Use of Information Systems (IS) to Transform Small Businesses in France

Introduction

The growing reliance on Information Technology in our daily lives and business practices has highlighted the significance of digital transformation, especially for enterprises adapting to dynamic markets (Legner, et al., 2017). As a result, the focus on digital transformation has elevated the roles of Information Technology (IT) and Information Systems (IS) in both business and society, surpassing their previous significance (Legner, et al., 2017).

Considering that Small and Medium sized Enterprises (SMEs) in France been approximately 3.9 million (which represents 99.9% of the total business population) (OECD, 2022) and the transformative impact of digital technology on economies (Faquet & Malardé, 2020); the effective use and adaptation of IS can effectively enhance their competitiveness, efficiency, innovation capabilities, economic growth (Rainer & Prince, 2022).

As digitalization continues to benefit and reshape industries, small businesses face challenges that hinder them from effectively adopting and utilizing information systems (IS) (Deschoolmeester, et al., 2013). This research proposal aims to investigate the challenges and opportunities specific to France, thereby contributing to a more comprehensive understanding of IS integration within small businesses. Additionally, the proposed recommendations hold the potential to empower small business owners with actionable strategies that will help them to navigate the challenges of digital transformation.

Research Problem

The research problem of this proposal will address “The lack of effective strategies for effectively utilizing information systems (IS) to transform and elevate small businesses in France”. This research problem is based on the literature review topic ‘Use of Information Systems (IS) to Transform Small Businesses in France’.

Despite the availability of technology solutions and their potential benefits, small businesses still encounter difficulties in effectively implementing IS (Nguyen, et al., 2015). Consequently, there is a gap in the literature that addresses the specific challenges faced by small businesses in France when it comes to embracing IS for transformational outcomes. This research fills the gap by not only acknowledging and exploring these challenges, but also proposes actionable strategies for successful IS implementation for French small businesses.

Research Question

The research question that guides this study is: "How can small businesses in France effectively strategize the implementation and utilization of information systems to drive meaningful transformation growth?" This question highlights the intent to explore the importance of strategically employing IS to accelerate comprehensive business transformation, emphasizing the need for practical and contextually relevant strategies.

Aims and Objectives

Today we live in an information economy, whereby, information systems (IS) are integrated in almost all industries and its use provides both small and big businesses with a number of benefits, from sustainable competitive advantage, efficiency, increase of job satisfaction and work productivity, helps in making decisions, etc. (Stair & Reynolds, 2015).

In France, Small and Medium sized Enterprises (SMEs) tend to adopt to digitization late compared to larger enterprises (Faquet & Malardé, 2020). For instance: Most French SMEs have limited access to high-speed internet, limited use of management software, e-commerce, cloud computing, and data analysis (Faquet & Malardé, 2020).

The challenges and barriers that commonly hinder small businesses from effective IS implementation and adoption include:

Lack of proper planning influences low percentage of successful IS implementations (Nguyen, et al., 2015) whereby, small businesses, especially new ones, often experience ambiguity and uncertainty regarding IT adoption (Carson & Gilmore, 2000).

Small businesses face constraints like insufficient finances, low innovation capacity, and challenges in managing human, technical, and technological resources, thus leading to unsuccessful IS implementation due to weak administrative capabilities (Galvão, et al., 2018). Additionally, most SMEs choose not invest in IS after start-up due

to them viewing it to be costly and high maintenance, while some recognize IS potential benefits and go for it (Levy, et al., 2003).

Most SMEs have insufficient technical expertise, technological education, and skills within their workforce and management, yet for a successful implementation of IS in SMEs relies on provision of IT training and knowledge (Carbonara, 2005); (Nguyen, et al., 2015).

Implementing information systems poses higher risks for SMEs compared to larger enterprises, as SMEs lack resources and education in this area (Bruque & Moyano, 2007). Additionally, SMEs struggle to hire and retain internal information system experts due to scarcity and limited career growth opportunities (Bruque & Moyano, 2007).

Data privacy concerns and cybersecurity challenges arising from information sharing raise fears of data breaches. Despite the benefits of Information Systems (IS), inadequate security and privacy measures can deter firms and individuals from adopting to it (Lee & Lee, 2015).

Understanding and addressing these challenges is crucial for small businesses to successfully adopt and leverage information systems for their growth and transformation.

The next section will cover the strategic ways for implementing IS to drive transformation in small businesses.

In small organizations, management decisions influence IS adoption (Nguyen, et al., 2015). Therefore, for IS adaptation to be a success, effective communication between management and employees is crucial to ensure understanding and acceptance, prevent negative attitudes, and address concerns during the adoption process (Nguyen, et al., 2015).

Training and staff socialization through various training methods, including on-the-job, classroom, and pyramidal training; - that are facilitated by both internal and external agents can be effective in implementing IS successfully (Bruque & Moyano, 2007). Factors like job rotation, age, and staff turnover can moderate the training's impact (Bruque & Moyano, 2007). Additionally, technological change may disrupt hierarchy and power structures within an organization, potentially affecting implementation success (Bruque & Moyano, 2007).

Since small business often lack IT resources, expertise and skills (Carbonara, 2005), external network interactions with professional consultants, IT vendors, customers, suppliers, etc.; - can significantly influence IS implementation process thus offering IT adoption, learning opportunities, knowledge creation, improvement of products or services, and competitive advantage (Nguyen, et al., 2015). Unfortunately, not all small businesses can access this resource due to its associated costs (Izushi, 2005). However, certain IS such as business information systems (e.g., amazon web services) and ERPs, - can be rented out thus making them to be more accessible and cost-friendly to people and organizations (Stair & Reynolds, 2015).

Small businesses adopt IT for various reasons rather than mere desire for change, often driven by customer demands, industry standards, quality enhancement, cost reduction, or efficiency goals (Nguyen, et al., 2015). Therefore, a clear understanding of the adoption rationale is crucial so as to avoid disconnect between IT adoption and implementation (Nguyen, et al., 2015). According to (Seufert & Meier, 2016), companies must first analyse and recognize consumer needs and preferences to ensure digital transformation's success.

Addressing security challenges can involve training developers to integrate security solutions such as encryption, intrusion prevention systems, multi-factor authentication, firewalls, etc., -into products, while also promoting user utilization of built-in IoT security features on their devices (Lee & Lee, 2015). Furthermore, it's the responsibility of SMEs to oversee controls and regulatory compliance (Seethamraju , 2015).

Key Literature

Over the past decades, Information Systems (IS) have significantly driven globalization by transforming organizations and industries (Malhotra, et al., 2013), consequently empowering local SMEs to engage in the global market arena (AlBar & Hoque, 2019). For instance: Amid the 2019 COVID pandemic, France's online sales reached USD 66 billion, constituting 9.2% of total retail revenues and positioning the country as the world's sixth-largest in e-commerce sales. Amazon further aided French SME retailers through online store setups that enhanced product promotion and visibility among French and European consumers (Nicolaï & Grange, N.D.).

Digital transformation employs information technologies (IT) to automate tasks across diverse societal aspects, including politics, law, labour markets, and personal routines, - enabling businesses to transact effectively in dynamic markets (Legner, et al., 2017).

Since most SME's entrepreneurs initiate and drive digital transformation, entrepreneurs must be empowered and have adequate capabilities to ensure a successful digital transformation (Li, et al., 2017). Furthermore, creating an engaging customer experience is vital in digital transformation as it leads to establishing customer loyalty and trust (Westerman, et al., 2014).

The implementation of IT innovations is anticipated to improve firm's performance (Seethamraju , 2015). For instance, SMEs benefit from ERP's external resources to address external pressures, leading to streamlined processes, real-time data access, and enhanced information management for improved efficiency (Seethamraju , 2015).

Methodology and Research Design

To comprehensively address the research question and objectives, mixed-methods research approach will be adopted.

Quantitative data collection will be collected through surveys (Bhaskaran, N.D.) distributed among small business owners and managers across various sectors in France. These surveys will employ a combination of closed-ended and Likert-scale questions to quantify the extent of IS adoption, the perceived challenges, and the effectiveness of current strategies. The data collected will be analysed using statistical

techniques to derive meaningful insights into the prevailing IS landscape among small businesses (Runeson & Höst , 2009).

Qualitative data collection will involve in-depth interviews (Runeson & Höst , 2009) with small business owners, employees and key stakeholders. These interviews explore the perspectives, experiences, and challenges faced by small businesses in adopting IS. The qualitative data will be subjected to rigorous content analysis, discourse analysis, thematic analysis, descriptive statistics and validation to identify recurring themes, patterns, and underlying factors that contribute to the dearth of effective IS strategies (Bhatia, 2018); (Caulfield, 2019).

Observations will also be undertaken to gain insights into the operational dynamics of the businesses (Runeson & Höst , 2009).

Ethics Considerations and Risk Assessment

This research places a paramount emphasis on ethical considerations and the mitigation of potential risks. Participants' informed consent will be obtained prior to data collection, ensuring voluntary participation and understanding of the research objectives (Sim & Waterfield , 2019). While collected data will adhere to data privacy regulations (e.g., GDPR) and ethical standards ensuring anonymization, confidentiality and provision of feedback to participants (Runeson & Höst , 2009).

Furthermore, the potential risks associated with biases, misinterpretation of responses, and data security will be diligently addressed. Cyber security practices, transparency

and robust data analysis techniques will be employed to minimize these risks, ensuring the integrity and validity of the findings (Bott, 2014).

A toolkit will be developed to offer small businesses in France a well-organized methodology and hands-on tools for effectively implementing information systems. It offers a comprehensive set of resources to help businesses navigate each phase of the implementation journey, ensuring a smoother transition and optimal outcomes.

Timeline of Proposed Activities

Below is a 24weeks/6months research timeline of the proposed activities. This is divided into distinct phases:

Literature Review and Synthesis (4 weeks): A comprehensive review of existing literature to identify gaps and relevant theories.

Data Collection and Analysis (8 weeks): Surveys, observations and interviews are conducted to gather both quantitative and qualitative data. Analysis techniques will also be applied.

Framework Development (4 weeks): Based on literature insights and empirical findings, a critical framework for effective IS utilization will be developed.

Toolkit Creation (4 weeks): The toolkit will be crafted using the critical framework as a foundation, providing actionable strategies for small business owners to implement IS.

Writing and Finalization (4 weeks): The research findings will be compiled into a comprehensive research proposal, supplemented by the developed toolkit.

Conclusion

Over the past decades, Information Systems (IS) have significantly driven globalization by transforming organizations and industries, leading to cost reduction, product/service innovation, and improved customer interactions (Malhotra, et al., 2013).

Despite 70% of French SME leaders not prioritizing company's digital transformation, a majority (53%) have initiated this process, beginning in Q3 2019 according to the BpFinance survey (Elinext, 2020). Additionally, the COVID-19 pandemic showed how digital technology can contribute to greater economic resilience by allowing work to be organized more flexibly and goods to be sold remotely (Faquet & Malardé, 2020).

The challenges identified, such as insufficient resources, lack of technical expertise, and security concerns, underscore the multifaceted nature of the issue (Nguyen, et al., 2015). However, these challenges also signify potential areas for improvement and growth. By leveraging a strategic mix of training, external collaborations, and the development of clear adoption rationales, small businesses can navigate these obstacles more effectively (Bruque & Moyano, 2007).

The proposed research endeavours to contribute to this transformation journey by offering insights into the specific challenges faced by small businesses in France and providing actionable strategies for their successful IS integration. By addressing these

challenges head-on, small businesses can not only achieve meaningful digital transformation but also secure a competitive edge in an increasingly digital world.

As the research timeline unfolds and the proposed activities are implemented, it is anticipated that the findings will not only enrich academic discourse but also directly impact the way small businesses approach and embrace the digital realm.

By doing so, this research aspires to be a catalyst for change, steering French small businesses toward a future where information systems are harnessed as powerful tools for growth and transformation.

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