

Extracted from Annex 2 of *International Experience with Civil Service Censuses and Civil Service Databases* by Neil McCallum and Vicky Tyler. International Records Management Trust, London UK, May 2001. This case study was authored by Cletus Azangwo.

CASE STUDY 1

GHANA

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PART I: PRE 1991

Background

The post independence period in Ghana saw a dramatic increase in the size of the Civil Service with an annual average growth rate of 14% in the 1970's. By the early 1980s it had expanded to about five times its original size. Fraudulent practices such as 'ghosting' - the tendency to employ absentee workers and make use of their salaries for personal gain is one factor known to have contributed to the inflated civil service.

The Civil Service was faced with the problem of low average remuneration for Civil Servants, under employment, inefficiency and ineffectiveness in the delivery of services. These negative tendencies naturally militated against any meaningful attempts at development and growth in the country as was witnessed in the 1980s.

In the context of international technical co-operation, the condition for granting structural adjustment loans included the reduction of Civil Service numbers. However, during the period 1970-1985, there was no available information as to the size of the Civil Service. Therefore, under the Public Sector Management programme, a head count of public servants was undertaken in 1986. Censuses of 1987, 1988 and 1990 were undertaken with the aim of reducing the number of civil servants.

The 1986 census

Context

The Civil Service staff list until its demise in 1976, provided the name, date of birth, educational qualification, date of appointment, postings, title of post salary range etc of every civil servant. Unfortunately this list ceased to be issued in 1976. Payroll information from the Controller and Accountant General's Department could not be relied upon because of incomplete and erroneous data owing to inaction on resignations, terminations and transfers. Records were either non-existent or inconsistent. No reliable data was available, however by 1985, the estimated population of personnel in the public service was about 320,000.

The Head of the Office of the Civil Service under the Civil Service Component of the Public Sector Management of the World Bank's Public Sector Programme then ordered a head count of personnel in the service by January 1986, concurrently with other employees in the public sector.

Purpose

The exercise, involved preparing staff lists and identifying excess labor in the Civil Service for redeployment. In accordance with the target agreed with the World Bank, the redeployment program was to involve staff reductions at the rate of 5% per annum for 1987, 1988 and 1989 (approximately 15,000 per annum).

Methodology

Questionnaires were prepared and sent to all the 10 regions to be completed by governmental organizations in respect of their employees. The exercise was to be executed over a period of four weeks. There was some indifference on the part of some heads, and a team therefore had to be sent round to collect the results. Two vehicles and four people were assigned to the task of collecting the missing data.

Results

The census provided a total number of 317,654 civil servants was made up as follows:

Following a reconciliation of the census figures with print out figures of pay rolls from the Accountant-General's office an actual figure of 307,000 was established as follows:

Impact

It was clear from the trend that there was a heavy wage bill in certain grades and that it was possible to cut off 5% in the following categories in both the Civil Service, GES and the District Councils.

- Principal Secretaries Grade 5,000

To achieve the expected reduction, the following measures were pursued:

- Maintain the Freeze on Employment
- Encourage Voluntary Retirement of Personnel who want to take advantage of the exercise
- Enforce Normal Retirement Age
- Institute Staff Audit Check

It also became possible to identify over-aged public servants (those over 60 years but still in the service) and to have them compulsorily retired. This was a condition for the activation of the structural adjustment credit negotiated between the Ghana Government and the World Bank.

The revelations from the census also led to the appointment of a committee under the chairmanship of the secretary for Labour and Social Welfare for the labour redeployment exercise. The committee identified the following strategies:

- identifying numbers and actual persons per grade per organisation to be cross-deployed, redeployed or retrenched
- programming the cross-deployments, training/retraining, redeployment and retrenchment;
- detailing out the compensation scheme for the redeployables and retrenchables
- forming the total cost of the entire labor redeployment exercise and the spread of funding over the 1987 budget year.

A crash program for spot checks on nominal rolls was mounted immediately for the purpose of exposing ghost names.

The 1987 And 1988 Censuses

Context

These censuses were designed to establish an authoritative and useful database both for the functional and redeployment study and for other components of the Civil Service reform programme. They were payroll-based.

Purpose

To enable an analysis of the staff into the various grades of the Civil Service in order to provide some rational basis for identifying the excess labor and to redistribute manpower of comparable skills between surplus and deficit administrative units.

To obtain the following data for a comprehensive computerized manpower database in respect of every civil servant:

- payroll staff number
- name
- gross pay
- grade (according to a standard nomenclature)
- sex
- date of birth
- date of first appointment
- date of appointment to present grade
- employing ministry
- region.

Methodology

The approach adopted was basically through the issue of circulars and forms to be filled by officers under the supervision of their heads of departments, ministers of state, regional ministers and district chief executives. The census forms were sent out to all pay points throughout the country with monthly pay vouchers. Officers were instructed by the Controller and Accountant General's Office to refuse to issue pay to staff members who had not completed the census forms. The pay officers were given a briefing when they came to Accra to collect the pay vouchers, but they had no formal training as such.

Reminders for the prompt return of the forms were also made through wireless messages to regions and districts.

Results and Analysis

The response to the exercise was encouraging. The overall response rate was approximately 97% which is very satisfactory given the logistical difficulties involved in issuing and returning completed forms.

The data collected provided for the first time a profile of the Ghana Civil Service comprising the following:

- A total of 131,000 civil servants on the payroll at the end of August 1987. Of these, approximately 2,200 were no longer actually employed at the pay point concerned and of these more than 1,500 had actually left the Civil Service (i.e. ghost workers).
- 59% of the Ghana Civil Service was under the age of 40. About 6,500 within five years of compulsory retirement. (The scope for reducing the size of the Civil Service through natural wastage was therefore limited)
- The age distribution of the Civil Service workforce showed that fifty per cent of staff were 30 and 45 years old and had a length of service of about 10 years. Consequently, career prospects and advancement opportunities were likely to be reduced amongst these staff. In turn this might result in a lack of motivation and potential loss of staff from this age group.
- 45% of the staff had held their post for more than six years. 1,529 civil servants were over the retirement age of 60 years. 4,452 staff failed to declare their age.
- A total of 3,461 civil servants identified by the exercise were no longer at the payroll point at the time of the census and over a thousand staff on the payroll couldn't be fully accounted for.
- Civil service employment was concentrated in Greater Accra and the other major urban centers. 28% of the Civil Service is located in Greater Accra even though Accra contains less than 12% of the total population.
- Civil Service employment was heavily concentrated in a small number of ministries. Approximately 30% of the total was accounted for the Ministry of Health alone, and a further 9% each by the Ministry of Agriculture and the Ministry of Local Government and Social Welfare. If one includes the 31,000 staff employed in the Regional and District Administrations then 78% of the Civil Service was accounted for by the five largest ministries.
- A large proportion of civil servants are concentrated in basic unskilled manual occupations. More than 20% of the entire Civil Service were laborers (including conservancy laborers) and a further 15% were watchmen, drivers, messengers, security guards and cleaners. Again the importance of the health sector was shown by the fact that over 10% of the Civil Service were nursing or hospital staff.
- In terms of the functional and redeployment study perhaps the most important conclusion was that large-scale manpower reductions could be achieved by concentrating solely on low priority ministries and central/headquarters functions: Achieving the Government's objective of 15,000 staff reductions would therefore require significant cuts in staff both at Regional/District level and in key sectoral ministries such as Health and Agriculture.

Impact

At the end of the 1988 exercise, there were 125, 182 civil servants on the payroll of which 124, 148 staff were identified by the data collection exercise. This indicated that there had been an overall decrease in staff numbers of approximately 7,000 in the year up to August 1988. The major reductions of staff were limited to all small ministries and regions. In others, there were staff increases.

3,068 new civil servants had been recruited since the last census. Reductions in staff, primarily through redeployment, appear to have occurred mainly in the younger age groups in the Civil Service. The results indicated that the number of staff under 30 years old had gone down by approximately 5,500, compared with a reduction of just over 2,000 in this, over 30 years.

To ensure the availability of reliable information there was clearly a need to install machinery and systems to update the data regularly.

Nevertheless the exercise had yielded useful data concerning the composition of the Civil Service. The data on numbers of staff by ministry and grade was utilized to help develop the detailed manpower targets for the Civil Service. This paved the way for the conduct of an exercise to find out the minimum levels of staff that should be employed in every Government establishment in the ministries, departments, regions, districts and the town/village/areas.

This exercise was believed to have helped to identify most of the surplus labor force in the public administration system. The relevant manpower data was issued to each ministry to assist them both in identifying areas for redeployment and in gaining a better understanding of their existing manpower stock as a basis for forward planning.

The success of both the 1987 and 1988 Data Collection exercises in identifying over 99% of civil servants on the payroll, clearly established the viability of using the payroll as a basis for setting up effective personnel records in the Civil Service. This formed the basis for the 1990 Census which leading to the introduction of the Integrated Payroll/Personnel Database project in 1995.

Despite the worsening budgetary situation there was evidence of very significant recruitment: in more than 21,000 civil servants were shown as having less than five years service. Moreover, since July 1986 (when a selective recruitment ban was introduced) more than 3,000 civil servants had joined the civil service. Doubts were thus raised as to whether staff reductions were in line with redeployment policy, and whether the policy had been targeted accurately. It was agreed that the most straightforward way of ensuring regular updating of the information would be to add fields to the existing payroll input forms to allow payroll clerks to give the reason for an individual joining or leaving the Civil Service and to include additional personnel details for all staff. This was however believed to be too ambitious a change in the short term given that the existing payroll input forms were not always completed satisfactorily.

The 1990 Census

Context

The format for the data collection exercise in 1990 was different from the global censuses conducted in 1987/1988. It was recognized that the problem with the previous two exercises was in up-dating the results. However, the time required to conduct such a major census would be considerable, and officers might become unwilling to furnish the same details repeatedly. The Government of Ghana therefore sought a method to up-date the August 1988 exercise, without a further massive data collection process.

Methodology

It was proposed to use PPMD¹ resources to create first a senior and then a junior staff list by combining the 1988 database with information from the October 1989 payroll. The draft lists were then verified by requiring personnel officers in each ministry to check that all details are correct. This involved deleting staff no longer at their ministry, and filling in details (date of birth, date of first appointment) for staff who have joined their ministry or been transferred since August 1988. The senior staff lists and junior staff list were handled separately so that the processing of returns on senior staff can be completed quickly. Any lessons learnt during the senior staff list exercise could then also be used when completing the junior staff list, and briefing sessions were provided for personnel officers engaged in the exercise. It was anticipated that the senior list could be produced for distribution in January/February 1991. The junior staff list exercise was expected to take longer because of the larger numbers involved, with production scheduled for March/April 1991.

Strengths and Weaknesses

The creation of a staff list through use of the payroll with verification by personnel officers, rather than conducting a further data collection exercise on the 1987/8 model was considered preferable because:

- It avoided a major field exercise.
- It combined 1988 data with the October 1989 payroll to minimize the amount of data to be collected, hence considerably speeding up the exercise.
- It could be regularly updated using the Controller and Accountant General's system and a microcomputer in the PPMD.
- It would produce a physical senior and junior staff list which could be distributed and inspected by all civil servants, and systematically amended using quarterly staff gazettes.

¹ The Personnel and Payroll Management Division of the Office of the Head of the Civil Service.

- Data obtained could be manipulated in PPMD using their new microcomputer to enable manpower planning, linkage with MSD establishment recommendations, and manpower budgeting procedures.

It was, however, observed that there were certain deficiencies stemming from excessive duplication of personnel information and the poor state of most of the personnel registries where the data was stored and maintained. There was also a problem with the flow of information from the regions to the Central Headquarters in Accra. There was no reconciliation between the staff lists and the payroll because the payroll, which might be expected to be useful source of data on all civil service members, was only able to yield a crude total head count as a result of the way in which it was structured.

PART II: POST 1991

Integrated Personnel and Payroll Database (IPPD)

While annual census approach was seen as the most practical short-term solution to the lack of aggregate manpower data, but it was recognised that in the longer term, priority should be the installation of machinery and systems to generate and update data on a regular basis. It was in view of this that a study commissioned in 1989 recommended, among other things, the development of a computerized Integrated Personnel/Payroll Database (IPPD), finally approved in April 1990.

At the time, the IPPD was the largest and most complex IT project ever undertaken by the Government of Ghana. The database combines information about staff salaries and personnel data to perform the payroll function for the public service (serving the Controller and Accountant General's (CAG) Department) as well as to support the central human resources functions (serving the Office of Head of Civil Service (OHGS) Ghana Education Service (GES) and Audit Service). The IPPD replaced a part of the existing mainframe payroll database. It is believed to be the first of its kind in West Africa.

The IPPD Project was scheduled to take 18 months to complete. In retrospect this was highly optimistic, given both the technical obstacles and the prevailing culture of the Ghana Civil Service. The project timetable was extended several times, and in the end IPPD went live in July 1995, 45 months after the project began. The delays included software procurement problems (1992/3) and computer hardware procurement problems (1993), largely caused by the need to adhere to World Bank procurement rules and procedures.

In addition there were more deep-seated constraints. The technical capacity of the IT staff in the CAG was limited and poorly managed.² The UNIX operating system had never been used in Ghana before, and the IT staff did not have the necessary technical knowledge of the system. The decision to use UNIX was a high risk strategy that contributed to a loss of confidence in the project by the IT staff.

Ownership of the project at a senior level proved to be a serious problem from the beginning. Disagreements between the OHCs and the CAG were reflected at all levels.

² The project also drew on staff in OHCS and GES for report designing, report generation, screen designing etc.

When an independent review³ was carried out in August 1996 it was found that a range of technical problems continued to hinder the exploitation of the system to its full potential. Data input staff were idle for up to half the month. The review concluded that until the technical problems are overcome, the plan to extend access to IPPD to all the ministries and the 110 regions and districts is impractical. As at May 2001, the IPPD coverage had been extended beyond the OHCS, and CAG to the Ministries of Education, Health, Agriculture, Lands and Forestry, Local Government and the Audit Service, but remains far short of its original target.

Undoubtedly the information in the IPPD is richer in content and of a higher quality than in the CAG payroll system it replaced. By including both established and non-established posts, Civil Service and subvented organisations in one personnel database it is possible for the first time to provide a comprehensive picture of government employees. IPPD successfully supports the control of staff numbers by making it easier to generate the requisite statistics for the annual manpower budget hearings. It should be noted, however, that IPPD did not come into operation until after the bulk of staff cuts had already been implemented.

Data Sources for IPPD

From the very beginning the Coppers and Lybrand consultants responsible for the IPPD Project recognised that source data for the system would be critical for success. The strategy that they recommended built upon data collected before the project had begun:

In our experience, however, data collection in Ghana is very time consuming. We therefore think there are major benefits to be gained from continuing to verify and consolidate the information that is already available as the project proceeds rather than waiting until towards the end of the project in 1992/93.⁴

Before IPPD went live in July 1995 work had been carried out in the OHCS Service to gather the necessary data and enter them on an 'interim system'. The method used was to send out census forms to the pay point throughout the country with the monthly pay vouchers. The pay officers were instructed by the CAG to refuse to issue pay to staff members who had not completed the census form. The pay officers were given a briefing when they came to Accra to collect the pay vouchers, but they have no formal training. The system depended heavily upon the integrity of the pay officers and the individual civil servants completing of the forms. The returns were not verified against personnel files for accuracy.

It was recognised at the time that this was a 'rough and ready' approach justified by the limited numbers of staff that could be allocated to the task. Only a small number of foreign consultants and about 30 Ghanaians (drawn mainly from the Manpower Services Division) could be spared to survey over 100,000 civil servants. The exercise did serve to flush out some 'ghosts' from the payroll and provided useful data for modelling changes in the grading and pay structure. However, these data were not sufficiently accurate for personnel management purposes or for maintaining a 'ghost free' payroll. This point may not have been fully appreciated in later years as the personnel of the project team changed.

³ Thurston and Cain *ibid* p84-86 and 96-98.

⁴ Coopers and Lybrand. 'Integrated Personnel/Payroll Database Study: Proposal'. December 1990. p9.

Subsequently, basic personnel information on 70,000 civil servants from the payroll database supplemented by data drawn from the census forms (e.g. geographical location and post title) was entered on a Dbase III database loaded on a microcomputer. In 1990 the consultants stated that the database was largely integrated with the payroll (this turned out to be a misunderstanding) and that it was being systematically upgraded through redesigned payroll input forms (for new recruits), the incorporation of data held in other computer data banks (e.g. Ministry of Health) and an exercise involving checking personnel files (for information about incumbents). The later exercise was dropped as the project progressed. In practice, although the database was updated by means of data from the monthly payroll transactions, it was never possible to reconcile the discrepancies completely. Finally, it proved impossible to obtain details of geographical location and job title for several thousand individuals in the districts. The experience when IPPD went live would suggest that the data gathering process was not sufficiently accurate to be reliable for payroll purposes.

The project team took the data source and data conversion issue seriously and produced a detailed strategy paper that analysed the data available and recommended strategies for populating the database with personnel and payroll data.⁵ The report highlighted issues which were to prove crucial when the project was implemented. It divided the information the system required into three categories: payroll, pensions and personnel. The majority of payroll information was to be found in the existing computerised CAG Payroll System, which contained information on about 292,000 employees in the Civil Service, GES and other public agencies. Likewise, pensions information was largely to be found in the existing computerised CAG Pensions system. In both these cases it was recommended that the information be transferred electronically to the IPPD at the appropriate time.

The team identified a number of other problems with data sources. The old CAG Payroll database contained a large amount of inaccurate data, either 'ghosts' or inaccuracies about real employees. There was a risk that conversion might disrupt the existing payroll and pensions systems, leading to late or incorrect salary payments or financial loss and embarrassment to the Government. Moreover, there was 'a significant risk that the payroll system may have additional problems because the development staff responsible for the system have no training and are poorly managed'.⁶ For this reason most of the data conversion work was to be carried out by a team in the OHCS to reduce the reliance on the computer staff in the CAG.

The personnel information was a more formidable problem. Limited personnel information on 70,000 civil servants was held on the Dbase III system. In addition, GES had data on 153,000 employees on questionnaire forms completed by the staff themselves during a survey carried out in April 1991. The Ministry of Health had data on 37,000 employees, also on questionnaire forms, collected during a survey carried out in October and December 1991. Some of the information needed for IPPD had not been collected at all. The possibility of using personnel files as a data source was rejected at an early stage and not investigated further.

The personnel information sub-system was considered of lesser importance compared to the data needed for the payroll and pensions modules. It was recognised that analyses might be made on the basis of incorrect data. Notably;

⁵ IPPD Project, Data Conversion Strategy, 28 February 1992.

⁶ *Ibid*, para 2.03

- employees could be allocated to the wrong management unit
- employees could be allocated to the wrong grade
- personnel data could be wrong
- personnel could be omitted.

However, the immediate consequences would be much less serious than a failure to pay large numbers of staff or pensioners.

This analysis accurately predicted the dire consequences of allowing inaccurate payroll data to be entered on to the IPPD system, but it underestimated both the difficulties in obtaining accurate personnel data and their importance for the long-term usefulness of IPPD. If the only objective of IPPD was to produce a better payroll system, it would probably have been cheaper and far less risky to upgrade the old CAG payroll database. The justification for creating an Integrated personnel and payroll database was to strengthen human resource management of the public service. For this to be achieved accurate personnel data were essential.

The decision to reject a strategy of making the paper personnel files (the primary data source for personnel information) more accessible and more complete, in favor of gathering the requisite information by means of survey forms, had long-term implications for the accuracy of the database and for personnel management generally. In practice the quality of the personnel data relied heavily upon the integrity of the individuals completing the forms. The original 1991 data collection survey forms mentioned above were not checked against the establishment files held in the Personnel Registry of OHCS, or any other personnel files.

The decision not to use personnel files was taken because the establishment files were judged to be incomplete, and some of the files were missing. Moreover, the establishment files did not cover non-pensionable posts. The poor state of personnel records is confirmed by a report of a survey carried out by the International Records Management Trust⁷ on registry organization and management in October 1990. Personnel records were surveyed in the OHCS, Public Services Commission, Controller and Accountant General's Department and Auditor General's Department. The report concluded that 'Despite the quantity of paper generated, nowhere are the personal files of civil servants anywhere near complete.' The personnel records maintained by departments were more complete than those of OHCS and they did include files on staff in non-established posts. However, the logistics of locating, identifying and filling in the gaps in the manual records of over a quarter of a million staff would have been a near impossible exercise within the 18 months originally envisaged for the project.

With the benefit of hindsight, the decision not to use personnel files for checking the date of birth and the date of appointment to the civil service was a mistake. The former date determines date of retirement and the latter has a bearing on pensionable benefits. As IPPD is used to generate lists of staff about to retire, it was in the interest of individuals wishing to avoid retiring to enter false dates. Moreover, without checking personnel files it is impossible to identify breaks in an individual's service, which could lead to overpayment of

⁷ Formerly the Overseas Records Management Trust, Report GH1, p14.

pension benefits. At the time of the data collection exercise it was widely believed that the implementation of IPPD would lead to the abolition of the establishment files, or at least lead to a major running down of the central OHCS Personnel Registry. The notion that there would be no means of checking data submitted on the data entry forms may have encouraged false entries.

DATA SOURCES FOR IPPD BEFORE ITS LAUNCH IN JULY 1995

Full Scale Implementation

IPPD went live in July 1995 and replaced part of the old CAG database as the system for running the payroll. Initially there were serious teething problems and large numbers of staff did not receive pay cheques for several months. In part this reflected delays in data being input on to the system. The story attracted the attention of the press and questions were asked in Parliament.

Overall the accuracy of the data on IPPD is variable. Some fields contained accurate, up-to-date information, while other fields are unused or contain out-of-date data. The difference depends largely upon the incentives for encouraging staff and managers to believe that it is in their interest to maintain the accuracy of the information held on the database. In general, information about salaries is accurate. In contrast, there is virtually no incentive to maintain the accuracy of information which does not have a financial component. The data most affected are 'pure' personnel information such as qualifications, training courses attended, etc, which is essential if the system is to be used for personnel management.

The system is mainly used for the payroll. The most satisfied customer in 1996 was found to be GES, which is by far the largest user of IPPD. The Civil Service Performance Improvement Program team also found the reports beneficial, especially for manpower planning; Directors of Administration and Statistics saw the value of IPPD and appeared to be using data from the system. In contrast, Personnel Directors continued to rely very largely on the traditional paper systems. The CAG expressed dissatisfaction with the payroll function, especially in connection with the length of time taken to run payroll and with system security. The Head of Civil Service was the least satisfied: receiving virtually no reports of value to him.

Conclusion

IPPD is a qualified success. However, it would appear to have had little impact upon improving the efficiency, responsiveness and timeliness of personnel administration. Firstly, senior managers appeared to have little understanding of the advantages of a computerized system for analyzing human resource issues. Secondly, from the outset the project sought to minimize the use of manual personnel records and substantially reduce registry functions. The object was based on a lack of appreciation of the significance of paper files.

Finally, the absence of credible emergency arrangements in the event that the computer room at the Controller and Accountant General's Department becomes inoperative was a cause for great concern. This highlights the risks in concentrating strategic information in a single system unless adequate steps are taken to protect it. Also given the vulnerability of a

networked system to unauthorized access, it could be dangerous to put confidential personnel information on the database.

The IPPD project illustrates the complexity of installing and running a computerized system, in conditions where the requisite skills are in short supply and where the existing records are in a poor state.

There is no doubt that the objective of reducing the size of the Civil Service from the censuses conducted in Ghana has to a very large extent, been achieved. A most recent IPPD report on the size of the Civil Service is 76,951 as against 139,287 in the 1986 census.

It cannot however, be said that the reduction in size has brought about a more effective and efficient Civil Service, “properly compensated and continuously motivated” than before.

It cannot also be said that steps will not be taken to further reduce the size and cost of the Civil Service. The Minister of Labor and Social Welfare in a television program on the occasion of the May Day 2001 celebration hinted at the possibility of further retrenchment in the Civil Service of Ghana.

