



Department of Accounting
Faculty of Management Studies and Commerce
University of Sri Jaywardenepura, Sri Lanka

DIFFUSION OF REVENUE ADMINISTRATION MANAGEMENT INFORMATION SYSTEM (RAMIS) IN THE INLAND REVENUE DEPARTMENT OF SRI LANKA

 Amarasinghe OL, Gunaratne MLS, Madusanka WADC, Pakianathan AE, Pathirana KPH, Ponnampereuma MP, Sandeepa WAH, Sannasooriya BA, Wijenayake WKNA, Wijesinghe WHSS, Dayananda AG

ABSTRACT

The Inland Revenue Department of Sri Lanka along with the Ministry of Finance commenced the Project for implementing the Revenue Administration Management Information System (RAMIS) to provide a better service to the nation and taxpayers. The objective of this study is to analyze the evolution of Phase I of RAMIS in order to identify the stages of progression, keyplayers of the project and their influence on implementation and also to recognize the challengesand weaknesses of the project. Thus, the study is significant as it contributes to the extant knowledge by adding new knowledge to the limited research conducted relating RAMISboth globally and locally. Further, it acts as a post-assessment study which will help to analyzethe effectiveness of the processes and initiatives. The data was mainly sourced through interviews with the top level employees of the Inland Revenue Department who were directly involved in or exposed to the initiation and Phase I of the RAMIS project and important documents (internal and external organizational documents, namely, internal reports, annual performance reports and operational and strategic plans) relating to the project. Interviews wereduly transcribed and analyzed to arrive at the conclusion. The findings of the study revealed thatthe process of RAMIS implementation is in line with the stages of diffusion of innovation, withkey stakeholders such as the Ministry of Finance, ADB, IRD and IDA Singapore. The study alsoidentified weaknesses such as inadequate training provided to staff, time overrun and issues withRAMIS external interface. It was concluded that though the diffusion of RAMIS is in line withthe stages suggested by Rogers (1983), it has not been executed effectively owing to political interference and lack of buy-in from the staff. Finally, as a direction for future research, an in- depth study is suggested of both Phases I and II of the RAMIS project while taking into accountthe tax payer perspective as well.

Keywords: Revenue Administration Management Information System (RAMIS), Inland Revenue Department, Sri Lanka., Diffusion of Innovation

Received:
21.04.2018

Accepted revised version:
10.11.2018

Published:
06.01.2019

Suggested citation: Amarasinghe, OL, Gunaratne, MLS, Madusanka, WADC, Pakianathan, AE, Pathirana, KPH, Ponnampereuma, MP, Sandeepa, WAH, Sannasooriya, BA, Wijenayake, WKNA, Wijesinghe, WHSS & Dayananda, AG 2019, 'Diffusion of revenue administration management information system (ramis) in the inland revenue department of Sri Lanka', *Journal of Contemporary Perspectives in Accounting and Digitalization*, vol. 3, no. 1, pp. 66-89.

JCPAD © 2019 is licensed under Creative Commons Attribution 4.0 International license which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

 osanda.amarasinghe@yahoo.com

1. INTRODUCTION

The inability of the government to raise adequate funds through taxes for the development of a country is a commonly cited issue among most developing countries including Sri Lanka. As a country which offers a wide variety of public goods, quasi-public goods (free education, free medical attention) and various social security networks, Sri Lanka constantly struggles to meet ends with consistently declining revenue sources. According to the Central Bank Report of 2014, the total government revenue as a percentage of GDP continued to decline as a result of poor performance in tax revenue collection. Accordingly, tax revenue as a percentage of GDP declined significantly from 11.6 per cent to 10.7 per cent in 2013.

The Inland Revenue Department (IRD) is the entity responsible for collecting and administering taxes imposed by the Government of Sri Lanka. IT transformation or adoptions by the department has been limited in scope as it is mainly reliant on the manual tax administration system. This manual system has been identified as the main drawback hindering the revenue collection potential of the department (CBSL 2014).

The Asian Development Bank (ADB) identified several loopholes in a manual tax administration system which is also evident in the present tax administration system of Sri Lanka (ADB 2014, pp. 3-4). The main drawback is that the actual tax payer base will be minimized due to unequally distributed and unrevealed income sources in the public sector. Further, evaluating every individual based on received and available manual records is a hard task to perform. It is difficult to monitor the full potential of revenue realization due to the complexity of the taxation system and the large volume of records maintained manually. It is also difficult and time-consuming to track incomplete and inaccurate records of the taxpayers. Since majority of the tax payers and tax administrators have prioritized the processing of tax returns and claims in the first place, low consideration has been given to monitoring the inaccurate and delayed records of revenue. ADB (2014) also identifies that manual operations limit the possibility of monitoring and ensuring full compliance with the tax liability of taxpayers, leading to delays and inefficient service delivery to taxpayers, and executing assessments and recovering collections.

The Revenue Administration and Management Information System (RAMIS) was implemented at IRD with the vision 'to be a taxpayer friendly tax administrator delivering excellent service to the tax paying public with well trained and dedicated staff' (Department of Inland Revenue of Sri Lanka 2013, pp.46-47). The implementation of RAMIS was aimed at supporting the Department of Inland Revenue (IRD) in simplifying the tax administration and tax compliance by taxpayers. RAMIS is also envisioned to support increased revenue collection and tax compliance enabling IRD to reach taxpayers more effectively and efficiently.

Problem and Research Questions

The main purpose of this study is to analyze the evolution of RAMIS Phase I within IRD. The pilot study showed that the project officially commenced in July 2014 and it was planned to be rolled over in two phases. However, Phase I of the project was only implemented in March 2016 and Phase 2 will commence in October 2016.

Hence evolution of this project was identified as the scope of the research so that it could

be evaluated in depth using diffusion of innovation. Accordingly, the research questions are: How was the Revenue Administration Management Information System (RAMIS) Phase I diffused within the Inland Revenue Department (IRD) of Sri Lanka? Who are the main parties involved and what are the challenges hindering the successful implementation of RAMIS?

Objectives of the Study

This study has three objectives: to identify the progression of the RAMIS project as per diffusion of innovation theory and highlight any deviations from the proposed initial plan and reasons for such deviations; to identify key participants.....?, their role and influence over the execution and progression of the project; and to recognize the challenges faced during the implementation process of the project.

Significance of the study

Only limited research has been conducted relating RAMIS globally. Further to the researcher's knowledge there is no published study done contributing to the extant literature on RAMIS or on any other IT transformation in IRD or in any other government organization in Sri Lanka. Therefore the theoretical significance of the study is that it contributes to the extant knowledge by bridging the above mentioned gap by adding new knowledge.

The practical significance of the study is that it could act as a feedback report which will help to analyze the effectiveness of the processes and initiatives taken to ease the transition to RAMIS and also highlight areas to improve its efficacy. Further, it would enable the key players and stakeholders of the project to benchmark this project against the advanced computerized taxation systems of developed countries in detecting areas of failures, if any, and means of improvement.

Scope and Limitations of the study

The study is limited to Phase I of the RAMIS project and therefore, covers specifically the divisions in which Phase I was rolled out for implementation such as Corporate Tax (IT), Value Added Tax (VAT), Simplified Value Added Tax (SVAT), Withholding Tax (WHT), Nation Building Tax (NBT) and Pay-As-You-Earn (PAYE), which cover more than 95% of IRD Revenue.

Phase II which is rolled over divisions such as ESC and Excise Duty will not be addressed in this study as the phase was not implemented within the research period. This is one of the main limitations of the study because it fails to capture the RAMIS project in its totality but only focuses on one phase of it. The next section reviews the literature.

2. LITERATURE REVIEW

Background of the RAMIS program

RAMIS has been widely adopted by emerging nations with the intention of streamlining their processes. With Asian Development Bank assistance several countries like the Maldives, Kyrgyz Republic, some Indian provinces, Tajikistan and Vietnam are in the process of developing new systems (ADB 2014). Malaysia, Singapore, Tanzania, Egypt, Georgia, Costa Rica, El Salvador, Bosnia and Herzegovina are some other examples of Tax MIS implementations (USAID 2013).

Prior to conducting this research study, a pilot study was conducted in order to better understand the context of RAMIS implementation in Sri Lanka. Through preliminary interviews with the top level IRD staff, the following details on RAMIS were collected. The pioneering efforts for the implementation were undertaken in 2013 under the supervision of the Ministry of Finance and Planning. On November 29, 2012 the Cabinet of Ministers approved the commencement of discussions with the Ministry of Finance of Singapore, seeking assistance to implement RAMIS on a Government-to-Government basis (G2G).

On June 5, 2013, a Memorandum of Understanding was signed between the Ministry of Finance and Planning and the Infocomm Development Authority of Singapore. Asia Development Bank acts as the Funding agent of this project. The project officially started in July 2014 and was targeted to be implemented under two Phases. However, implementation of Phase I was delayed till March 2016 and Phase II was planned to be implemented in the latter part of 2016. The total project period will be 28 months followed by a four-year warranty period up to year 2020.

Concepts and Theories

This study of diffusion of RAMIS at IRD is based on the diffusion of innovation theory. The diffusion of innovation theory into public sector studies has attracted the attention of many researchers (Adhikari, Kuruppu, Wynne and Ambalangodage, 2015; Ezzamel et al., 2014; Rogers, 1983). Most studies note that the pressure to adopt or diffuse innovative accounting technologies in the public sector has arisen mainly from the need to provide a cost-effective and efficient service and help improve overall financial performance and accountability.

Rogers (1983, p.5) defines the diffusion of innovation as ‘the process by which an innovation is adopted by members of a social system’. Innovation and time can be identified as the key concepts in the diffusion of innovation. Innovation is an idea or practice that is perceived as new by an individual who adopts it (Rogers 1983). It is communicated through certain channels over time among the members of a social system, where the communication channel is the means of transmitting information from one individual to another, and the social system is a set of several units involved in joint problem solving with a common goal.

Gallivan (2001) discusses two stages of diffusion of innovation, which is the process by which new ideas are spread (cited in Mellett, Marriot and Macniven 2009). The initial stage is when management decides to make changes to the existing systems. This will be followed by the secondary stage where the individual adoption by users takes place. Rogers (1983) identifies some of the fundamental requirements for a diffusion to take place. Firstly, the thing to be diffused, in this case it is the newly introduced tax administration management information system. Subsequently, a group of potential adopters throughout which diffusion is taken place, in this case the IRD within the wider setting of the public sector and the tax payers. For the completion of the process, communication must be in place so that the idea can be moved from the location where it is present to where it is absent; the government, through the Treasury and the Department of Inland Revenue, provides this channel of communication. Thus, the spread of a computerized tax management system in Sri Lanka is an excellent fit for consideration in the context of diffusion.

The diffusion of innovations is a process, rather than an act (Lapsley and Wright 2004). Boundary spanning activity may be necessary by actors to bring inventions to the point of diffusion. This process may be shaped by internal and external, formal and informal channels of communication (Swan and Newell 1995, cited in Ezzamel et al. 2014) and can take different forms. The implementation of RAMIS can also be identified as a clearly defined process of several stages, with time frames being assigned. Feltham in 1972 (cited in Malmi 1999) indicated that if a proposed system leads to better decisions than the existing system, and the expected benefits from the proposed system exceed the cost of its implementation, the new system is adopted.

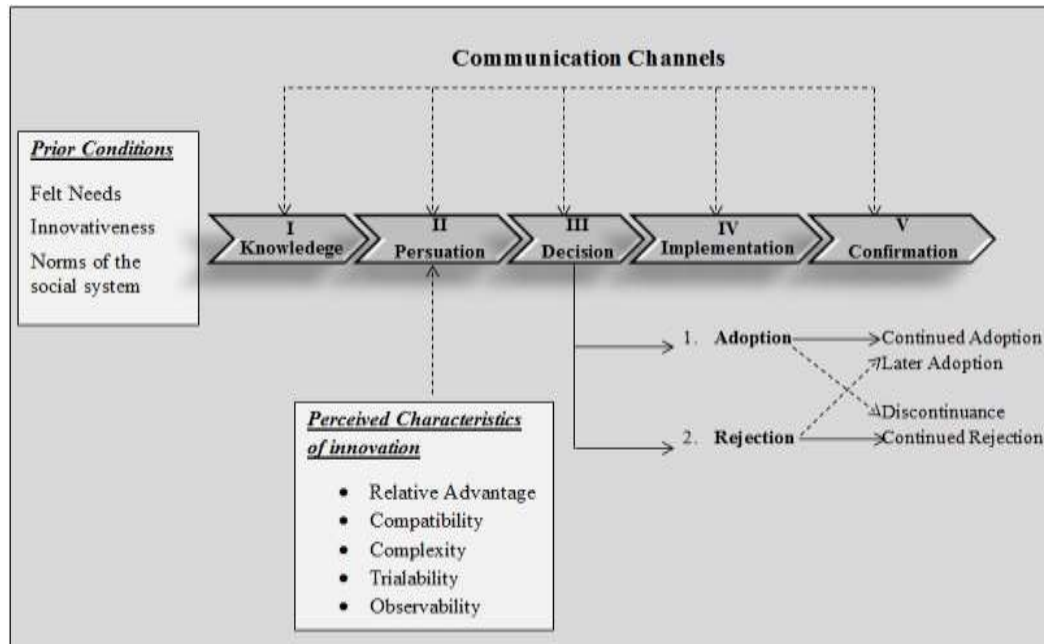
Since diffusion contains change, an individual needs to be there to convince others that the change is desirable and who has the capability to promote it (Sangster 1996). An aspect of analysis (Abrahamson 1991 cited in Mellett, Marriot and Macniven 2009) indicates that an outside institute can influence a particular new technology where decisions are not being made internally. In this case the government or the Ministry of Finance may have been influenced by the worldwide trend towards the adoption of RAMIS, which was adopted from Singapore tax system.

According to the findings of Crum et al. (1996), three critical antecedents are required from pioneers of diffusion. They are technical compatibility, technical complexity and relative advantage (cited in Mellett, Marriot and Macniven 2009). Rogers (1983) highlights that the degree of adoption is positively affected by relative advantage and compatibility, while observability though complex can create a negative influence. He further studied the time span of innovation in detail by identifying five separate stages: knowledge; persuasion; decision; implementation; and confirmation. This has been further elaborated on in the study conducted by Ezzamel et al. (2014) on the use of resource accounting and budgeting (RAB) in the UK central government. At the inception of the diffusion process prior conditions are recognized such as the recognition of defects within the prevailing practices as well as the willingness to adopt modern practices. Ezzamel et al. (2014) found that in the next stage of the diffusion process, policy and decision makers should have the required knowledge of the innovation process. Without prior knowledge, the diffusion of innovations will not be able to move forward to the next stage. At the next stage of the diffusion process is persuasion, which includes encouraging the major stakeholders to embrace innovation, including the possible costs and benefits. The persuasion stage is followed by the decision on innovation, which can range from approval to rejection.

The next stage of diffusion is implementation of the innovation. At this stage, innovation can be invented, altered and modified as the requirement arises. Confirmation is the last stage of Rogers' diffusion theory, which can have two opposite effects on the diffusion process. Either the wider adopters may begin to understand the benefits of the innovations and institutionalize them, or they may reject the utilization of such innovations, as the desired paybacks are not actually gained in a practical situation.

The fact that was highly emphasized from the beginning is that there has to be something to diffuse, a process containing various stages, a group of potential adopters, a way to communicate the novel process and a driver to adopt the change. This study is aimed at finding whether these conditions had been fulfilled with the adoption of RAMIS. The literature supports the research problem since diffusion of innovation theory involves a change consisting of stages of evolution.

Figure 1- A model of stages in the innovation-decision process



Source: Rogers (1983)

Objectives of Computerization of Tax System

Many governments in the world are now in the phase of adapting electronic communication devices including the Internet to better provide services through their institutions. This is popularly known as e-government. Siau and Long (2005) identify five main models of e- Government, namely, the digital interactions between a citizen and the government (C2G), between governments and other government agencies (G2G), between government and citizens (G2C), between government and employees (G2E), and between government and businesses (G2B). A computerized tax system in government tax collection departments can be identified as one of the aspects coming under this e-Government concept.

Many countries have tended to implement computerized systems in order to accomplish various objectives. According to the Asian Development Bank (ADB 2014), minimizing the cost to taxpayers and tax agencies by reducing the cost of tax compliance and tax administration respectively has been identified as one of the main objectives. Apart from that there is , the creation of a centralized tax payer database and a unique identification system for all categories of taxpayers. Moreover the establishment of integrated systems facilitate information exchange between the tax agencies and other key stakeholders such as the Ministry of Finance.

Ernest et al. (2015) observed that computerization of the tax system enables tackling tax avoidance and tax evasion. By enhancing the effectiveness of tax payments and simplifying the tax process tax avoidance might decline to a lower level. Moreover, in accordance with USAID's Leadership in Public Finance Management (2013), facilitating voluntary compliance is

another objective which a modern computerized tax administration achieves by simplifying processes, providing information, education and support.

According to a recent study (Ernest et al. 2015, p.54) the objectives considered during the development of the e-taxation system in Nigeria include: Creation and management an effective and efficient database to provide tax payers records, information/bio-data for easy referencing. The provision of an alternative payment routes for tax payers so as to encourage immediate tax payment and provide relief to those who find it an easier and more efficient payment route.

Benefits of Tax System Computerization

Benefits of computerizing of Tax system could be split into two main categories as benefits to tax agency and benefits to tax payer. As per the study conducted by the Asian Development Bank (ADB 2014) significant amount of benefits of Tax MIS implementation for tax agency have been identified. Firstly, this enhances perception of overall tax administration performance. Faster processing of information can be achieved by a well-planned system which assists the processing of returns and payment data more quickly.

Moreover USAID's Leadership in Public Finance Management (2013) states management information for tax administration facilitate smooth operation by ensuring staff and management obtain appropriate reports at appropriate time. This ultimately helps to identify risk and internal problems in advance further increasing the efficiency and effectiveness in the tax administration. Under the assistance of Asian Development Bank, countries like the Maldives, the Kyrgyz Republic, some Indian provinces, Tajikistan and Vietnam are in the process of developing new systems (ADB 2014).

Monitoring and Evaluation of a computerized tax system

The purpose of a monitoring and evaluation system is to determine whether the outputs and deliverables have been achieved as planned so that necessary action can be taken to rectify the deficiencies as quickly as possible. It was indicated that evaluation mainly focuses on the performance indicators selected during the initial stage of implementation, including the ease of paying taxes, reduced processing time for tax returns and identifying the reasons behind non-satisfactory performance in any particular area (ADB 2014, p. 68).

At present many countries have adopted computerized tax systems to benefit of their traditional tax system. 'Globally, tax authorities are being challenged to harness the power of information and communication technology (ICT) to achieve greater tax compliance efficiency' (Ling and Muhammad 2006, p.147). According to Chatama (2013, p.93), with the introduction of ICT, the Tanzania Revenue Authority (TRA) made significant improvements. Integrated Tax Administration System (ITAX) improved taxation by speeding up the administrative processes, timely monitoring of taxpayers, their penalties and its interests, and increase of revenue. Hence ITAX contributed to fair, effective and efficient taxation and increase in revenue, as well as supporting TRA's vision of becoming a modern tax administration mechanism (Shekidele 2007, cited in Chatama 2013).

Based on the findings of the study by Lukwata, 2011, it is evident that the electronic tax filing system implemented in Uganda has improved tax compliance as it is easy for tax payers to assess their tax obligation accurately and enable them to file their returns on time.

On the other hand, the new system has helped ease the work of the Uganda Revenue Authority (URA) staff and to an extent led to an increase in tax collection in URA.

As mentioned above, most of the developed countries have adopted a computerized tax system. Jimenez, Sionnaigh, and Kamenov (2013, pp 44-49) concluded in their study that there were issues during implementation, including a delay of over a year and modules with ongoing quality control problems in the Integrated Tax Management and Administration System (ITMAS) in Egypt. It was also indicated in their research that with the Georgia Business Climate Reform (GBCR), the tax administration had seen a 121% increase in the number of registered taxpayers from 2005 to 2008 and an increase by 133% in the number of returns filed between 2005 and 2009. As per their study, the computerized tax system implemented in Costa Rica provided considerable benefits including reduction in administration and compliance costs, reduction of errors, streamlining of internal business processes, and a reduction of the time to collect information from tax returns from days to hours.

Victor – Nyambo's tests done in Tanzania regarding the usage of Information Communication Technology (ICT) at Large Taxpayers Department (LTD) in 2009 (cited in Chatama 2013, pp. 95-96) revealed that 88.8% of staff agreed that the introduction of ICT at the LTD had shortened the lengthy and cumbersome manual procedures and that ICT usage had minimized errors in return processing and in assessment. Further, 100% of large taxpayers agreed that processing time and responding to taxpayers queries had been reasonably shortened due to this ICT.

Challenges to diffusion

Tax authorities around the world have faced many obstacles in their quest to automate tax systems. The Asian Development Bank has also identified key challenges a tax agency would face when implementing a Tax Management Information System. As per ADB (2014, pp. 71- 72), the challenges a tax authority could face when implementing Management Information System are as follows:

- *Resistance to change*
Employees may resist the change to new ICT systems mainly due to lack of management buy-in before implementation, lack of involvement of staff in early trial runs, and a multi-layered decision making structure leading to a lack of a clear vision on the goals of the ICT program.
- *Lack of standard process*
Maximum benefits from an ICT system can only be achieved if standard processes are followed. Lack of standard processes can lead to problems such as: inability to choose an effective IT system, high possibility of duplication, inaccurate data being fed into the system and misalignment of chosen ICT systems.
- *Lack of Trained ICT Personnel*
Most tax agencies hire firms from outside to implement their ICT systems but the lack of a strong ICT team within the tax agencies would seriously hamper the ability to extract maximum value from an ICT partnership.

- *Demographics of Staff*

The standard argument is that an older workforce will not see the benefits of computerization as much as a younger workforce. This results in lack of staff buy-in at the initial stages of a project.

3. METHODOLOGY

Population and Study Sample

Since the research was based on a project pursued within the IRD, the population of the study was designed to consist of IRD employees. Due to the practical difficulty in covering all IRD staff members within the given time and due to the political sensitivity of the project, the study had to limit its sample to the top level personnel of IRD. Data had to be gathered on a snow balling basis until the theoretical saturation point was reached. Accordingly, the study sample was as follows;

Table 1: Profile of Respondents

Position	Code	Method used	Duration
Commissioner- RAMIS Project Director	Interviewee I	Face to face Interview	45 minutes
Head of Central Processing unit	Interviewee II	Face to face Interview	30 minutes
Central Processing unit- Executive Staff	Interviewee III	Face to face Interview	30 minutes
Senior Commissioner	Interviewee IV	Telephone Interview	30 minutes
Asst. Commissioner- User Accepting Testing (UAT)	Interviewee V	Telephone Interview	30 minutes
Commissioner- Human Resource Management VI Unit	Interviewee VI	Telephone Interview	30 minutes
Commissioner - Policy and Legislation Unit	Interviewee VII	Telephone Interview	30 minutes
Commissioner - Change Management Unit	Interviewee VIII	Face to face Interview	45 minutes
Commissioner - Customer Supporting and Promotion Unit	Interviewee IX	Face to face Interview	30 minutes
Commissioner- Investigation Unit	Interviewee X	Telephone Interview	30 minutes

Sources of Data

Data for this study was sourced through interviews and documents. Top level personnel of IRD, who were involved in Phase I of the RAMIS project, were interviewed. Further, important documents such as relevant project documents, reports issued by the Inland Revenue Department and other documents which discuss various aspects of RAMIS were reviewed in order to gather relevant data. Internal organizational documents inclusive of internal reports, annual performance reports and external organizational documents inclusive of the documents of the Asian Development Bank supporting the Fiscal Management Efficiency Project and documents of MOF were used. Published data was obtained from Department websites (IRD and MOF), annual reports and government department websites.

Collection of Data

In collecting data initially documents were gathered which also proved to be valuable in identifying and selecting relevant key officials for the interviews. Initial interviews were held on an unstructured basis to allow participants to respond in an unconstrained manner. Based on the initial interview findings, an interview guide was prepared for subsequent interviews so that they could be completed within approximately one hour and contained open ended questions (Appendix 1). Interviewees were only capable of yielding qualitative data since no statistics were available to obtain quantitative data as the IRD has not yet initiated evaluations of the system.

Data Analysis Strategies

The data gathered through interviews was transcribed and extracted to identify common responses. A narrative analysis was used to analyze the data and a documentary analysis based on the documents gathered to extract findings and also to support claims put forward in interviews.

Ethics and Human Subjects Issues

The researchers obtained a voluntary consent from the interviewees involved by clearly informing them of the nature and objective of the research. Further, there was no unfair inclusion and exclusion from the sample of the study. The study ensured confidentiality of the interviewee responses and identities and also the secrecy of the documents received which were used only for the intended purpose. To maintain anonymity, codes were used in attributing quotations in the subsequent chapters.

4. ANALYSIS AND DISCUSSION

A process of innovation passes through a series of stages before the reform becomes accepted practice (Rogers 1983). Hence, the first objective of the study was to identify the way RAMIS had been adopted and implemented within IRD and to analyze whether it was in line with Rogers' (1983) stages of diffusion of innovation theory, and whether there was any deviation in the execution from the initial implementation. As per Rogers (1983, p.5), diffusion of innovation theory is comprised of five separate stages, namely prior conditions, knowledge, persuasion, decision, implementation and confirmation.

Prior Conditions

As stated by Rogers (1983), prior conditions accompanying a degree of receptivity to the RAMIS in the IRD had been identified. First, the problems with existing practices had been realized by officials of both IRD and the Ministry of Finance (MOF). During the interviews it was constantly highlighted that the existing system had been incapable of improving the government tax income base over the years (Ministry of Finance 2015).

We have been observing the fact that the existing tax system does not assist in improving the tax revenue of the government and mitigating those who avoid tax payment through loopholes of the current tax system. So it has been a long prevailing requirement to adopt a system that is capable of providing a solution to those problems.

Interviewee I

Knowledge

The existence of change agents with adequate skills and expertise is paramount for any organization which intends to create a desire for new practices (Rogers, 1983). In regard to RAMIS, both MOF and IRD acted as key change agents providing the needed commitment and resources in promoting the system.

Being a project director of the RAMIS project, I and my team worked hard at the forefront even at the times when some of the officers failed and were demotivated due to various obstacles we faced.

Interviewee I

The needed peripheral platform was already in place within IRD. All the required infrastructure facilities such as a Data Centre and Disaster Recovery Centre were established at the beginning of 2010, under the initiative of the Ministry of Finance on the Fiscal Management Reforms Programme (FMRP) and the Fiscal Management Efficiency Project (FMEP). Further, Local Area Network (LAN) and Wide Area Network (WAN) were also introduced in order to link all the regional offices to the head office and also to link branch to branch (Central Bank of Sri Lanka 2014).

However, the application was yet to be developed. In order to select an IT solution provider for this, a global tender process was initiated. The main criterion of selection was adequate experience on automation of tax systems. But, several applicants were disqualified as they did not have the adequate required experience to handle such a complex project.

As the tender process failed, the Cabinet of Ministers approved starting discussions with the Ministry of Finance of Singapore seeking assistance to implement RAMIS on a Government- to-Government basis (G2G). During the interviews several reasons were given as to why Singapore was selected for this.

There were several reasons for selecting Singapore. The main reason is that Singapore has the best functional method for this kind of automated tax system. Further its locational proximity to Sri Lanka with fewer entry barriers and also Singapore's record of some projects on automation of the tax system in Australia and in some other countries gained the popularity for pioneering the automation of their own tax system.

Interviewee I

Singapore was well known for the successful implementation of RAMIS within their IRD and their quality of service was also backed by the successful implementation of RAMIS in several other countries

Interviewee VIII

Finally, a Memorandum of Understanding (MOU) was signed in June 2013 to implement the RAMIS project at IRD. As per the MOU Infocomm Development Authority (IDA - International), the Government of Singapore's execution arm for collaboration with overseas Governments on ICT projects, submitted a proposal in August 2013. IDA International is a wholly owned subsidiary of IDA Singapore set up for collaboration with foreign governments on public service infocomm technology to achieve socio-economic outcomes for the respective countries. IDA International engages the necessary subcontractors to plan, analyze, design and implement the tax system with the participation of the relevant tax authority.

.... Commissioner General of IRD, Secretary of Finance Ministry and IDA International entered into an agreement. System development has been delegated to NCS Company. It's not a Singapore government company. Singapore Tax IT project was also done by NCS.

Interviewee I

The Cabinet Appointed Negotiation Committee (CANC) and the Project Committee (PC), having conducted a detailed technical evaluation of the proposal submitted by IDA concluded the evolution process in November 2013, deciding that the solution proposed by IDA is technically acceptable and fulfills the requirements of the Inland Revenue Department. A further Due Diligence process was carried out in November 2013 by the Commissioner General and a Core Team of the IRD by visiting the Inland Revenue Authority of Singapore and it was concluded that IDA and its nominated subcontractors had the capability and required experience to undertake the implementation of RAMIS at IRD.

Negotiations were started in January 2014 to finalize the work scope of RAMIS, the teams of contract, etc. Specifications were formulated by the IRD officers and the software developer informed of them. The supply, delivery, installation, commissioning and warranty of Application Software, System Software and Supporting IT Infrastructure were concluded in March 2014.

During this pre-implementation period both parties to the agreement got a clearer understanding on the specifications of RAMIS, its deliverables and the time plan. This shows that the policy and decision makers had the required knowledge of the innovation process (RAMIS) before implementation of the project which is needed in the diffusion process.

Persuasion

Acceptance of the need to adopt current international reforms is determined by the ability of promoters to convey the superiority of the new practices over existing practices (Adhikari et al. 2013). Once the agreements were in place, a Change Management Committee was established in order to plan the changeover and communicate the changes

under RAMIS. The main task of the team was to influence the IRD employees and to organize change management programmes. The Change Management Committee comprised IRD Change Agent, Project team

Change Manager, IRD Deputy General (Head of the Team) and Project Director. Changes were communicated through RAMIS News, RAMIS Mass briefing sessions, Monthly Commissioner's and Senior Commissioner's meetings and at Monthly Steering Committee meetings which were attended by all the Deputy Commissioner Generals along with the Commissioner General .

The change management team has taken several steps to improve the awareness among employees through publishing magazines, distributing leaflets and displaying posters in their own working environment at IRD. They have also held seminars to change the attitudes towards the RAMIS. In addition to that IRD has sent 1200 officers to Inland Revenue Board of Malaysia for a five-day training programme to see and understand how to work on an automated system. They played a major role in organizing pocket meetings for branches at IRD and practical training sessions for both IRD staff and users.

Interviewee I

Accordingly, IRD has conducted series of weekend in-house seminars for all IRD staff with regard to Change Management. Further, mass briefings for taxpayers and supporting organizations such as the Chamber of Commerce, CA Sri Lanka, CIMA, AAT, Tax Agents and Tax Consultants were also conducted and are still in progress so that continuous communication is maintained (Department of Inland Revenue 2013).

The mass briefings held with tax payers and related institutional bodies are very important to ensure the smooth functioning of the platform. This is a new initiative not only to the employees but also to the tax payers. There could be system failures and fear of using IT systems. The mass briefings serve as a contact point for IRD to track such weak points.

Interviewee X

However there had been some instances where the employees showed a resistive attitude towards the new system.

I regret to say that some of the employees of IRD engaged in various ways of resistance to stop the changeover programme. They spread bad word of mouth and did not contribute to the implementation process.

Interviewee I

The older workforce and employees who don't have computer literacy raised objections. However, these objections were nullified by linking them to their promotions. Biannually the Commissioner evaluates the performance of the employees. The employees who didn't complete the allocated jobs will receive negative marks. Therefore IRD higher level officers expect that the employees will automatically adjust to the new RAMIS environment.

Interview II

Decision

The decision stage occurs when the decision making unit engages in the activities leading to a choice between adoption or rejection of the innovation (Rogers 1983). Prior studies have established that any new accounting practice can be launched through in various means, ranging from continuation to later approval and from disagreement to rejection (Adhikari et al., 2013). It was observed during the interviews conducted with the IRD staff that even though higher level authority had taken the decision to continue with the new system, some of the staff had doubts over the decision of getting involved actively in the execution of RAMIS.

Cabinet approval was granted for the RAMIS Project on April 3, 2014 according to the decision taken by the responsible actors for the implementation. The agreement between IRD and IDA International was signed in May 2014 including all the terms and conditions finalized during the stage of negotiations. The project officially began in July 2014 (Department of Inland Revenue 2014).

Implementation

Initiating the implementation stage, IRD formed a RAMIS Core team comprising five members. It is different from the RAMIS project team and the main purpose of the core team is to coordinate with the Government of Singapore and the software developer, NCSI Solutions Private Limited. Monitoring and tracking the progress of the project is also conducted by the Core team.

IRD was internally organized to support RAMIS initiatives and accordingly IRD's business experts were organized into Lead User Representatives (LURs) and Subject Matter Experts (SMEs) to provide and validate requirements. LUR consists of Senior Commissioners and their role in RAMIS is requirement identification. SME consists of twelve Commissioners from whom information regarding current state of operations is obtained.

Under RAMIS, IRD has gone through Business Process Re-engineering (BPR) and it uses the Inland Revenue Authority of Singapore (IRAS) as the reference model. As part of RAMIS BPR, the project team has studied the existing processes working with IRD LURs and SMEs to understand and document the main points. The RAMIS processes are customized to address the key main points.

The system developer aims to streamline each process both from within IRD and also externally from the taxpayer perspective. Key changes through RAMIS were e-registration giving convenience to taxpayers register from their office or home instead of coming down to IRD office, e-payment leveraging on the bank's online payment facility with key banks BOC and People's Bank, Centralized Processing Centre at Headquarters for centralized action for data entry, Regional Processing Centre for all regional works on data entry and scanning and linkages with external interfaces. Further, it provides for use of multi-languages across forms and correspondence. This is also apparent in the newly launched web portal as well.

During the interviews the linkage with external interface was emphasized.

Actually the linkage with external interfaces is the most important feature under RAMIS and IRD have identified 23 such agencies to be interfaced. The two main

government banks which are the People's Bank and BOC now have already connected. An MOU has been signed with the Excise Department and Department of Customs.

Interview VI

As per diffusion theory, at this stage innovation can be reinvented, altered and modified as the need arises. This characteristic was also seen in the implementation process of RAMIS. Once a module has been handed over to IRD by the software developer, it goes through system integration testing and user acceptance testing where the service provider will be asked to alter and modify some of the parts as per the requirements of IRD.

An individual needs to be there to convince others that the change is desirable and who is capable of promoting it (Sangster 1996). The Change Management Team of IRD, being a predominant change agent for RAMIS staff, was convinced about adapting to the new change. As indicated in the studies (Clegg et al. 1996 cited in Ezzamel et al. 2014) the process may be shaped by different forms of communication which was apparent in RAMIS facilitated by different form of communications such as training sessions, pocket meetings, and seminars and publishing leaflets and magazines.

Confirmation

Confirmation, the last stage of the Rogers' diffusion theory, can have two opposite effects on the diffusion process, namely, the adopters realizing the benefits of the innovations and institutionalizing them or rejecting the utilization of such innovations, as the desired paybacks are not actually gained in practical situations.

In terms of RAMIS, execution of the above stages has been behind the scheduled target timeline and there were deviations from the intended plan. Despite the slow transition, the processes have been implemented successfully and have been embraced by both employees and taxpayers and institutions.

Actually, we could not implement this project as per the time plan. This is mainly due to the considerable deviation in the time that occurred in the testing phase due to unexpected small issues and the time consumed to resolve those issues. However, now we are at the final stage. At present, services cater to users have been implemented as planned, such as Web portal and E filing.

Interview III

Taking the above findings of the study into consideration, the study emphasizes that the diffusion of Revenue Administration Management Information System can be understood as a process which followed Rogers' stages of diffusion extending from prior knowledge to confirmation. The innovation of RAMIS can be considered a clearly defined process of several stages, with time frames being assigned as indicated by Lapsley and Wright (2014).

Deviations in the proposed plan

Although the time frame for each stage was included in the initial agreement, it deviated from the plan due to various practical reasons. Budget changes and delays due to the rigorous procedure to follow in obtaining approval of MOF for funds, little support from other organizations with whom IRD depend for external interface can be seen as critical drawbacks in achieving the expected outcomes.

Lack of an upgraded IT system in other organizations (e.g., Department of Registration of Companies) to be compatible with RAMIS has also adversely affected timely execution of objectives. Further, unexpected errors occurred at the testing phase and considerable time was consumed to solve those errors has prolonged the time to complete the project more than intended.

As identified in the background to the research subject, the execution of RAMIS had been undertaken with the guidance, active participation and interaction of several key players from multifunctional teams. As per the interviews held with IRD staff, following parties were identified as key stakeholders to the project.

Ministry of Finance and Planning (MOFP)

The Ministry of Finance introduced the Fiscal Management Reforms Programme with the objective of creating fiscal space through revenue collection and better expenditure management. MOFP is identified as the main catalyst that triggered the transformation process. As one interviewee said;

With the shortcomings of the old system, the (Legacy) concept of RAMIS emerged within IRD. But the ministry (MOFP) got involved since it's not feasible to pursue such a huge project only by IRD staff.

Interviewee IX

However, the interviewees also revealed that the support from MOFP was short-lived. Though they triggered the innovation process and pioneered the initiation, their support diminished subsequently during the implementation process.

Asian Development Bank (ADB)

ADB extended funding and technical assistance needed for the RAMIS implementation. It provided support in areas such as implementation of AS-IS Study and Functionality analysis, in introducing internally acceptable RAMIS and ITMIS, development of architecture definition and design for RAMIS and ITMIS and improvement of the ICT environment from legal, regulatory, and institutional perspectives.

Interviewees acknowledged the assistance provided by the ADB as follows:

ADB helped in the initial stages to acquire hardware. They supported establishing LAN and WAN by providing required funds. Further, it supported setting up of Local Area Network (LAN) and Wide Area Network (WAN) in order to link all the regional offices to the head office and also to link branch to branch in the head office.

Interviewee IV

Inland Revenue Department (IRD)

IRD being the platform upon which the RAMIS was launched, it can be recognized as a prime actor. Teams appointed such as the project team, core team, and the change management team facilitated the transition.

According to the opinion of one interviewee,

Project Directors and especially the higher level authority of IRD are considered key players of RAMIS. The Commissioner General plays a key role as she is responsible for the overall project. Further, nine additional project directors have been appointed. Each project director has been assigned separate modules in RAMIS. Further sixty assistant project directors have been appointed to overlook RAMIS at operational level.

Interviewee X

Members of those teams are engaged in crucial activities including facilitating communication with Infocomm Development Authority of Singapore (IDA) and National Computer Systems Private Limited (NCS), collection of suggestions with regard to RAMIS from all IRD officers, submission of Due Diligence Reports after visiting Inland Revenue Authority of Singapore (IRAS) from November 10 to 13, 2013 and implementing awareness programmes among the IRD staff and union members.

Infocomm Development Authority (IDA) of Singapore

RAMIS was initiated as a G2G project, one of the models of e-government as stated by Siau and Long (2005). Technical know-how was supplied by IDA through the discussions held between Sri Lanka and Singapore Government. IDA in collaboration with the IRD engaged with the necessary subcontractors to plan, analyze, design and implement RAMIS. IDA serves as the prime contractor and provides project oversight on behalf of MOFP and IRD. IDA was the representative body of the Government of Singapore and is the party from which the diffusion of innovation commenced. Finally, as per the third objective of the study, the following challenges were identified during Phase I of the implementation of the project, as drawbacks to the diffusion process.

Issues in requirement assessing stage

The requirements assessing stage is one of the initial steps in RAMIS where teams allocated for each module were required to identify the requirements of respective modules. Project teams were assigned to study the existing processes and thereby identify the main points.

In the opinion of one interviewee,

At the initial stages IRD officers had an opportunity to learn about the Singapore tax system and identify specifications for RAMIS in Sri Lanka. However, the officers selected for those tours were at their retirement age and had no intention of understanding the process in detail. Some officers who participated in such training programmes had retired even before the implementation of RAMIS. Hence there were difficulties in identifying the requirements of a tax management information system suitable for local conditions.

Interviewee

V However certain teams were not able to identify some of the crucial requirements and thereby the system failed to respond to user requirements. For instance, the VAT module does not have a sub module to calculate penalty for non-payment of VAT within the stipulated date.

Demographics of Staff

During the interviews it was identified that the younger generation of staff were willing

to embrace the new system when compared to the older workforce. But most of them have not been equipped with proper training.

Lack of training for staff has created doubt over the new system. Certain senior individuals are not willing to learn the new system since they know that the old system “legacy” will operate parallel with the new system for a certain period of time. Further, more than 50% of staff has not been allocated work items in RAMIS. Thereby they have no knowledge of the new system. For example, KPIs have been integrated into the system upon which individuals will be evaluated. But most individuals do not know this and assume performance evaluation will be carried out by the old method.

Interviewee V

This is a common issue as stated by ADB (2014, pp. 71-72). The standard argument is that an older workforce will not see the benefits of computerization as much as a younger workforce. This results in lack of staff buy-in at the initial stages of a project (ADB 2014, pp. 71-72).

System Loopholes: Weak interlink between the modules

During the training programs offered to IRD staff, training concentrated only on the respective module in which the respective staff will work. Overall understanding regarding the system was not given to employees. As a result, employees are not aware of what others perform. This reduces flexibility and mobility within tasks.

When inquired about the reason for such a strategy, the top management highlighted that it has been restrained from giving an overall understanding about the new system to all employees because they fear that employees may resist the new system if they try to load them with all available information. However, the system itself has failed to maintain interlinks between its sub-modules.

For the main types of taxes we have different modules. For example, we have a VAT module and a NBT module. If the tax payer changes the address and notified it to the VAT unit changes will be incorporated into the VAT module. But no alert is sent by the system to other sub modules informing about the address change. Hence this may result in returns being undelivered.

Interviewee VII

Failure to meet the agreed deadlines

As per the plan, Phase I of RAMIS was scheduled to be implemented in September 2015. But as per the interviews, it was revealed that Phase I was actually implemented at the beginning of 2016. Reasons like delays in the government tender system, delays in finding technically competent service providers and resource persons, variations to the initial plan during the process, etc., contributed to the overall delay in the process. However, the delay had not affected the expected final outcome.

I experienced delays in implementing Phase I. This resulted in failure to achieve prescheduled deadlines. However we were able to computerize all the tax types which we planned initially. Hence it did not affect the target achievement.

Interviewee IV

Document management cost been high

Tax payer returns are not directly uploaded to the RAMIS. IRD intended to run the manual system parallel with the new system for next five years. For example, tax payer returns received as hardcopies are scanned by the CPU and updated to the RAMIS. Simultaneously IRD files the original hardcopy of the return as per the old manual system.

Failure to link other Government institutions with IRD system

RAMIS external interface is one of the modules which connect RAMIS with twenty-six other departments. Of these institutions only the two main government banks, People's bank and BOC, have been linked to RAMIS at present.

Linking the private banks to this system has been an issue due to Central Bank rules and regulations. CBSL approval has yet to be obtained to link their data with IRD. The main cause of failure to develop the linkage is that the systems of respective organizations are not compatible with the RAMIS system. Only Sri Lanka Customs possess a system compatible with RAMIS. MOU has been signed with the Excise Department and the Customs regarding this interlink.

Another reason is that certain government institutions fail to maintain computer databases. Government departments such as the Department of Registration of Companies, Land Registry, Department of Registration of Persons, Department of Census and Statistics and Department of Motor Traffic maintain manual records in place of computer databases.

Further, the Department of Motor Traffic (MTD) has difficulty in sharing information because necessary permission has not been granted under the Motor Traffic Act. However, this issue has not been discussed with the respective Minister and since the Inland Revenue Act supersedes other Acts of the country, IRD will be able to obtain the permission to interlink their database with that of MTD in the near future. However, these will further delay the implementation process.

Providing adequate Training to IRD staff

IRD has up to now provided the theoretical aspects of training but has failed to offer adequate practical training on overall RAMIS processes. This is because resources such as computer labs are not sufficient to fulfill the training requirements of the staff.

Theory aspects of the overall system were given to the employees. But the practical training given to them is not adequate. Employees were not given training in all of the modules and because of that the link between sub modules can't be maintained.

Interviewee VI

Jimenez, Sionnaigh, and Kamenov (2013, pp 44-49) concluded in their study that while the Integrated Tax Management and Administration System (ITMAS) in Egypt made considerable progress, there were issues during implementation, including a delay of over a year. The findings of the study were similar to the aforementioned issues such as delays in some of the modules, varying contribution from the staff towards the change and developing the RAMIS external interface.

5. CONCLUSIONS, LIMITATIONS AND DIRECTION FOR FUTURE RESEARCH

RAMIS is the initial step of automating the Government's treasury function (ITMIS). Through this, IRD expects to increase the efficiency of the tax administration by reducing human error in the current system. As one step of a giant leap, RAMIS it is an extremely complicated and novel process to Sri Lanka. The main purpose of this study was to analyze the evolution of RAMIS Phase I within the IRD of Sri Lanka.

This study aimed to achieve three major objectives. Firstly, to identify the progression of the RAMIS project Phase I and highlight any deviations in the proposed plan. Diffusion of innovation theory was used in this regard; secondly, to identify key stakeholders of the project, their role and impact on the project; and finally, to recognize the challenges faced during the implementation process.

Findings under objective I of the study reveal that the process through which RAMIS progressed up to the present status has been in line with the stages identified by Rogers (1983), namely, knowledge, persuasion, decision, implementation and confirmation. However, there have been deviations from the initial time plan due to specific reasons such as design errors, change in the scope, inadequate procurement and complexity of the system. This reveals a lack of planning and system study prior to implementation.

In regard to the second objective, the execution of RAMIS has been undertaken with the guidance, active participation and interaction of several key players from multifunctional teams. The Ministry of Finance and Planning as the pioneering stakeholder triggered the need for the project RAMIS within the Inland Revenue Department. The Asian Development Bank was identified as the funding agent while IRD and its staff are the main parties handling the transition. Being the IT Solution facilitator, Infocomm Development Authority (IDA) of Singapore is also an important stakeholder providing technical know-how. Even though several parties were recognized as key stakeholders, the Inland Revenue Department and especially the core teams appointed at the inception are playing the predominant role in bringing the system to the stage of completion successfully.

Fulfilling the third objective of the study, several challenges have been identified during the implementation process including the varying contribution given by the staff and inadequacy of practical training provided to staff. Moreover, pitfalls were also identified in terms of incongruence in the external interface developed through which RAMIS is linked to several other government institutes.

Hence based on the above findings, this study concludes that though the diffusion of RAMIS is in line with the stages put forward by Rogers (1983), it has not been executed effectively owing to political interference, fading support from pioneering entities and lack of buy-in from the staff.

However, this study has certain limitations. First, the scope of the study is limited to Phase I of the RAMIS project rather than to the whole project as highlighted earlier. Hence this study only covers the evolution of Phase I and therefore fails to answer the research question from the standpoint of the whole RAMIS project. Secondly, this study is based on the insights of IRD

staff, obtained during the data collection for the research. Thirdly, due to practical difficulties the study could not cover all employees of the IRD. Therefore convenient sampling had to be used. However, this convenience sampling adopted in the study could make the sample biased leading to biased perspectives being analyzed in the study. This prevented the study from getting objective information needed to ensure the credibility and dependability of the study. Finally, this study involved the problem of generalizability across other government institutions due to possible cultural mismatches.

Future studies could focus on the implementation of Phase II of RAMIS and whether lessons learnt from Phase I implementation were addressed. In addition, it is suggested that studies be conducted inclusive of relevant quantitative information on performance so that a more accurate evaluation could be made on the impact of RAMIS on the effectiveness of RAMIS. Studies could also focus on the change management aspect analyzing the driving and restraining forces within IRD which induce and restrict adoption of RAMIS.

REFERENCES

- Adhikari, P, Kuruppu, C, Wynne, A and Ambalangodage D 2015, 'Research in Accounting in Emerging Economies', *Diffusion of the Cash Basis International Public Sector Accounting Standards in Less Developed Countries- The Case of the Nepali Central Government*, vol. 18, no.15, pp.85-108, viewed 8 May 2016, <http://repository.essex.ac.uk/15302/1/Diffusion%20of%20the%20Cash%20Basis%20International%20Public%20Sector%20Accounting%20Standard%20%28IPSAS%29%20in%20Less%20Developed%20Countries%20%28LDCs%29.pdf>
- Asian Development Bank (ADB) 2014, *Tool kit for tax administration management information system*, viewed 25 April 2016, <http://www.adb.org/sites/default/files/publication/150133/tool-kit-tax-administration-management-information-system.pdf>
- Central Bank Sri Lanka 2014, *Annual Report*, Viewed 20 May 2016, p.142, http://www.cbsl.gov.lk/pics_n_docs/10_pub/_docs/efr/annual_report/AR2014/English/10_Chapter_06.pdf
- Chatama, YJ 2013, 'The impact of ICT on Taxation: the case of Large Taxpayer Department of Tanzania Revenue Authority', *Developing Country Studies*, vol. 03, no.02, viewed 7 May 2016, <http://www.iiste.org/Journals/index.php/DCS/article/download/4258/4327>.
- Department of Inland Revenue Sri Lanka 2013, *Performance Report of the Commissioner General of Inland Revenue*, pp.46-47, viewed 27 April 2016, http://www.ird.gov.lk/en/publications/Annual%20Performance%20Report_Documents/P_R_2013_E.pdf
- Department of Inland Revenue Sri Lanka 2014, *Performance Report of the Commissioner General of Inland Revenue*, pp.10-58, viewed 27 April 2016, http://www.ird.gov.lk/en/publications/Annual%20Performance%20Report_Documents/P_R_2014_E.pdf

ments/P R_2014_E.pdf

- Ernest, EO, Fikayo, F, Ogheneovo, E and Ayodeji, J 2015, 'Design and development of an E- taxation system', *European Scientific Journal*, vol. 11, no.15, viewed 7 May 2016, <http://eujournal.org/index.php/esj/article/viewFile/5615/5406>.
- Ezzamel, M, Hyndman, N, Johnsen, A, and Lapsley, I 2014, 'Reforming Central Government Accounting: An evaluation of an accounting innovation', *Critical Perspectives on Accounting*, vol. 25, no.4-5, pp.409-422.
- Jimenez, G, Mac an Sionnaigh, N and Kamenov, A, 2013, *Information Technology for Tax Administrations*, USAID Bureau for Economic Growth, Education and Environment, Office of Economic Policy, viewed 7 May 2016, http://pdf.usaid.gov/pdf_docs/PNAEA485.pdf.
- Lapsley, I and Wright, E 2004, 'The diffusion of management accounting innovations in the public sector: A research agenda', *Management Accounting Research*, vol. 15, no.3, pp.355-374, viewed 10 May 2016, <http://isiarticles.com/bundles/Article/pdf/8259.pdf>
- Ling, LM and Muhammad, I 2006, 'Taxation and Technology: Technology Readiness of Malaysian Tax Officers in Petaling Jaya Branch', *Journal of Financial Reporting and Accounting*, vol. 04, no.01, pp.147-163, viewed 7 May 2016, <http://dx.doi.org/10.1108/19852510680001587>.
- Lukwata, MH 2011, *The influence of Electronic tax filing system on Tax compliance and Tax collection*, viewed 7 May 2016, https://www.academia.edu/1821339/THE_INFLUENCE_OF_ELECTRONIC_TAX_FILING_SYSTEM_ON_TAX_COMPLIANCE_AND_TAX_COLLECTION.
- Malmi, T 1999, 'Activity-based costing diffusion across organizations: an exploratory empirical analysis of Finnish firms', *Accounting, Organizations and Society*, vol. 24, no.04, pp.22-24, viewed 8 May 2016, <http://www.tecsi.fea.usp.br/disciplinas/5840/textos/pdf/activity-based.costing.diffusion.pdf>
- Mellet, H, Marriot N and Macniven, L 2009, 'Diffusion of an accounting innovation: fixed asset accounting in the NHS in Wales', *European Accounting Review*, vol. 18, no.04, pp.745-764, viewed 8 May 2016, <http://10.1080/09638180903118710>
- Ministry of finance (MOF) 2015, *IT projects*, viewed 27 April 2016, <http://www.treasury.gov.lk/web/departments-of-information-technology-management/links>.
- Rogers, E 1983, *Diffusion of innovations*, 3rd edn, viewed 10 May 2016, <https://teddykw2.files.wordpress.com/2012/07/everett-m-rogers-diffusion-of-innovations.pdf>

- Sangster, A 1996, 'Expert system diffusion among management accountants: a U.K. perspective', *Journal of Management Accounting Research*, vol.8, pp. 171–182, viewed 8 May 2016, https://www.researchgate.net/publication/211393614_Expert_System_Diffusion_Among_Management_Accountants_A_UK_Perspective
- Siau, K and Long, Y 2005, 'Synthesizing e-government stage models – a meta synthesis based on meta-ethnography approach', *Industrial Management and Data Systems*, vol.105, no.04, pp.443-458, viewed 8 May 2016, <http://dx.doi.org/10.1108/02635570510592352>

APPENDIX 1

Questionnaire

Objective 01: To identify the progression of the RAMIS project through its initial stages till Phase I and highlight any deviations in the proposed plan, if any.

1. In your view, what are the motives behind the idea of a computerized tax administration system?
2. Who do you think will benefit most through this RAMIS implementation? As a department IRD or the tax payers at large?
3. How did you identify the real needs of the tax payers?
4. What is the level of involvement of the Ministry of Finance in this project? What is the significance of this project to the government?
5. What are the procedures followed to acquire resource persons to maintain the system
? Who is the funding agent of the project?
6. What is the monitoring and evaluating procedure established to measure the progress of the project?
7. What procedure was used to select the professionally competent software developer for the project?
8. Explain the timeframe of the RAMIS project along with the stages of Phase I? Were you able to achieve the agreed deadlines? Were there any deviations from the proposed plan? What are the reasons, if any?
9. Did the Department conduct test runs before handing over the project to the users?
10. What kind of training sessions was held for the staff and the level of importance of those trainings? What are the results achieved through those sessions?

Objective 02: To identify the key players of the project and their role and impact on the execution of the project.

1. In your view who are the key contributors to the initiation of RAMIS?
2. On what basis was each of the above mentioned persons defined as key players?
3. At which stage did you identify key players? At the planning stage or during carrying out the project?
4. Had duties been properly delegated among key players at the planning stage of the project?
5. Through which means were key players expected to accomplish the objectives as intended?
6. Did you face any conflicts when dealing with key players? If so, what are the steps you took in order to carry out the project smoothly?
7. Were there any changes in the IRD organizational structure? Was the change management team capable of managing any conflict that arose?

Objective 03: To recognize the challenges faced during the implementation process and weaknesses of the project that could be identified at the end of Phase I.

1. What issues did IRD face during the implementation of Phase I of RAMIS?
2. RAMIS facilitated an external interface that can improve information flows by sharing needed information with all parties involved in trade such as private participants i.e. banks, insurance companies and public agencies like customs, immigration and vehicle registration authorities etc. But it is not an easy task to link all those parties. Thus, what kind of challenges did IRD have to face during the implementation of this external interface?
3. The standard argument is that an older workforce will not see the benefits of computerization as much as a younger workforce. How did IRD treat the older workforce when RAMIS was implemented?
4. What methods did IRD use to enhance public awareness regarding RAMIS? What kind of difficulties did IRD have to face when using each method?
5. How could IRD identify the system loops in the Revenue Administration Information System? What actions were taken to deal with the system loops?