



Low-tendency of Adoption of the Cloud-based HRM Solutions by the Micro, Small, and Medium-sized Enterprises in Sri Lanka

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ABSTRACT

As a growing number of studies delineate, cloud computing services are significantly helpful to Micro, Small, and Medium-sized enterprises (MSMs) to optimize their business performance. However, a notable reluctance can be observed in the MSM owners in Sri Lanka despite the redundant cloud services available online. Specifically, many MSM enterprise owners refuse to adopt cloud HRM applications to handle HR and administrative tasks in such enterprises. To examine this phenomenon, a qualitative exploratory study was designed cross-sectionally. Data were collected from nineteen MSM enterprise owners from semi-structured interviews. Results show a little tendency for such owners to adopt cloud HRM services for their firms. Less reliability of those cloud HRM services, less affordability, less awareness, absence of exclusively designed cloud applications for MSMs, and non-urgency to use cloud-based IT applications for HRM functions in MSM, uncertainty of the business growth due to the prevailing crisis are the main reasons for the low-tendency to adopt such applications.

Keywords: administration, cloud computing services, enterprises, human resource management, low-tendency

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INTRODUCTION

The cloud computing has become a fundamental electronic application in business enterprises in the era of Industry 4.0 (Akpan et al., 2022). As Attaran and Woods (2019) witnessed, Cloud Computing Technology (CCT) became a breakthrough technology for leveraging the power of the internet by providing software and many infrastructure solutions to empower businesses around the world at a greater cost-effectiveness. As a growing body of studies in literature demonstrates, the grand scale enterprises are not anymore reluctant to embrace these CCTs to optimize many of the repetitive administrative tasks (Hong et al., 2019). However, these findings are not favorable with Micro, Small, and Medium (MSM) scale enterprises around the world (Akpan et al., 2022), and a significant reluctance can be observed in the adaption of CCTs by the small and medium-scale enterprises in developing economies (Akpan et al., 2022; Khayer et al. 2021).

It can be recognized time and attendance management, leave management, payroll management, document management, backup storage management, web hosting, and contract management are the key human resource-related tasks that can be easily performed via CCTs (Attaran & Woods, 2019; Chai, 2022; Umar & Maude, 2023). Also, several studies show that adapting CCT services by MSM owners to perform at least the above-stipulated HR functions can enhance greater flexibility, reduce the workload of employees, reduce the training and retraining cost of employees, and reduce the reworking cost (Al-Rwaidan et al., 2023; Dharmanto et al., 2023; Tongkachok et al., 2023). It is not fair to treat cloud computing as a modern and emerging technological concept, as it was first coined by John McCarthy in 1961 (Attaran & Woods, 2019; Chai, 2022). However, it seems that these adaptations to those HR-related CCT applications have been very strange to MSM owners in Sri Lanka even at the inception of the twenty-first century (Elayanathan & Kalainathan, 2021; Gamage, 2019; Nawaz & Thowfeek, 2014; Nuskiya, 2017).

Three main research themes can be portrayed when narrowing down the wide-dispersed CCT literature into Sri Lankan context, comprehensively; the determinants (factors) of cloud computing adaption (Ayoobkhan, 2019; Gamage, 2019), the awareness of cloud computing adaption (Elayanathan & Kalainathan, 2021; Khaliq et al., 2021), and the intentions of adaption of cloud computing services into enterprises (Tharanga & Perera, 2018). In many

studies, these three themes were mainly associated with Accounting, Finance, and Logistics, certainly not HRM. Even the remaining studies focusing on HRM cloud applications provide a general overview on establishing cloud-based Human Resource Information Systems (HRIS) with reference to Software as a Service (Saas), Infrastructure as a Service (IaaS), and Storage as a Service (StaaS) (Abdalla & Varol, 2019; Dincă et al., 2019). Thus, the adaption of module-wise cloud-based HR services for MSMs is a largely ignored area in the literature.

Nuskiya (2017) has recognized top management support, size of the firm, technology readiness, and security concerns are the main determinants of cloud computing adaption in Sri Lankan MSMs. All these determinants are positively associated with cloud computing adaption. Meanwhile, the intention of adapting cloud computing applications is largely influenced by relative advantage, compatibility, complexity, top management support, organizational readiness, training and education, competitive pressure, and support of the vendor (trading partner) (Chai, 2022; Gamage, 2019). Further, these determinants (factors) can be categorized mainly into three categories, namely; technological factors, organizational factors, and environmental factors. These factors are illustrated in Figure 1. Also, as Elayanathan and Kalainathan (2021) witness, the COVID-19 pandemic became a major basis for manipulating the awareness of cloud computing applications of SME owners. As those authors stipulate, the level of awareness of cloud computing applications of SME owners was 54% in Sri Lanka before the pandemic, and that level of awareness was uplifted just by 5.5% after the pandemic.

Despite the recognition of determinants of cloud business services adoption (Ayoobkhan, 2019) and the existence of a meta-theoretical framework on those determinants of Sri Lankan SMEs (Gamage, 2019), the need for conducting this study is three-fold. First, even though the determinants of cloud computing service adoption have been well recognized in the Sri Lankan context, the MSM owners in Sri Lanka are still extremely reluctant to integrate their administrative operations with cloud services despite considering its greater flexibility and cost-effectiveness (**Guerrero**). Second, an ample number of existing studies in this domain highly focus on cloud service adoption in finance, marketing, and logistics, but only a small number of empirical studies can be found that discuss the cloud service adoption on HR in MSMs. Third, most published studies focus on small and medium enterprises, but recognizing micro-scale enterprises is largely

ignored. Hence, considering those recognized loopholes in the contemporary context, the two objectives of the present study can be delineated as follows:

- To recognize the factors that affect the low tendency to adopt cloud HR solutions by MSMs in Sri Lanka.
- To propose clear-cut solutions to upscale the tendency of adopting cloud HR solutions by MSMs in Sri Lanka.

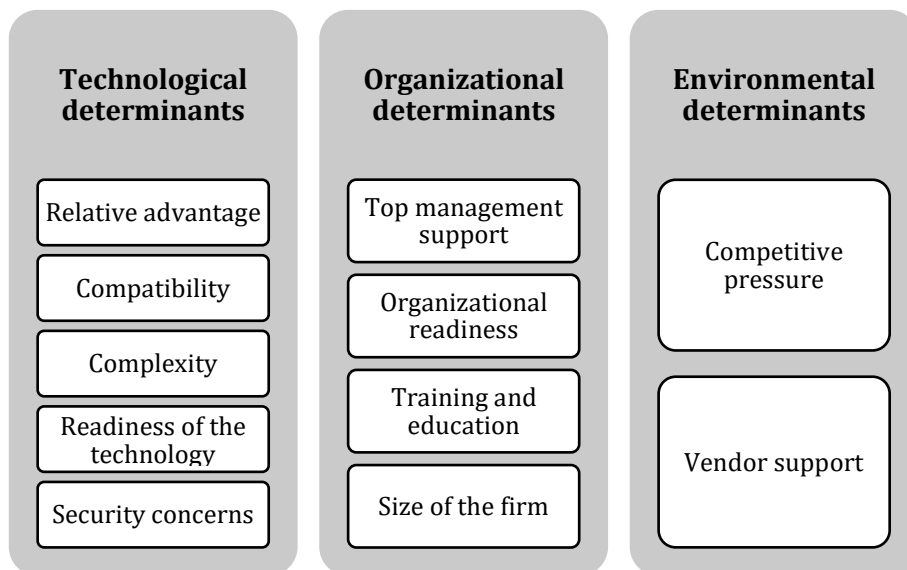


Figure 1: Determinants of the Adoption of Cloud Computing Applications in MSMs (Author adopted from Nuskiya (2017) and Gamage (2019))

LITERATURE REVIEW

Small and Medium-Sized Enterprises in the Sri Lankan Economy

Small and medium-sized enterprises are the most prominent entity in the Sri Lankan economy. Not only in Sri Lanka, but it is the main economic driving force that contributes to the enrichment of every developing nation in the world (Cahyadi et al., 2022). As the United Nations Global Compact Network (2021) points out, MSMs is a prominent strategic sector in the Sri Lankan economy. As Chen and Mitra (2022) witnessed, SMEs comprise more than 75% of total enterprises in Sri Lanka and contribute more than 20% of exports, 45% of employment, and 52% of the gross domestic product.

It is widely recognized that the main three functions of SMEs in any economy are inclusive economic growth, regional development, employment

generation, and poverty reduction (UN Global Compact, 2021). Importantly, when defining SMEs in Sri Lanka, the two main criteria considered are the number of employees and annual turnover (in LKR million). In accordance with the National Policy Framework for SME Development in Sri Lanka (2015), the formal operationalization for SMEs is as per Table 1 below.

Table 1: Operationalization of Micro, Small, and Medium Scale Enterprises

Criteria	Micro Enterprises	Small Enterprises	Medium Enterprises
Annual Turnover (LKR Mn.)	Less than 15	16 – 250	251 – 750
Number of Employees	Less than 10	11 – 50	51 – 200

Source: Author adopted from National Policy Framework for SME Development in Sri Lanka (2015)

As Mausudeen and Rauf (2022) explored, eight factors influence the growth of SMEs. Those are easiness for market entry, infrastructure, adequacy and constant supply of electricity, transportation, telecommunication, technology readiness, viable financial markets, and efficiency of the labor market. As per the evaluation of these authors, Singapore is the best country in the world to plant an SME. Meanwhile, Pandithasekara and Hewage (2022) recognized three factors which can ensure the long-term sustainability of SMEs in Sri Lanka, especially in the post COVID-19 pandemic era, namely, maintaining a healthy cash flow, digital transformation, and improving the quality of products and services. These factors shed light on the urgency of this study, as digital transformation was recognized as one of the key determinants for the sustainability of SMEs.

A limited but growing body of literature has delineated that HR management is the chief driving force of any SME (Mathushan & Kengatharan, 2022). Based on the resource-based view, edging the competitive advantage of an SME can largely be influenced by the effectiveness of its HR management practices. The same finding was validated by Guerrero et al. (2022) testified that HR professionals have been widely neglected in SMEs in Canada. However, human resource management is largely ignored in contemporary SMEs (Guerrero et al., 2022; Imron et al., 2019). Hence, the presence of sound HR professionals and cutting-edge HR practices to be performed in SMEs is especially emphasized to optimize their performance.

Cloud Computing for HRM in MSMs

A large body of literature shows how cloud computing could be increasingly useful to perform routinized business functions in micro, small, medium, and even large-sized enterprises, but the growth of literature on the adoption of cloud computing on human resource functions is really sluggish (Dharmanto et al., 2023; Jemine & Guillaume, 2021). Many authors have proved that cloud computing could enhance small business performance (Akpan et al., 2022; Attaran & Woods, 2019; Ayoobkhan, 2019; Carcary et al., 2014). The state-of-art technologies, suitable for MSMs are recognized as internet and web; industrial internet of things; cloud, edge, and fog computing; big data analytics; and artificial intelligence (Akpan et al., 2022; Hong et al., 2019). Out of these stipulated state-of-art technologies, cloud computing is the most convenient and flexible technology available for MSM owners (Abdalla & Varol, 2019).

As Abdalla and Varol (2019) emphasized, only a few forms of cloud computing are readily available for enterprises. Cloud storage is very common not only for enterprises but even for personal users which is technically known as Storage as a Service (StaaS). Secondly, a vast number of cloud services which offer data and application services to clients with all reacquired infrastructure, known as Software as a Service (SaaS). Thirdly, some cloud services provide software application improvement settings and environments to clients, commonly known as Platform as a Service (PaaS). Finally, the fourth type of cloud service which is offered by cloud vendors is Infrastructure as a Service (IaaS), where the clients can get storage and calculation resources which are useful for computer program developers and ICT firms (Abdalla & Varol, 2019). Out of these cloud computing forms, SaaS and Paas are the most frequently used services by MSMs.

Theoretical Facets of Cloud Computing Adoption by MSMs

Unlike in other realms of social sciences, no palpable theoretical trajectory can be observed to profoundly understand the conceptual evolution of cloud computing usage and adoption in various contexts. However, two theoretical attempts can be recognized in the literature postulating cloud-computing usage and adoption, namely, the Diffusion of Innovation (DOI) theory (Rogers, 1995) and the unified theory of acceptance and use of technology 2 (UTAUT-2) (Zhu et al., 2023). Also, sufficient evidence can be

found that the theory of planned behavior (Ajzen, 1991) can be applied to understand the behavior of cloud-computing users in various contexts (Acikgoz et al., 2023).

First, the Diffusion of Innovation theory is one of the oldest social science theories (Boston University School of Public Health, 2022), which primarily explains how an idea or a product gains momentum and diffuses through a specific community (Rogers, 1995). Further, it is depicted that the community adopts the particular idea or the product in the long run. Hence, the theory remarks that users (people) change their behavior as a result of the adoption of the so-called idea or the product. However, the particular object should be new or innovative; otherwise the user may not adopt it (Acikgoz et al., 2023). Several studies have shown that this theory clearly explains the behavior of MSM owners in terms of the adoption of a new technology, which is an innovative approach for them (Acikgoz et al., 2023; Athambawa et al., 2023; Zhu et al., 2023).

Moreover, the theory of planned behavior (Ajzen, 1991) signifies the adoption behavior of MSM owners to cloud computing applications (Athambawa et al., 2023). According to this theory, the intention of an individual to change his/her in accordance with a new circumstance or a condition is the most proximal determinant of the social behavior of an individual (Ajzen, 1991). Hence, it can be concluded that the level of adoptive readiness to cloud computing services of MSM owners is significantly determined by the intention to change / intention to adopt the new technology of so-called individuals. Hence, the diffusion of innovation theory and theory of planned behavior provides a strong theoretical foundation for cloud-computing adoption behaviors of individuals.

Meanwhile, the Unified Theory of Acceptance and Use of Technology 2 (UTAUT-2) is a recent theoretical development explaining the factors that influence the acceptance and adoption of technology (Athambawa et al., 2023; Zhu et al., 2023). As per the original explanation of the theoretical framework, performance expectancy, effort expectancy, social influence, and facilitating conditions are the main factors which determine the acceptance and adoption of a new/innovative technology of an individual (Athambawa et al., 2023; Vankatesh & Bala, 2008).

METHODOLOGY

Design and Procedure

Based on the interpretivism research approach, the inductive approach was followed to design this study to achieve the objectives of this study. In the interpretivism research approach, it is assumed that the reality of an individual is something that can be created through his/her values, beliefs, and experiences rather than just relying on an absolute truth (Saunders et al., 2019).

Followed by the inductive approach, a qualitative exploratory study was designed to achieve the so-called objectives of the study. A survey strategy was adopted to collect the data, and the choice of the research was mono-method as data was collected only from interviews. Interviews were conducted by the researcher, and semi-structured interviews were designed and conducted physically in a face-to-face setting. Further, this is a cross-sectional study as all interviews were conducted between March and May 2023 by collecting all necessary data at once. The unit of analysis of this study is an individual respondent who owns a micro, small, or medium enterprise during the data collection period. Data were collected from nineteen respondents by conducting separate interviews with each respondent.

In this qualitative inquiry, the gathered data were scrutinized through thematic analysis in accordance with the methodological guidelines by Clarke and Braun (2013). Initial codes were derived from all nineteen interview transcriptions. Themes were then derived based on those codes. Further, themes are defined and taken as the factors affecting the low adoption of cloud-computing applications by MS owners.

Adoption of Definitions

The definitions were taken from the National Policy Framework for SME Development in Sri Lanka (2015) to operationalize micro, small, and medium-scale enterprises in Sri Lanka, as presented in Table 1 above. Out of the two criteria, the criteria of number of employees was taken for the data collection purpose of this study since the headcount of employees is much more essential than the value of the annual sales turnover with regard to the functionality of HR functions. Hence, if the number of employees is less than ten in a particular firm, that is considered a micro-sized enterprise; if the

number of employees is between eleven and fifty, that is considered a small-sized enterprise, and if the number of employees is in-between fifty-one and two hundred, that was considered as a medium-sized enterprise. Simultaneously, in Sri Lanka, it is used the abbreviation SME that stands for Small and Medium-sized enterprises which encompasses micro-sized enterprises too. However, in overseas literature, the commonly used abbreviation is MSM, which stands for micro, small, and medium-sized enterprises. Thus, technically, there is no significant difference between the abbreviations of SME and MSM. Both abbreviations were interchangeably used in this study.

Sampling

The snowballing sampling technique was applied as a non-probabilistic sampling method. Initially, two respondents were found from an entrepreneurial diploma program offered by a major public university in Sri Lanka, and subsequently, other respondents were personally contacted and met for interviews on prior agreed dates and times at the convenience of respondents. Before holding the interviews, each respondent was clearly explained the objective of this study and assured of the confidentiality of the information they would share. On average, the duration of an interview was 21 minutes. Sixteen interviews were conducted in Sinhala, and three interviews in English.

Interview Guide

Mainly, four questions were asked from every respondent: (1) Are you aware of cloud-based HRM solutions that are adoptable for your firm, and what are they? (2) Why are you reluctant to adopt cloud-based HRM solutions for your firm? (3) Do you believe that cloud-based HRM solutions can really enhance your business performance? (4) Do you have any plan to adopt cloud-based HRM solutions for your business? And (5) What are the possible solutions for enhancing the tendency to use cloud-based HRM services for your firm? Before asking those questions, general background details were taken, such as what triggered you to become an entrepreneur, your past life before starting this enterprise, and the respondent's perception of contemporary business arena in Sri Lanka. Responses were recorded with the permission of the respondent.

RESULTS AND DISCUSSION

Eight respondents were micro-enterprise owners, and seven were small business owners out of the sample. Only four respondents were chosen as medium enterprise owners out of the sample of nineteen respondents. Seventeen respondents were males, and only two female respondents were in the sample. One female respondent is a small business owner, and the other female respondent is a medium-scale enterprise owner. All the respondents were running regular enterprises and not e-businesses. All four medium-scale business enterprises are manufacturing businesses. Seventeen respondents in the sample are in the 30 to 40 age category, and only two respondents were below 30 years old at the time of conducting interviews.

In general, all the respondents answered that the contemporary business context within the prevailing economic turmoil in the country is very unfavorable for small business owners. Severe labor shortages, the constant rise in costs of raw materials, and reducing demands for the products and services they offer are the key challenges determining the survival of their enterprises. Moreover, all eight micro-enterprise owners responded that they would probably terminate their businesses for either migrating or doing a job. The seven small enterprise owners have no clear idea about the future in the contemporary business landscape, while four medium enterprise owners witnessed that they would hold the battle until they succeeded in their businesses. Further, the main findings can be plotted in Table 2 as follows.

Table 2: Summary of Interview Transcriptions

	Micro Enterprise Owners (Eight respondents)	Small Enterprise Owners (Seven Respondents)	Medium Enterprise Owners (Four Respondents)
The general business outlook in Sri Lanka for MSMs	Very unfavorable Survival is uncertain at all.	Unfavorable Future growth is uncertain at all.	Little unfavorable, but there is hope for the future.
(Q1) Awareness of cloud-based HRM solutions those are adoptable for the firm and their forms (modules).	Well-aware Leave and attendance Attendance tracking Payroll administration Performance appraisal	Five respondents were well-aware, and two respondents were fairly aware	Fairly aware of many of the cloud-based HRM solutions

(Q2) Reluctance to adopt cloud-based HRM solutions for the firm.	Strongly reluctant. On-computer and simple IT applications are still effective, and cloud-based HRM applications are still expensive.	Strongly reluctant. These internet-based HRM applications will create an additional burden on the business.	Moderately reluctant. Need to make a proper cost-benefit analysis, and if the results are reliable, cloud-based HRM applications might be adopted.
(Q3) Belief that cloud-based HRM solutions can really enhance business performance.	Certainly not. A relationship between business performance and cloud services for HRM cannot be seen.	Probably not. Cloud services are not mandatory for HRM and admin tasks.	May trust. There may be some benefits of using cloud services for enterprises.
(Q4) Planning to adopt cloud-based HRM solutions for your business.	Not planning. Applying too many technologies to HRM deviates from the main purpose of business. There is no urgency to plant such computing applications at all.	Not planning. If the business grows, there is a tendency to place cloud computing solutions. At present, having such technology seems useless.	The Return on Investment (ROI) should be carefully computed, if there is a real benefit, such technology might be introduced.
(Q5) Possible actions/ strategies from the point of enterprise owners to enhance the readiness to use the cloud-based HRM services in firms.	<ul style="list-style-type: none"> ● Education and training ● Readiness of the owner 	<ul style="list-style-type: none"> ● Education and training ● Invest in more IT infrastructure (hardware) 	<ul style="list-style-type: none"> ● Education and training ● Adequate budget allocation ● Align with what competitors adopt to
Further remarks (if any)	Applying sophisticated IT applications to a micro business is unnecessary as business owners may deviate from the main purpose of the business.	Applying information technologies to a small business at very early stages may lead the enterprise to bankrupt	Having internet-based IT solutions for a business may be good, but there is no real impact. Ideal for large enterprises.

Note: This table does not demonstrate the responses given by every respondent but their summary of responses in general.

Source: Survey Data (2023)

Some answers given by a few respondents are quoted to validate the findings. The third respondent is a female owner of a medium-sized enterprise, and she answered the first question of the interview guide : the awareness of the availability of cloud-based HRM solutions applicable to MSMs. The respondent answered originally in Sinhala, the first language of Sri Lanka, and below is the translated answer.

Yes. The word you say, “cloud” sounds strange, but I know that there are so many computer software available for my business. Honestly, I don’t

know how to name them with vendors. Also, my business colleagues are using them too. But they are not positive about them (laughing). On the other hand, I have nothing to manage HR in my business, rather I just get things done by anyone onboard.

The eleventh respondent of the sample, who is a male respondent of a small-sized business, answered the second question: why are you reluctant to adopt cloud-based HRM solutions for your firm? Again, the respondent originally answered in Sinhala, and it was converted into English and presented below.

It's about the survival of our businesses and lives, not about improvement. You know, my business is not technology-driven. I serve to accomplish one of the most fundamental necessities of humans, depending on the nature of my business. By managing HR in my firm, I cannot make my employees unhappy. Otherwise, I lose my business. So, it is all about the survival of my business. I still think I don't even need a computer, and I really don't need those so-called cloud services (laughing with sympathy). I manage the stuff with my phone, and still do not have a computer. However, I have been doing this business for the last twelve years.

The fourteenth respondent in the sample, a female owning a medium-sized manufacturing firm, answered the same question (second question) insightfully. She answered in English; below is her quoted answer in her own words.

I use manual labor in my production process. I am proud of one thing in my business: I am really close to my employees. All nine people in my small factory have been with me for the last four years. So I need to manage them manually. Actually, I do not manage them. Rather, they manage my business. So, I do not blame cloud computing and all new technologies. But I believe in the physical touch with my people, and I further believe that is the secret to the success of my business.

The nineteenth respondent of the sample, a woman owning a small business, expressed her intention to adopt a cloud-based computing solution for her business in the following way. She originally answered in Sinhala, and her words are translated into English as below.

What my father told me when I was eight years old; 'you cannot be a mother by fifteen years old, but you can get through your school examinations.' So, as a young businesswoman with a very young business (laughing), I need to grow my business with very smart investments. So, letting go of 200 to 300 dollars a year is not an investment but a recurring expense. So, I don't want to intentionally rush my working capital. However, these cloud applications may be a very good option for businesses having huge workloads running with a few people. So, once my business is getting expanded, I may adopt this.

The eighteenth respondent is a male medium-sized business owner in the apparel industry, and his business is taking subcontracts from large apparel manufacturers and taking his words as the answer to the third question: do you believe that cloud-based HRM solutions can really enhance your business performance?

No, I don't believe. You know, managing people in the apparel sector is a really tough challenge. I must be with my people. Actually, it is easy for me to introduce a cool technology to manage my crew and then I enjoy my life while from time to time I check on my phone notifications given by that app. But what if my business dies without a powerful protocol? Managing HR is almost like raising a kid. You cannot raise your kid with an app, right? (laughing)

Moreover, the answers given by all nineteen respondents for the fourth question are negative. Sixteen of the respondents strongly expressed that they do not have any plan to adopt so-called cloud-based applications. Only three respondents gave a green signal saying that they would consider this in the future, but currently, there is no plan for them to install such facilities. Further, respondents gave meaningful answers to the fifth question, and seven respondents widely discussed the answer with the researcher. Those are discussed under the recommendations, such as a wide awareness of these applications, price affordability, reliable information security, and ease of accessibility.

Hence, the findings of this study are compatible with many of the recently published studies in this domain. As Ayoobkhan (2019) ascertained,

the cloud computing satisfaction level of Sri Lankan traditional SMEs is significantly low, but this satisfaction level with online SMEs is significantly high. Meanwhile, the level of adoption for cloud-based IT solutions for Sri Lankan SMEs before the pandemic was just 35% before the COVID 19 pandemic and even after the pandemic, the level of adoption has increased just by 8% (Elayanathan & Kalainathan, 2021). Moreover, as Surendro and Fardani (2012) found that SMEs are ready to implement cloud-based HR applications in their businesses, but those employees and owners are severely lacking the required training and education. Even in the present study, the owners of medium-scale enterprises are ready to embrace cloud computing for HRM, but their level of knowledge is still lacking.

Meanwhile, Carcary et al. (2014) pointed out, that SMEs are not very interested in adopting to cloud computing technologies for administrative tasks as they do not technically and organizationally fit with SMEs. Even in the present study, the micro and small enterprise owners emphasized that it is not affordable for them to use these cloud-based HR applications as they are usually designed for grand-scale organizations. This finding leads to alarm software developers to make unique cloud-based services exclusively for MSMs, not just the simplified version that they designed for their large-scale clients. Furthermore, these findings clearly show that readiness of the organization, training, education, and awareness are critical in determining the adoption of cloud-based HRM services of MSMs. This finding is further supported by the study done by Imron et al. (2019) in the Indonesian context, where organizational determinants were found to be more influential in determining this tendency.

CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to recognize the factors which affect the low readiness of adopting to cloud HR solutions by MSMs in Sri Lanka and to propose clear-cut solutions to upscale the tendency of the adoption of so-called cloud-based solutions. To accomplish this purpose, an exploratory qualitative study was designed. Data were collected from semi-structured interviews with nineteen respondents, and the findings revealed that MSM enterprise owners are reluctant to adopt cloud-based applications for functioning human resource and administrative tasks in their enterprises in Sri Lanka.

Less reliability of those cloud HRM services, less affordability, less awareness, absence of exclusively designed cloud applications for MSMs, and non-urgency to use cloud-based IT applications for HRM functions in MSM, uncertainty of the business growth due to crisis are the main reasons for the less tendency to adopt such applications. Also, as per the findings, training, education, and awareness of cloud computing, the readiness of the enterprise owner to adopt cloud solutions, enhanced flexibility and user-friendliness are the main strategies to upscale the readiness (tendency) to adopt those technologies. Thus, organizational factors and the prevailing economic condition of the country are significant in determining this adoption.

This study contributes to the body of knowledge in contemporary literature in a few forms. The existing studies are not certain about the tendency of MSM enterprise owners to adopt cloud solutions for HR and admin functions in their firms. However, this study confirms that MSM enterprise owners are not willing to integrate their HR functions with the cloud-based solutions, and their perception is either negative or neutral on the cloud-based HRM services. Also, organizational and environmental factors are more significant in up scaling the tendency to adopt these cloud-based solutions exclusively for human resource management rather than the technological factors (see Figure 1). Further, the contemporary literature is silent about HRM and cloud-based solutions for micro- enterprises, but this study attempted to capture not only small and medium enterprises but micro businesses, too.

As many MSM owners are not interested and unwilling to the adoption of the cloud-based HRM solutions that already exist in the market, it is important to build more viable and simplified cloud applications for MSMs. Also, not only HRM but also all-in-one packages can be introduced as the function of human resource has combined with other administrative functions in MSMs. On the other hand, as many MSM owners are unaware of easily accessible cloud computing applications, it is important to provide full awareness for MSM owners about possible applications of them. Especially within the contemporary economic turmoil in Sri Lanka, if application developers can upgrade their cloud business applications to replace main resources in businesses, which are the main cost generators, the MSM owners may embrace them with high priority.

Future researchers are suggested to study more about the use of cloud computing in Industry 5.0 specifically for micro businesses encompassing the special IoT devices and artificial intelligence tools and applications along with cloud computing. Further, this cloud application embracement may be associated with different generations. Generation Y and Z people may be more oriented with technology even for their traditional business models, which may be subjected to further research. Finally, the digitalization of businesses is an inevitable turbulence, and the adoption to these ever-evolving technologies by MSMs may determine their survival or death in this hyper-dynamic business environment in the twenty-first century.

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