries.

Lastly, vendor pressure was found to significantly influence adoption decisions in this study. Participants reported that the support provided by vendors, including technical, operational, and financial assistance, was crucial in their decision to adopt marketing automation tools. This finding echoes the views of Malaysian SMEs in Abbasi et al. (2022), who also recognized the importance of vendor pressure in their adoption of social media marketing tools. Gidron et al. (2021) highlighted that ITS face unique sustainability and scalability challenges, often related to resource and human capital constraints. Christensen (2016), as cited in Teberga et al. (2018), argued that such challenges stem from the limited resources available to startups. However, Khaerani and Sudarmiatin (2022) provided an example of how digital marketing led to a 90% increase in sales for one participant, underscoring the potential impact of marketing automation in improving business outcomes despite these challenges. Thus, the adoption of marketing automation by ITS is influenced by a complex interplay of technological, organizational, and environmental factors. Cost, perceived complexity, top management support, employee capability, and competitive pressure are significant determinants of adoption decisions. The findings from this study contribute valuable insights to the understanding of marketing automation adoption in ITS and provide implications for practitioners and policymakers seeking to encourage the use of such tools in the sector.

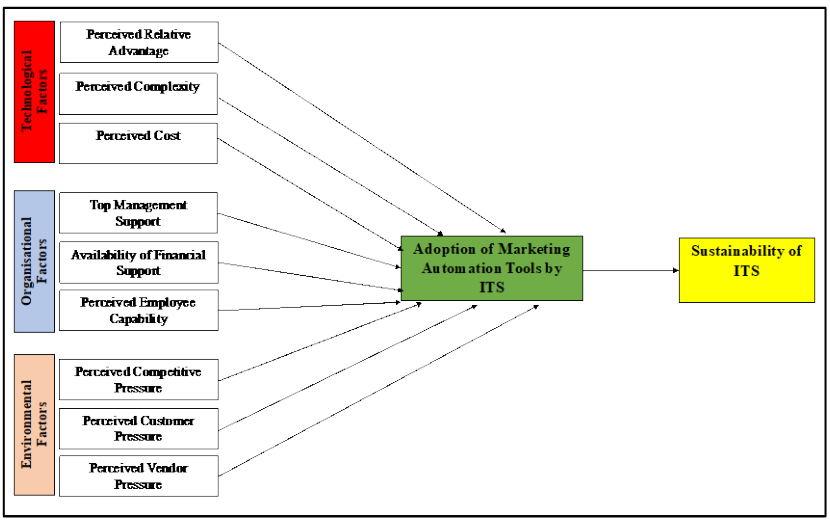

Figure 2. Conceptual Framework for the Adoption of Marketing Automation by Impact Tech Startups (ITS)

Figure 2 illustrates a conceptual framework that highlights the key technological, organizational, and environmental factors influencing the adoption of marketing automation by impact tech startups (ITS). Technological factors, such as the perceived advantages and complexities of marketing automation tools, play a crucial role in shaping how employees within ITS view the utility and feasibility of integrating such tools. Organizational factors, including top management support, the availability of financial resources, and the perceived capabilities of employees to handle the technology,

are essential for facilitating the adoption of marketing automation. External environmental factors, such as competitive pressure, customer expectations, and vendor influence, also impact the decision to adopt marketing automation, with ITS employees viewing these pressures as key drivers to stay competitive and meet market demands. Finally, the framework theorizes that the adoption of marketing automation tools can positively affect the sustainability of ITS by streamlining marketing processes, enhancing customer engagement, and improving overall operational efficiency. In this way, the adoption of marketing automation can contribute to the long-term success and growth of ITS, helping them achieve greater sustainability in a resource-constrained and competitive environment.

6. Conclusions

This study has successfully developed a conceptual framework for the adoption of marketing automation tools by South African Impact Tech Startups (ITS) and to deepen the understanding of how marketing automation can contribute to the sustainability of ITS. Through the conceptual framework, the research identifies and explores the relationships between various technological, organizational, and environmental factors that influence the adoption of marketing automation tools by ITS. Technological factors, such as awareness and understanding of marketing automation tools, as well as perceived benefits, were found to significantly affect the adoption decisions of ITS. While some startups viewed the complexity and costs associated with marketing automation as barriers to adoption, others argued that the benefits of these tools outweighed the challenges posed by their complexity and cost. Organizational factors, such as top management support, availability of financial resources, and employee capability, were seen by some startups as influencing their adoption decisions. However, other startups maintained that these factors did not have a significant impact, with some founders relying on their younger, tech-savvy employees to advise on technology adoption decisions. Environmental factors, including perceived pressure from competitors, customers, and vendors, were found to influence the adoption decisions of some startups. On the other hand, some startups reported that neither competitor nor vendor pressure played a role in their decision-making process regarding marketing automation.

6.1. Policy Implications

The findings of this study have several important policy implications for fostering the adoption of marketing automation tools within South African Impact Tech Startups (ITS). First, policymakers should focus on increasing awareness and understanding of marketing automation tools, particularly in rural regions where access to such knowledge may be limited. Training programs and initiatives that provide education on the benefits and practical applications of marketing automation could help startups overcome barriers to adoption, particularly the perceived complexity of these tools. Second, given that financial constraints are often cited as a barrier to adoption, policymakers should consider providing financial incentives or subsidies to support ITS in adopting marketing automation. This could include offering grants or tax breaks for startups that invest in marketing technology, as well as facilitating access to affordable financing options for those with limited capital. Additionally, support for training programs aimed at enhancing employee capability in using marketing automation tools would help mitigate the challenges related to skills gaps.

Third, recognizing the critical role that top management plays in the decision-making process, policies should encourage the development of leadership skills among startup founders. Government programs that promote leadership training, especially in the tech sector, could ensure that decision-makers are well-equipped to understand and leverage marketing automation for the sustainability of their businesses. Finally, the study highlights the role of environmental factors, such as pressure from competitors, customers, and vendors, in the adoption of marketing automation. Policymakers should consider creating an enabling environment where ITS can network with peers, suppliers, and customers, thereby creating opportunities for collaboration and innovation. This could include facilitating industry forums or networking platforms where startups can learn from the experiences of others in the sector. By addressing these policy areas, the South African government and relevant stakeholders could significantly enhance the ability of ITS to adopt and benefit from marketing automation tools, ultimately contributing to the growth and sustainability of this vital sector.

6.2. Recommendations for Future Research

This research focused on South African impact tech startups, and future studies could expand the geographical scope to include other countries, offering comparative insights into the adoption of marketing automation tools. The study also included the North-West Province as a representative of South Africa's rural regions, but future research could explore additional rural provinces for a more comprehensive view. The study addresses marketing automation as a general concept, without focusing on specific tools. Future research could delve into particular marketing automation tools, evaluating which are most effective in promoting the sustainability of impact tech startups. Additionally, the study treats ITS as a broad category, but future research could focus on specific types or subcategories of ITS to identify sector-specific adoption patterns and challenges.

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