Evidence-Based Governance in the Electronic Age

Case Study

Personnel and Payroll Records and Information Systems in Tanzania

A World Bank/International Records Management Trust Partnership Project

May 2002

CONTENTS

INTRODUCTION

1   *Evidence-Based Governance in the Electronic Age* is a three-year project delivered in partnership between the World Bank and the International Records Management Trust. It involves coordinating a global network of institutions and organisations to facilitate the modernisation of information and records systems.

2   Records, and the information they contain, are a valuable asset that must be managed and protected. Records provide the essential evidence that a particular action or transaction took place or that a particular decision was made. Records support all business functions and are critical to the assessing of policies and programmes, and to analysing individual and organisational performance. Without reliable records, government cannot administer justice and cannot manage the state's resources, its revenue or its civil service. It cannot deliver services such as education and health care. Without accurate and reliable records, and effective systems to manage them, governments cannot be held accountable for their decisions and actions, and the rights and obligations of citizens and corporate bodies cannot be upheld.

3   New technologies provide great potential to improve services and efficiency, but the evidence base upon which governments depend must continue to be protected and preserved. For initiatives such as e-government and e-commerce to be successful, governments must have access to information that possesses certain crucial characteristics: the information must be available, accurate, relevant, complete, authoritative, authentic and secure.

4   The aim of the *Evidence-Based Governance* project is to make records management a cornerstone of the global development agenda. The challenge is to rebuild and modernise information and records management systems in parallel with complementary measures to improve the broader environment for public sector management. The project represents a major opportunity to integrate records management into global strategies for good governance, economic development and poverty reduction.

5   During the first phase of the project, studies were carried out within the World Bank and in a range of countries to explore the requirements for managing personnel, financial and judicial records in a hybrid, electronic/paper environment. This report is one of thirteen case studies that illustrate the issues involved. The studies have been supplemented by findings derived by a global discussion forum of senior officials and records and archives professionals. The knowledge gathered through these means is providing the basis for the development of assessment tools to measure the quality of records and information systems in relation to clearly defined functional requirements and benchmarks. The project will develop tools for use in the three areas of study: personnel, financial and judicial records systems. Ultimately, the information gathered will also help to define the requirements for global capacity building for managing electronic records.

Situation current as of May 2002

6   The case studies have been chosen to represent differences in geographic regions, administrative structures and resource environments. In the personnel and payroll management area, case studies were undertaken in India (in the state of Uttar Pradesh and at the central government level), Burkina Faso, Tanzania and Chile.

Terms of Reference and Methodology

7   This report covers a visit to Tanzania by Victoria Lemieux and Kelly Mannix from 5 to 10 May 2002, to examine the improvements to the records and information systems that are being undertaken in the personnel and payroll management area and to test a prototype of an assessment tool.

8   The report is based on observations made and interviews conducted during the visit, as well as on a review of relevant laws and reports relating to public sector reform initiatives and to records and information system reforms.

9   The case study represents a snapshot in time. The observations it contains were current as of May 2002. Since then, new developments and improvements have taken place on a regular basis and therefore the case study does not represent the situation at present. It is hoped that the findings in this report will highlight issues that will continue to arise in many other situations**.**

Acknowledgements

10   Grateful thanks are extended to Vedasto Rwechungura, Program Officer at the World Bank Tanzania Office, for facilitating this visit. We also wish to thank Tauhidah El-Busaidy and Gloria Sindano, Project Assistants at the World Bank's Tanzania Office, for their assistance in making the arrangements for the visit. Finally, we want to thank all the Tanzania Government officials who kindly made themselves available and provided much valuable information during the visit. A full list of people consulted is at Appendix A.

EXECUTIVE SUMMARY

11   A Civil Service Reform Program (CSRP) aimed at achieving a smaller, affordable, well-compensated, efficient and effective civil service was launched in 1991. This initiative was followed by a second phase of reforms, the Public Service Reform Program (PSRP) in 2002. The PSRP includes a management information system component that aims to sustain the establishment and payroll controls already in place and to provide relevant, complete, accurate and timely information to managers and administrators. It is also intended to support the modernisation of information and communication systems in government office and to improve the quality of information. (paras 25 to 32)

2

12   A new Public Service Act was passed in April 2002. The Act establishes the component agencies of the Public Service. The key stakeholders in the Government's human resource management and payroll processes are the Civil Service Department, the Ministry of Finance, employing ministries, departments and agencies (MDAs), parent ministries for common cadres, service commissions, the Office of the Controller and Auditor General, the workers' councils and the Public Pension Fund. (paras 33 to 45)

13   The PSRP includes reforms directed at recruitment, appointment and promotion processes. Planning for those processes is part of a yearly budget exercise that results in the authorised establishment for each MDA. Implementing recruitment and appointment processes is the shared responsibility of the Civil Service Department (CSD) and the employing ministries. Recommendations for promotion are forwarded to the appropriate service commission. (paras 46 to 52)

14   Paper-based records remain an essential component of the human resource information management in the Civil Service. As computerised personnel systems grow in sophistication and scope, personnel records will be a key source of data for new applications. Until such a time as electronic records can be retained in a reliable and authentic form over time, paper records will be required as legal evidence. A records management improvement project has strengthened record keeping systems for subject files, but systems for managing personnel records have not been addressed, and this has significant consequences for the payroll and human resource management functions. The successful approach to restructuring subject files could be applied to restructuring personnel files. A central storage facility, or records centre, would be a key factor in maintaining control of paper records systems. (paras 53 to 61)

15   A new Records and Archives Management Act was passed in January 2002. It gives the Archives clear powers to oversee records management across the public service. The Archives is now promulgating regulations under the new Act, and it will need additional resources to ensure that it can fulfil its new legislative mandate. The long term sustainability of improvement will depend critically on the appointment of clearly designated Principal Records Officers in each ministry who will be responsible for records management. (paras 62 to 64)

16   A 1997 report by the International Records Management Trust on personnel control and information systems in the Government of Tanzania made a number of recommendations concerning improvements to the way personnel records and information were managed. These recommendations have been incorporated into the National Archives' medium-term plan to build an effective records and information management programme. (paras 65 to 67)

17   Successful implementation of the plan will depend on several key changes in the administration of records services, including developing a records centre, analysing records and information requirements in relation to redesigned personnel and payroll information flows, developing standards for managing personnel files and training registry and National Archives staff in the management of personnel records. (paras 68 to 69)

18   The Personnel Control and Information Systems (PCIS) project was initiated in 1995 as part of the Public Sector Reform Programme. New information systems were intended to integrate personnel data into one database. The procurement process for the system began in 1999. Lawson, an Oracle database run on Windows-based client-server architecture, was selected as the most appropriate system. Weaknesses in control systems for keeping personnel records have made it difficult to audit the payroll because relevant documents were scattered in files in a variety of locations throughout government. Improving the quality of personnel files will be essential for sustainable control of the payroll and for improved management of the Public Service. (paras 73 to 79)

19   The system is now supported by four system analysts and over 20 data entry clerks located in CSD and the Treasury. The personnel database now holds over 280,000 employee records. Each employee record has 15 data entry screens but only eight are populated, due to a lack of integration with legacy systems and an authoritative personnel record for each employee. It is not possible to verify data in the computerised personnel management information system because there is no systematic method of handling and storing data entry forms after data entry. There is a need for a rational and consistent policy for managing these documents. Lack of system reporting functionality also hampers data verification. (paras 80 to 84)

20   The PCIS servers are located in the Treasury Department, and backups are made on a daily basis. The system administrator stores weekly and monthly backups on magnetic tape. While measures have been implemented to protect the integrity of the data and the system, the long-term preservation and access of the database records have yet to be addressed. There is no live information about recent retirees or terminations. Since April 2000 the database has grown at five per cent per month, or by two million rows of data. In May 2002, the database occupied over 268 gigabytes of computer space. The sheer volume of data has slowed processing, updating and backing-up procedures and could result in a system breakdown and potential data loss. Thus, the demand for long-term data storage has increased. (paras 85 to 95)

21   There are a number of records and information related issues that prevent achievement of the PSRP objectives. It will be necessary to populate the computerised system with detailed job data obtained from the ministries, departments and agencies before more effective establishment control can be achieved. However, there are difficulties in obtaining complete information from manual record-keeping systems. Moreover, the current data entry procedures do not permit accuracy checks on data that have been entered manually, and there is no systematic storage for data forms used to populate the database. Inefficient management of paper records, limited information technology support, laborious and inefficient manual processes, little benefit realisation and incomplete and inaccurate data all need to be addressed. (paras 96 to 102)

22   Electronic records are encompassed in the definition of records in Tanzania's new archives act. Some Archives staff have received introductory training in electronic records management. A project to improve control of personnel records ideally would address electronic records management issues in the same context as existing paper records management. The National Archives could be a valuable partner for the Civil Service Department (CSD) in developing strategies for long-term preservation

4

and access for PCIS records. (paras 103 to 107)

BACKGROUND INFORMATION

23   Tanzania, in East Africa occupies some 945.1 thousand square kilometres and has a population of approximately 33.7 million. As of 1997, the population density of the country was 38 persons per square kilometre and the GNI was around $US 280 per capita. Tanzania's GNP is currently $US 9.3 billion. The official language of the Government is Swahili.

24   The sovereign republics of Tanganyika and Zanzibar formed the United Republic of Tanzania on 26 April, 1964. The Government of the United Republic of Tanzania is a unitary republic consisting of the Union Government and the Zanzibar Revolutionary Government. Tanzania has a unicameral legislature, with a National Assembly that enacts laws that apply only to the mainland; Zanzibar has its own House of Representatives that makes laws especially for Zanzibar.[1]

Public Sector Reform Initiatives

25   By the late 1980s, Tanzania had experienced a decade of economic decline and deterioration of its public services. Public expenditure had expanded beyond what the Government could afford. Public administration was characterised by under funding and overstaffing. Civil servants had become de-motivated due to decreasing real incomes and political interference in appointments and pay decisions. Establishment and payroll controls had also deteriorated. As a result, the public service wage bill was largely out of control. This situation contributed to the country's fiscal instability and deficits.

26   In response to this situation, the Government launched a Civil Service Reform Programme (CSRP) in 1991. Implementation was delayed, however, and the programme ran from 1993 to 1999. The CSRP was supported by a range of donors, including the World Bank, the UK Department of International Development (DFID), the Swedish International Development Cooperation Agency (SIDA), the Norwegian Agency for Development Cooperation (NORAD), Department for International Development Cooperation (FINNIDA), the US Agency for International Development (USAID), the European Union (EU), the United Nations Development Programme (UNDP), the Swiss Agency for Development and Cooperation (SDC) and the Netherlands Organisation for International Development Co-operation (NOVIB).

27   The overall objective of the CSRP was to achieve a 'smaller, affordable, well-compensated, efficient and effectively performing civil service.'   The programme was implemented in two phases:

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[1] http://tanzania.go.tz/administration.html; http://www.tanzania.go.tz/government/; http://www.tanzania.go.tz/smz.

Situation current as of May 2002

- restoration of the structural preconditions to support fiscal stabilisation measures, including removing ghost workers from the payroll; retrenching staff where necessary; rationalising the pay and grading system; and reinstating establishment and payroll controls

- institutional improvements, including a redefining the role of government; restructuring for organisational effectiveness and efficiency; outsourcing certain services; decentralising service delivery and building managerial capacity.

28   Specific achievements under the CSRP included:

- reducing the total number of public service employees by approximately 27% from 335,000 in 1992 to 265,000 in 2002

- establishing of effective controls on employment and the wage bill. All recruitment and entries into the payroll were controlled. A central personnel database was established, together with a computerised payroll system (funded by DFID). The Government's integrated computerised personnel and payroll system is discussed in greater depth in paragraphs 72 to 102.

- decompressing of the civil service salary structure from a ratio of 9 to 1 in 1992 to about 21 to 1

- devolving of non-core and executive functions to autonomous agencies, local authorities, communities, non-governmental organisations and the private sector

- improving leadership, management and governance capacity, for example, through the establishment of a code of ethics and conduct for public servants

- decentralising advising structures and reforming local government.

29   Despite significant achievements, there were a number of outstanding problems and concerns:

- Recruitment and appointment to the public service were based not on competence or ability but on the availability of potential workers. For example, places were created for school leavers and graduates of training institutes.

- There were no established criteria for monitoring of vacancies.

- Promotions were based more on longevity of service than on merit.

- Movement or transfer from one job type to another took place indiscriminately.

- There was a general weakness in work supervision and applying disciplinary action.

- There were too many employment authorities for different cadres and among various agencies.

6

- There was a lack of transparency in the operations of the *Kamati za Ajita Serikalini* (KAMUS), the service commission for operational employees, that limited management effectiveness in employment decisions in ministries.

- Customer care was not emphasised.

- Weak personnel data and information systems undermined the decision-making process.

- Public service pay levels were low and non-competitive compared with other employers.

- Existing employment and management policies and practices discouraged labour or job mobility.

- There was poor staff deployment and an unbalanced distribution of personnel among numerous ministries, departments and agencies (MDAs).

- The performance appraisal system was subjective, non-participatory and poorly managed. This situation undermined the objective of a results-oriented and merit-based public service management culture.

- Staff development programmes had not received sufficient attention.

- There was an absence of schemes for motivating employees and recognising good work, which resulted in poor staff morale.

30   To combat these problems, a second phase of reforms, the Public Service Reform Programme (PSRP), was introduced deepen the reforms begun under the CSRP. This programme was launched in 2000 and is to run until 2011. It aims to transform the public service into a service that has the capacity, systems and culture for client orientation and continuous improvement of services. The PSRP will be undertaken in three phases:

Phase I (2000-2004): install a strategic process for sustainable performance improvement

Phase 2 (2005-2008): institute a performance management culture

Phase 3 (2009-2011): establish quality improvement.

31   *Phase I* of the PSRP consists of six components:

- performance improvement

- restructuring and private sector participation

- an executive agencies programme

7

- management information systems

- leadership, management and governance

- program coordination, monitoring and evaluation.

32   The management information systems component of the project builds on the management information systems (MIS) component of the CSRP, which was launched in 1995. The approach includes measures to:

- install the personnel and payroll system software procured in 1999 and provide training

- develop a policy and legal framework for the management of increasing electronic records and a strategy for implementing the framework

- develop core information technology applications and infrastructure on the basis of common standards and strategies (there is a need for a shared and optimised information technology infrastructure)

- support public service managers in acquiring competencies in information technology use and management so that they can understand, plan and manage MIS developments in their organisations

- establish a participatory framework in which management information systems and information technology policies are formulated for the public service as a whole.

ADMINISTRATION OF THE CIVIL SERVICE

33   In keeping with the objectives of the PSRP, a new Public Service Act was passed in April 2002. The new act is not yet available for review, as legal drafters are in the process of incorporating amendments agreed by Parliament.

34   Under this new legislative framework, the public service of the GoT will comprise the following:

- political service

- civil service

- operational service

- local government service

- health service

- teachers service

8

- police, prisons and immigration service

- executive agencies and other public institutions' services

- judiciary service

- parliamentary commission service.

35 Between 1993 and 1998 the Government worked towards rationalising services and service cadres. There are now approximately 250 cadres within the different services.

36 At present, the key stakeholders in the government's human resource management and payroll process are:

- Civil Service Department

- Ministry of Finance

- employing ministries, departments and agencies (MDAs)

- parent ministries for common cadres

- service commissions

- Office of the Controller and Auditor General

- workers councils

- the Public Pension Fund.

37 The roles of these stakeholders are discussed in the paragraphs below in order to illustrate the complexity of the human resource management function and the information flows involved.

Civil Service Department

38 The Civil Service Department (CSD), soon to be renamed the Public Service Department, is responsible for personnel policy formulation and implementing personnel policy; developing and implementing the PSRP; producing and disseminating personnel management information; and introducing establishment control. The CSD is divided into seven divisions (see the organogram at Appendix B):

- Policy Division - responsible for formulating, monitoring and evaluating personnel and pay policy

- Human Resources Division – responsible for management training and staff development

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- Management Information Systems Division – responsible for systems development and delivery, including the integrated personnel and payroll system

- Ethics Unit – responsible for public service ethics

- Management Services Division – responsible for restructuring and private sector participation, executive agencies and performance management

- Records and Archives Division (the National Archives) – responsible for the management of official records from creation to disposition

- Establishment Division – responsible for staff grading, appointment and monitoring the establishment as well as for employment rationalisation.

Ministry of Finance

39   The Ministry of Finance is responsible for financial policy formulation, budgeting, treasury functions, accounting and pension administration. The organisational units with a role in personnel and payroll administration are:

- Budget Commissioner – verifies and authorises all employment matters with financial implications such as recruitments and the payment of salary arrears

- Treasury – processes and administers distribution of the payroll

- Pension Section – administers pensions for all retired civil servants.

Employing Ministries, Departments and Agencies

40   The employing MDAs draw up a medium-term and annual human resources plan. They have charge of administering personnel processes and activities on a day-to-day basis; implementing personnel policies, regulations and procedures; and implementing financial policies, regulations and procedures. The Director of Administration and Personnel (DAP) in each MDA oversees these tasks, while each supervisor is responsible for administering day-to-day personnel and pay matters.

Parent Ministries for Common Cadres

41   Under the current system there are a number of common cadres such as the Administration Cadre and the Accounting Cadre. For each common cadre, a responsible parent ministry makes decisions with respect to recruitment, appointments, promotions, transfers and retirement. For example, the CSD is the parent ministry for employees belonging to the administration cadre, while the Ministry of Finance is the parent ministry for employees belonging to the accounting cadre. In theory, the parent ministry also maintains the 'master' personnel file for the employee. Under the PSRP, common cadres will be phased out over a period of

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years, and each MDA will become fully responsible for its own employees.

Service Commissions

42   Service commissions (for example, those for teachers, police and the judiciary) are responsible for recruitment and the approval of promotions. With the implementation of the new public service management and employment policy, the service commissions will eventually be subsumed under an umbrella Public Service Commission.   The Parliamentary Service Commission, the Judiciary Service Commission and the Police Service Commission will remain separate. The process of establishing the Public Service Commission has begun already and is expected to be in place by July 2002. The new Public Service Act provides for a transition period of three years.

Office of the Controller and Auditor General

43   The Office of the Controller and Auditor General is responsible for auditing the Government accounts. As part of this function, the Auditor General will conduct audits of the payroll. Special audits of the payroll have been carried out under the auspices of CSRP.

Workers' Councils

44   Workers' councils represent employees at all levels within MDAs and recently have been involved in exercises to review schemes of service. Under the current approach to rationalising the service cadres, the individual departments now work closely with the CSD to analyse schemes of service. For example, departments prepare draft schemes that are then forwarded to departmental workers' councils, which are responsible for employees at all levels within the department. The workers' councils must approve the scheme of service which, if approved, is then forwarded to the CSD, where the Master Workers' Council must approve the scheme.

Public Pension Fund

45   Every public service employee, with the exception of operational employees[2], is entitled to a pension upon retirement. Pensions are jointly funded by employee and employer contributions. The normal retirement age is 60, although a public servant may take up voluntary early retirement as early as age 50. In 2001, a new executive agency was given responsibility for administering pensions for all current civil servants. Pensions for retired civil servants will continue to be administered by the Pensions Section of the Ministry of Finance (MoF).

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[2] 'Operational' staff refer to cleaners, gardeners and similar categories of staff who are not pensionable.

Situation current as of May 2002

RECRUITMENT, APPOINTMENT AND PROMOTION

46   In recent years the stages of recruitment, appointment and promotion have been clarified. Analysis of personnel and payroll information flows reveals how the responsible ministries, departments and sections process personnel transactions and create, use, transmit and store information at each step of the process.

47   Planning for recruitment, appointments and promotions is part of the budgeting exercise undertaken between January and June each year, in consultation with the Establishment Division of the CSD and the MoF. The output of this process is the authorised establishment for each MDA for the year. The Establishment Division prepares and maintains the establishment in Excel spreadsheets and paper files organised by MDA and thereafter by year.

48   Recruitment and selection is a shared responsibility. When a vacancy arises (for example, as a result of a new position or a vacancy in an existing position), the DAP in the employing ministry must request approval to appoint from the Permanent Secretary of the CSD. The CSD checks to ensure that there is money in the budget and, if so, it authorises the appointment. A request to fill the post is then sent to the appropriate service commission or, in the case of operational employees, to the relevant service commission, the *Kami Ajita Serikalini* (KAMUS). After the selection process is complete, the name of the successful candidate(s) is forwarded to the MDA to proceed with appointment.

49   At this point, the individual is added to the payroll. The DAP prepares a letter of appointment and forwards it to the Chief Accountant, who completes a data entry form for submission to the CSD's head of the Establishment Division. If the appointment is approved by the head of the Establishment Division, the form is forwarded to the Budget Commissioner to verify that funds are available to make the appointment. Once the three relevant authorities (the DAP, the head of the Establishment Division and the Budget Commissioner) have signed the data entry form, the forms are batched and data entry is carried out in either the Treasury or the CSD.

50   After the payroll is processed, the system produces a report indicating the amount that should be credited to the account of each MDA. The Accountant General prepares cheque vouchers and distributes these to the MDAs. The MDAs then distribute the cheques to their employees.

51   Promotions are carried out at the recommendation of the employee's supervisor. A new performance appraisal process is linked to the strategic planning process, and recommendations are now to be supported by performance appraisals. Implementation of the new system has been delayed in some cases because strategic planning exercises have not been completed, but some MDAs are pressing ahead with implementation without completing their strategic planning exercises.

52   Recommendations for promotion are forwarded to the appropriate service commission. If the promotion is approved for an employee belonging to the common cadre, the parent ministry prepares a letter of promotion. If the employee belongs to another category, the employing ministry prepares the letter. Changes are made to the

Situation current as of May 2002

payroll upon promotion are dealt with in a manner similar to the process outlined at paragraphs 83 to 85.

PAPER-BASED PERSONNEL RECORDS

53   This section examines systems for managing paper-based personnel records and information. The computerised systems for managing personnel information will be discussed in the next section.

54   The Government has made significant progress in introducing an integrated personnel and payroll system (see paras 72 to102). Nevertheless, paper-based personnel records will remain an essential component of the human resource information management for the foreseeable future. Personnel records, especially personal files, are an essential source of information that cannot be found elsewhere. They will be needed because computerised systems, although strategically important, will only capture a proportion of the human resource information. Moreover, as the computerised personnel systems grow in sophistication and scope, personnel records will be a key source of data for the new applications. In addition, until electronic records can be retained in a reliable and authentic form over time, paper records will be required as legal evidence.

55   From 1997, as part of a DFID-funded records management improvement project (see paras 66 to 69), new systems were introduced to improve the management of subject files and to clear inactive files from registries. However, systems for managing personnel records were not addressed.

56   Accountability for the payroll and human resource management functions is compromised because the system is overwhelmed by huge volumes of unmanaged paper. For example, it is very difficult to audit the payroll because the relevant documents are scattered in different files in a variety of locations. Personnel files should contain comprehensive documentary evidence to explain why a change has been made to a payroll entry. In practice, however, the quality of the personnel file is variable. Files are frequently incomplete, missing or misplaced. Improving the quality of personnel files will be of key significance to achieving sustainable control of the payroll and strengthening the management of the human resource function.

57   Equally seriously, incomplete service records undermine the personnel management function, which depends upon information gathered from the earliest stages of an employee's career. For instance, the employer must have adequate information to resolve disciplinary cases fairly; otherwise there may be costly delays in obtaining decisions or unfair decisions may be made. Further, a great deal of staff time may be wasted tracking down missing documents. The consequences for the employee are also significant, for example when there are delays in obtaining promotions, resolving grievances or receiving pension payments.

58   The sheer size of the paper records management problem has significant logistical implications. Effecting improvements across the public service will involve dealing with large volumes of records and will require building capacity for a higher level of records management.

59   This process has already begun as part of initiatives launched under the CSRP in the 1990s. With financial assistance from DFID, the International Records Management Trust worked with the National Archives to improve the management of subject files. Inactive files were appraised for their retention value and stored in boxes if they had ongoing value. Subject filing systems were restructured in 13 ministries. Training in the new systems and in the general principles of records management was provided to registry staff. The National Archives has continued this work in another 11 ministries. The successful approach to restructuring subject filing systems can be applied to restructuring personnel files.

60   The absence of a records centre is undermining efforts to restructure the registries. There is a need for a central storage facility to which files can be transferred to be held until their retention period has expired or the records become archives. In the meantime, boxes of semi-current records have been stored in the registries awaiting transfer to an appropriate facility.

61   These boxes are creating congestion in the registries. The establishment of a purpose-built records centre facility is essential if the benefits of work to date are not to be reversed and if personnel files are to be managed effectively.

62   Another major step in developing a sound records and information management framework has been passage of a new Records and Archives Management Act in January 2002. Delays in passing the Bill had made it difficult to publicise the roles and responsibilities of the National Archives and of the ministries for records management. The new legislation gives the Archives clear powers for overseeing records management across the public service. The National Archives is now in the process of promulgating regulations under the new Act. This will provide a solid basis for establishing control of personnel records.

63   The National Archives will need additional resources to ensure that it can fulfil its new legislative mandate. The Archives' complement of professional staff has increased. In 1997, there were only three professional staff. There are now 12, and the Director hopes to increase this to 16 by June 2002. It is important that at least one of these professionals develops special expertise in the management of personnel and payroll records.

64   The records management improvement project, which ran from 1997 to 2001, also developed a scheme of service for a records management cadre that was submitted for approval to the Director of Administration and Personnel. The long term sustainability of improvements will depend critically on the appointment of a clearly designated 'Principal Records Officer' within each ministry who will be responsible for records management. This in turn will depend upon approval of the proposed scheme of service. The Principal Records Officer will play a key role in establishing control of personnel records.

65   It is now important to introduce a strategic plan for improving the management of personnel records.

Situation current as of May 2002

66   A 1997 report by the International Records Management Trust on personnel control and information systems made a number of recommendations concerning improvements to the way that personnel and payroll records and information are managed. These recommendations have been incorporated in the National Archives' medium-term plan to build an effective records and information management programme.

67   A two-staged approach is envisaged. The existing paper-based files are to be reorganised and then restructured to enhance efficiency and effectiveness. The approach is to be applied to 26 ministries.

68   The Government ultimately plans to broaden the scope of the project to:

- encompass personnel records, vital records and specialised records, such as court records, financial records, land records, health records/medical records and local government records

- develop an integrated approach to information systems. This is to include establishing intranets, developing methods to manage records created electronically, incorporating text conversion technologies and creating linkages between paper-based and electronic records of long term value (for instance by using controlled vocabulary systems developed for paper records).

69   If the project is to succeed, several points need to be considered:

- A purpose built records centre needs to be created.

- The complexity of the personnel records management function needs to be recognised. Reform initiatives are changing the way that human resources are managed; careful review and analysis of the function is essential before a personnel records project is launched.

- Given the complexity of the personnel management function, careful attention needs to be given to developing standards and practices for the content and management of personnel records. Pilot records projects could be a valuable way to test standards and practices before they are applied more broadly.

- Officials involved in managing, delivering and reforming the human resource function should be actively involved in planning and executing the project. They will need to understand, accept and support the work of personnel records systems.

- The time and effort required to train staff involved in this project should not be underestimated. Registry staff, staff from the National Archives and those who use personnel information will need to upgrade their knowledge and skills.

- Given the need to address specific personnel records management requirements, it is essential to assign suitable National Archives staff specific responsibility to help oversee the management of personnel and payroll records.

COMPUTERISATION OF PAYROLL AND PERSONNEL MANAGE-MENT FUNCTIONS

Automated Payroll System

70 The payroll system supports the monthly remuneration for government employees. The current payroll system is a mainframe system on UNIX servers developed in house in 1985 using COBOL programming. The payroll is batch processed on a monthly basis at the Department of Treasury. There are 20 data entry PCs. Clerks enter the data in the payroll processing system. Payroll reports are then printed out and verified by employers, after which amendments are made as required.

71 The payroll system will eventually be phased out by the Personnel Control and Information Systems (PCIS) described below. At present data must be batched, recorded on tape and then migrated to the PCIS. This extra step is necessary because the new system is not linked to the budgeting system. A link between the PCIS and the budgeting system is needed to ensure that salary expenditure does not exceed budgeted amounts and it is understood that such a link is planned. This is a short-term situation during the process of system integration and the complete transfer of data. The project team recognises that a loss of data between the two systems could jeopardise the entire existing payroll system. The team has chosen a conservative approach and will fully integrate the two systems in the next PCIS project phase.

Personnel Management Information System (PMIS) and PCIS

72 The PCIS Project was initiated in 1995 as part of the Public Service Reform Programme. This has involved designing new information systems to support the reform initiatives and to integrate personnel data into one database. The system is intended to:

- sustain the effectiveness of the establishment and payroll controls already in place

- provide relevant, complete, accurate and timely information to public service managers and administrators

- support the modernisation of information and communications systems in government offices

- improve the quality and availability of information through the development of efficient, effective and sustainable paper-based records management systems in the ministries

- introduce an integrated computerised personnel and payroll system in the CSD and reinforce existing controls.

- identify and eliminate ghost workers

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- provide tools to help curtail the growth of the public service

- verify establishment and payroll changes

- devolve payroll administration to personnel officers in ministries, departments, and authorities as appropriate.

73   When the PCIS Project was initiated, an automated payroll system and several stand-alone databases supported different business processes such as processing the appointment of new employees and managing establishment and retrenchment. These systems were not integrated, and as a result, there was often a duplication of effort in collecting data. Moreover, there were inconsistencies in the data, and the lack of a 'master file' for each employee made verification a time consuming exercise. One of the main goals of the PCIS was to integrate the different data sources into one common database.

74   A comprehensive Information Systems Strategy and Feasibility Study was carried out in 1997 and provided the basis for the PCIS. The study recommended developing an interim personnel database to complement the payroll database. A Personnel Management Information System (PMIS) was developed and linked to the payroll database in order to enhance the management of the personnel function and to tighten control of the payroll.

75   A key component of the interim database initiative was a lengthy data cleansing exercise. Existing employee data, in paper and electronic form, did not provide readily accessible, accurate and complete data to populate the new database.

76   A validation exercise was conducted for each employee using data collection forms to gather employee data (vote number, position, salary, terms of service, date of employment and promotion) as well as personal information (including date of birth, citizenship, marital status, education and disabilities). Each employee verified the accuracy of the data. The section or station head and the department head then reviewed the form for accuracy. The forms were the main data source for the interim database.

77   While the data cleansing and collection process was underway, the Government issued a formal invitation to tender for the development of a personnel database. This process was funded by DFID. The project team included stakeholders from across the public sector, assisted by external consultants specialising in human resource management and human resource information management systems.

78   The stakeholders were trained in the functions of personnel information management systems. They established a common method of analysing the merits of each prospective product against agreed-upon criteria. This helped them to make an informed decision.

79   Potential vendors were invited to demonstrate their systems, and bids were received from a number of suppliers. The project team eventually selected Lawson, an Oracle database run on a Windows-based client-server architecture.

17

80   In 1999, as the implementation process began, it became apparent that additional technical resources were required to manage the system. There was a deliberate strategy to promote system sustainability by recruiting and training existing CSD staff in administration and data entry. The system is now supported by four system analysts and over 20 data entry clerks located in CSD and the Treasury.

81   The personnel database now holds over 280,000 employee records. Data entry is conducted by data entry clerks located in the CSD and the Department of Treasury. The database has 15 data entry screens for each employee, but only eight are populated. The data entry screens are as follows:

Table 1: Data Entry Screens

Data Screen	Purpose and Content	Presently in use
Main	The main screen, which captures the employee's name and employment number, is used to enter data on employee status, hire data, adjust hire, anniversary, seniority and termination.	Yes
Assignment	This is data describing the location and position level of each employee, including department and job code. The process level field contains numerical codes to represent the employee vote and station. All fields in this data set have individual audit trails to view historical entries and drop down menus to ensure consistency and minimise data entry errors.	Yes
Pay	This is data from the payroll system, such as salary class, pay frequency, rate of pay, schedule, grade and step of pay, and pay disbursement, including method of payment and the relevant government expense account. Fields here have individual audit trails to view historical entries.	yes
Work	The personnel file number would be entered here.	no
Personal	This is employee data for birth date, birthplace, gender, marital status and disability or veteran details. Data is not systematically entered into these fields.	sometimes
Address	This will be data about home address and contact information.	no
Work Eligibility	Data pertaining to citizenship and nationality.	yes
User Fields	This is data linked to the payroll, such as payroll group, tax relief, date of last promotion.	yes

Situation current as of May 2002

Data Screen	Purpose and Content	Presently in use
Tax	This is data required for tax deductions for each employee, including resident and work address and worker's compensation details.	yes
Pay Edits	This will be data pertaining to special pay such as overtime.	no
Year end		no
Benefit dates		no
Benefit flags		no
Plan test		no
Spouse Employee		no

82   There are two main reasons for the underutilised data entry screens. Firstly, there is a lack of integration with legacy systems, such as the payroll, as well as with stand-alone databases that support functions such as establishment management. Secondly, there is no authoritative personnel record for each employee. As a result, data verification is a very laborious process requiring a thorough inspection of paper files in diverse locations, followed by the verification of data contained in each record before the data can be used to populate the database. The problems in managing personnel paper records have hampered integration and expanded data processing time.

83   The Treasury verifies data entry for new employees. Some of the completed data entry forms (mostly EB1 induction forms for new employees) are stored in the CSD and some in the Treasury. Currently there is no set method of storage, nor has a retention period been defined. In addition, due to space constraints, the Treasury has advised that it has begun to return some of the data entry forms to the MDAs.

84   This situation presents problems. If questions arise about the data entered in the system, retrieval of the data entry forms may be difficult, thereby preventing verification. There is an urgent need to devise a consistent policy for handling and storing the forms. It would be helpful if, once data entry is complete, all forms could be forwarded back to the MDAs for verification by the DAP. Ultimately, the forms could be stored on a 'master' personnel file for the individual concerned. The Government needs to determine which of the many personnel files that are created for each employee should be designated as the 'master file'. This file could be held by the employing ministry or, in the case of individuals within common cadres, by the MDA responsible for the cadre.

19

85   The lack of reporting features in the PCIS contribute to the difficulties in data verification. The system does not allow users to print off a change report or to flag changes alone. Rather, it requires that all records be printed in full. Users have noted that the reporting tools for the system are not yet very user friendly.

86   The Personnel Management Information System (PMIS) is manually linked to the payroll system by two processes. Firstly, batches of data are uploaded on magnetic tapes to the PCIS system. Sheets containing pay amendment and arrears details are batched at the Treasury Department and forwarded to CSD data entry clerks. Secondly, the data entry clerks in CSD and Treasury verify the batch sheets for accuracy and input into the PCIS. Full integration of the two systems is planned for next year and will no longer require 're-entry' of payroll amendments and arrears to the PCIS.

87   Access to the system is limited to the project team, system administrators and data entry clerks. Permissions are based on position and are managed by unique user identification and passwords. Fields in the database support audit trail functions and report the 'history' of the data entered in each field, including the date of the change and the user who made it.

88   System analysts are responsible for administration and daily operations. These duties include maintaining position-based permissions for each user, conducting system backups, running system diagnostics and making system changes as required. It is important to note that no system changes are permitted while data entry is in progress.

89   The servers are located in the Treasury Department and backups are conducted on a daily basis. The system administrator completes weekly and monthly backups on a magnetic tape. While measures have been implemented to protect the integrity of the data and the system, provision for long-term preservation of and access to the database records has yet to be established.

90   The PMIS generates user statistic reports but has limited capacity to run reports to verify the accuracy of data. Data are verified after initial entry, but later amendments or changes are not verified for accuracy. At present only a few fields, such as pay rates and frequency, are checked after data entry to ensure accuracy. This gap in the process occurs because there is such a large volume of data being entered and because of the complexity of designing the necessary Oracle reports.

91   Each month a report summarising payroll and personnel budgets is sent to the budget commissioner, and each DAP also receives a printout of pay and personnel details for every employee in their department. Each report totals more than 300 printed pages. The reports are maintained as paper records in the relevant business area.

92   The next phases of the PCIS Project aim to:

  •   integrate the legacy payroll system with the PCIS

  •   update the system architecture from client-server to web-server. Currently a team is working on the web-user interface, database enhancements and business process analysis. The aim is to link regional offices to the PMIS and to

20

introduce a web-based architecture using VPN technology for remote access.

- complete and integrate performance management modules into the PCIS.

93   With the exception of the records of recent retirees or terminations, PCIS records are active in the system. Since April 2000, the database has been growing at five percent per month, or by two million rows of data. It now occupies 268 gigabytes of computer space. The sheer volume of data has slowed the processing, updating and backing-up procedures.

94   There is a danger that the volume of data will overwhelm the system, resulting in a system breakdown and potential data loss. Thus, the demand for long-term computer storage has increased. A potential solution is to purge aged data from the servers and store it in a data warehouse. Data stores in the warehouse would remain accessible for reporting procedures and, when required, for data entry.

95   The Personnel Management Information Unit (PMIU) is currently defining its requirements for storage and is exploring a data warehouse solution for short and long-term storage. While this solution is still in the development stages, the PMIU is working towards creating an archive product line system that would extract records (based on metadata) to store in the data warehouse. Various purging approaches, such as those developed by the Revere Group, Microsoft OLE, Oracle Export Utility and Microsoft Access ODBC, will be evaluated against PMIS and CSD business needs to find the most suitable product that will ensure the ongoing integrity of PMIS records.

96   The strength of the PMIS system is a result of the CSD's systematic approach to project planning and implementation and the capacity it has developed to maintain the database in house. The PMIS project team defined an agreed data set to serve as the basis for the database and has planned a systematic process to extract the data and verify its quality.

97   The PCIS does not currently contain establishment data, though a 'Position Management Module' was envisaged as part of the system functionality, and steps are being taken to incorporate establishment control into the system. One of the problems that must be overcome in order to implement the Position Management Module is the absence of a centralised repository of information about position titles and grades.

98   Full implementation of the Position Management Module of the PCIS will not be possible until the system is rolled out to the MDAs. At that point it will be possible to enter detailed position information held by the MDAs and this data then should be easily available to central agencies. In the meantime, the Government is moving toward position management by populating the database with information held by the Establishment Division relating to job categories and grades.

99   Difficulty in obtaining complete information from the manual record-keeping systems, particularly due to the absence of a 'master' personnel file, has slowed system progress. For example, it has not been possible to incorporate additional modules for performance and establishment management. The PMIS employee records do not contain all employee data, and the electronic record is not considered to be the 'master' file.

21

100   The current data entry procedures do not permit accuracy checks on amendment or arrears data that have been entered manually. Moreover, there is no systematic storage for data forms used to populate the database. The forms are bound in unindexed batches and stored in various locations including CSD registries and home department registries. Locating the relevant form to check for data inaccuracies is difficult.

101   The PMIS system design did not provide for the long-term preservation of and access to the records created by the system these requirements are now being considered because of the rapid increase in the size of the database. The data structure will need to be enhanced to include metadata fields that can search and retrieve records that are 'inactive', so that they can be archived in a data warehouse. Records retention and disposition schedules will need to be implemented as part of a long-term management strategy for PMIS records.

102   There are a number of records-related issues that the PCIS project needs to address:

- *inefficient management of paper records.* Without master files there are no authoritative records of employment. Personnel records cannot be retrieved easily and are not kept up to date rigorously.

- *limited information technology support*. There is a lack of trained personnel to maintain, evaluate and enhance the databases.

- *laborious and inefficient manual processes*. There is a lack of integration between databases which results in a duplication of effort to collect and input data.

- *little benefit realisation.* There is insufficient linkage between the burden of collecting data for the system and the benefits of the system in supporting the Government's business processes.

- *incomplete and inaccurate data*. The absence of imposed standards for regular updating the database results in inaccurate and unreliable reports.

ELECTRONIC RECORDS MANAGEMENT

103   The new Records and Archives Management Act of 2002 expands the National Archives' responsibilities to include records management. Records are defined in the act as 'recorded information regardless of form or medium created, received and maintained by any institution or individual in the pursuance of its legal obligations or in the transaction of its business and providing evidence of the performance of those obligations or that business.' While electronic records are not specifically mentioned, they are accounted for in the definition of records. The National Archives decided that the act should not refer specifically to electronic records because the supporting legislation specific to electronic records as evidence has yet to be defined.

Situation current as of May 2002

104   The National Archives has sent seven of its staff for introductory training in electronic records management and is currently developing an electronic records management policy. It is also conducting a survey of electronic records management policies, programmes and procedures as the basis for developing professional standards and practices.

105   The Archives is well positioned to develop relationships with government department that create electronic records, but high-level support will be needed to sensitise government stakeholders to the impact of information technology on record keeping.

106   The CSD is leading the development of standards for metadata and system interoperability. National Archives staff are not and have not been part of the project planning for the PCIS. The Archives would be a valuable partner in developing long-term preservation of and access to PCIS records.

107   The Government has submitted a proposal to DFID to expand the records management programme to include personnel files. Ideally, this project will address both electronic and paper records management issues and develop a comprehensive framework to support good record-keeping practices for personnel records throughout their life cycle.

RECORDS AND INFORMATION MANAGEMENT: KEY ISSUES

108   There are a number of records and information related issues that may prevent achievement of Public Service Reform Programme objectives. These are:

- Establishment records and information are fragmented, held both in electronic and paper files in the Establishment Division and in the MDAs. This dispersal of information is preventing effective establishment control.

- The poor organisation of data entry forms contributes to difficulties verifying data in the PCIS.

- There are real difficulties with paper personnel record keeping. A variety of files are held in many locations, and there is no clear master file. There are missing files and incomplete documentation, making it difficult to audit the payroll and manage civil servants' careers effectively. There is a need to improve paper personnel record keeping.

- The PCIS system is under utilised. For example, only eight of 15 data entry screens are in use. This is due, in part, to poor organisation of paper records, which has made data entry difficult and discouraged complete population of the database. Improvements in handling paper-based records should make it easier to locate the data needed to populate the database and realise the system's full potential.

- The PCIS system is rapidly growing in size. The sheer volume of data has slowed data processing, updating and backing-up procedures. There is a danger that the volume will overwhelm the system, resulting in a system breakdown

and data loss. To prevent a long-term data archiving solution is needed. The National Archives could be a valuable partner for the CSD in developing long-term preservation of and access to PCIS records.

- The National Archives has a mandate to manage electronic records. However, there currently is no strategic plan for electronic records management, and the National Archives has little capacity in this area. Thus, the Archives needs to work with other stakeholders, such as the MIS Division of the CSD, to develop a national electronic records management strategy.

109   Many of the issues identified in this report highlight the critical links between paper and electronic records. Full and effective implementation of the PCIS will depend just as much on improving the management of the paper records as on providing secure remote access to the system and addressing technical and systems issues. There is a need to consider the link between electronic and paper records and to develop integrated plans to improve both paper and electronic records system. Such an approach is likely to yield better overall improvements in management information than approaches that deal with paper and electronic records separately.

110   Including the National Archives in projects and initiatives for computerised information systems will help to foster the integration of paper and electronic records management. In this way, the Archives will be in a better position to improve paper record keeping, to help support the implementation of computerised systems and to protect electronic records.

LIST OF PEOPLE CONSULTED

Civil Service Department

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B Kamazima, Director of Computer Services, Treasury, Ministry of Finance
Thomas Kiama, Controller and Auditor General, National Audit Office
Miriam Mbegu, Acting Director of Administration and Personnel, Ministry of Health
M S Msongo, Director of Administration and Personnel, Ministry of Education
Blandina Nyoni, Accountant General, Ministry of Finance

Situation current as of May 2002

CIVIL SERVICE DEPARTMENT ORGANOGRAM

- President's Office
  - Civil Service Department
    - Civil Service Training Centre
    - Tabora Secretariat College
    - Policy Development Division
      - Policy Formulation Section
      - Policy Monitoring and Evaluation Section
      - Reform Co-ordination and Monitoring Section
      - Gender Section
      - Information Centre Section
    - Management Services Division
      - Restructuring and Private Sector Participation
      - Executive Agencies Section
      - Performance Improvement Section
    - Establishment Division
      - Staff Grade Appointments and Monitoring Section
      - Middle Grade and Lamus Appointments
      - Renumeration Section
      - Employment Rationalisation Section
      - Personnel Policy Implementation Section
    - Human Resources Development Division
      - Management Training Section
      - State Development Section
      - Technical Cooperation Section
    - Administration and Personnel Division
      - Administration Division
      - Personnel Section
      - Accounts Unit
      - Internal Audit Unit
    - Records and Archives Division
      - Records Management Section
      - Archives Management Section
      - Records Centre Section
      - Technical Services Section
      - Ethics Unit
    - Management Information Systems
      - Government Business Services Section
      - Government Systems Development and Implementation Section
      - CSD Information Systems Section

26

Situation current as of May 2002