

# **ACCOUNTING TRAINING PROJECT**

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## **THE HASHEMITE KINGDOM OF JORDAN**

***By***

***William M. O'Reilly, C.P.A.***

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W. M. O'REILLY & COMPANY

CERTIFIED PUBLIC ACCOUNTANTS

6935 WISCONSIN AVENUE

CHEVY CHASE, MARYLAND 20015

(301) 652-7877

June 11, 1980

Mr. Edward T. Giza  
Controller  
USAID/Amman  
Department of State  
Washington, D. C. 20520

Dear Mr. Giza:

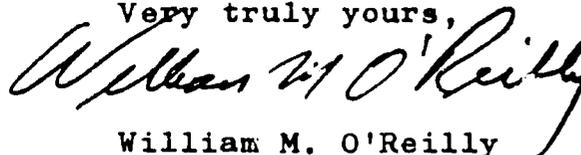
I am pleased to submit the enclosed report on the Jordan Accounting Training Project authorized under Contract No. AID/NE-C-1688.

Jordanian leaders in government, education and professional accounting practice contributed generously in time and ideas to this study. I wish to thank them and the AID officials and staff for their cooperation and assistance.

There has been spectacular progress in accounting education in Jordan since my last visit eighteen months ago. Progress is evident from the increases in the number of courses and accountants in training at Jordan and Yarmouk Universities, and major public and private institutes. However, the projected demand for accounting technicians is increasing faster than the supply. I believe the recommendations contained in this report provide a constructive plan for continued progress in accounting training, especially for intensive short-term courses for the public sector.

Please let me know if you have any questions on the report or require additional information.

Very truly yours,



William M. O'Reilly  
Director

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## BACKGROUND

The Government of Jordan recognizes that the current shortage of accountants is having a serious, adverse impact on the development and growth of major utility, industrial and service organizations. In the public sector, the shortage of accounting technicians is a major obstacle to the optimum use of resources available to meet National development goals. Accountants are needed to support a growing government administrative capability necessary to assure sound accountability of resources, rational allocation of resources, and the factual and analytical data upon which sound financial management decisions are based.

This project was initiated by AID at the request of the National Planning Council to help remedy the accounting manpower shortage by providing technical assistance in developing plans to provide in-country accounting training programs for both the public and private sector.

## REQUIREMENTS OF PROJECT

1. Survey government organizations and existing training facilities.
2. Assess public and private sector requirements for intensive short-term training in accounting.
3. Assess the adequacy of short-term accounting courses now offered in Jordan to meet current and projected requirements.
4. Recommend improvements in existing courses and/or initiation of additional courses to meet existing and projected requirements for accountants. Recommend course prerequisites and sequencing where applicable.
5. Recommend number and qualification of instructors required to conduct required programs.

## SUMMARY OF RECOMMENDATIONS

1. Supplement current on-the-job training in the public sector with formal career development training programs. Specific intensive short-term courses (5-10 days) should be prepared for the following subjects:

- . Basic Accounting
- . Accounting Systems Development
- . Introduction to Computers
- . Computer Programming
- . Systems Analysis
- . Flowcharting
- . Operational Auditing

2. The greatest potential for improvement in current courses, as well as major requirements of new short-term courses, is in the area of pre-packaged instructional material. Producing top-quality standardized instructional material is essential for course delivery and also facilitates training of new trainers. The initial investment in carefully developed instructional materials is essential to assist new trainers and provide briefings to back-up alternate trainers. It also helps to assure standard quality of educational programs and to utilize student training time most effectively. For each short-term course, the following material needs to be provided:

- . Purpose of each unit or module.
- . Specific learning objectives of unit.
- . Content description.
- . Instructor Manual--course plan--lecture notes.
- . Case studies and problems.
- . Solutions to case studies and problems.
- . Methodology of instruction.
- . Individual material for students--workbooks.
- . Visual aids: slides, films, filmstrips, video tapes/cassettes.
- . Audio tapes/cassettes.
- . Reading assignments.
- . Selection aptitude test.
- . Pre-test.
- . Post-test.
- . Evaluation analysis.

Technical assistance to the Institute of Public Administration in the next phase of this project should include preparation of initial instructional material packages and delivery of one or two pilot training courses for each unit.

3. Curriculum design in accounting is linked to plans for the modernization of government budgeting and accounting. Already, theoretical and practical training in government accounting is advancing beyond the practical steps in organizing resources to plan, design, and test alternative conceptual designs of future systems of government budgeting and accounting. Therefore, steps should be taken to initiate government accounting systems research projects to apply the methodology to accounting applications being introduced into the accounting curriculum. Such research effort would include:

3.1. Development of government budget and accounting system.

- . Define goals and purpose of budgeting and accounting.
- . Establish a unified framework for governmental budgeting and accounting.
  - concepts
  - principles
  - standards.
- . Define accounting functions and each subfunction.

3.2. Prepare a simplified guide to governmental accounting containing forms used and illustrations of various transactions and journals, ledgers, and reports. The same could also be done for budgeting.

3.3. Prepare a preliminary plan for accounting system model development to include:

- . Management requirements.
- . System requirements.
- . Functions and processes.
- . Performance requirements.

- . Data requirements.
- . Codes.
- . Inputs.
- . Outputs.
- . Data base.

3.4. Current operations and functions in selected Ministries should be analyzed and documented, using flow diagrams with written procedures prepared.

3.5. Research Department of the Institute of Public Administration should conduct study to modernize the accounting and inventory control system of the Ministry of Supply. The purpose of the study would be to provide system alternatives for achieving:

- . Internal financial control.
- . Stock inventory control and integration to accounting.
- . Serve as a model for system modernization report.

4. The shortage of accountants and trainers in accounting is reason to establish high priority on accounting mechanization programs in the public sector.

5. Improve salary levels of accounting instructors and trainers at universities and institutes to achieve comparability with pay scales in the private sector.

6. Add two full-time accounting trainers to the staff of the Institute of Public Administration.

7. Prepare booklet on various phases of bookkeeping and accounting for use as instructional material, using specific Jordan case studies. Accounting forms will be illustrated in Arabic and English.

8. Develop a self-study course in basic accounting.

9. Establish a unit within all accounting courses covering methods of accounting for inflation and changes in price level.

10. Expand accounting and computer training in vocational schools, junior colleges, and other technical institutes.

11. Develop aptitude test for selecting candidates for accounting and computer training in the public sector.

### METHODOLOGY

We interviewed eighteen leaders in government, education, and professional accounting practice to ascertain the specific knowledge and skill requirements of accountants to perform the tasks assigned to them. Group discussions were conducted with public officials and educators to examine a broad range of contemporary accounting training issues facing the management of government and private organizations.

We observed the actual accounting operations in several government ministries and in a few cases tested records to assure understanding of the flow of accounting data.

Our final statement of recommendations is based on analysis of the findings and issues which were identified during the course of the survey.

Accounting training is determined primarily by the functions accountants are expected to perform. The knowledge, skills, and techniques required to perform the functions depend on specific data requirements of users of accounting information. Therefore, our survey was designed to identify actual uses of accounting data, and the role of accountants in both the public and private sectors. We also assessed the impact that changing information technology and the modernization of government budgeting and accounting would have on training needs.

Before completing the assignment in Amman, we had the opportunity to give several presentations of the summary results of this report, and to obtain comments and recommendations from

educators and other officials involved in the survey.

Presentations were made to AID officials, the faculty at the Institute of Public Administration, and Dr. Basil Jardaneh, Secretary-General of the National Planning Council.

### ASSUMPTIONS

Several significant factors concerning our survey were clearly recognized by the government officials and educators and did not require any specific validation or verification. The following points were generally agreed to by all persons involved in the survey.

1. Modernization of government budgeting and accounting is recognized as a national goal.

2. There is a critical shortage of accountants and accounting trainers.

3. High government priority is assigned to accelerating financial management training to meet current and projected requirements.

4. The leadership in accounting education and public accounting recognize the need to develop a framework of accounting for the public and private sector and to establish authoritative Jordan or regional principles and standards of accounting.

5. The National Manpower Plan does not contain specific details on the current number of accountants and the projections of number of accountants to be trained annually to 1985.

6. Although there is no official definition of "accountant", we have assumed a broad definition which includes the basic functions of:

- . budget preparation
- . budget execution
- . fund control

- . cash management
- . billing and receiving funds
- . accounts payable and disbursing funds
- . coding
- . recording transactions
- . summarizing transactions
- . maintaining journals and ledgers
- . reporting
- . cost accounting
- . cost analysis
- . taxation
- . general accounting
- . payroll
- . property control
- . internal control
- . auditing
- . financial forecasting.

### SUMMARY OF FINDINGS

1. There is top government management support for modernizing budgeting and accounting systems and providing expanded career development training programs.

2. The Institute of Public Administration (IPA) has a research subproject to establish a base-line on accounting manpower resources. The project will provide:

- . Definition of accountant.
- . Classification of accounting positions.
- . In the public sector, the number of accountants.  
by position classification within function.
- . Manpower needs by function in the public sector.

3. Major progress since initial study eighteen months ago:

- . IPA developed 300-hour financial accounting course including elementary, intermediate, and advanced accounting.
- . IPA expanded the curriculum in the governmental accounting course.

- . Jordan Institute of Management (JIM) started first full year program with six courses in accounting-related courses for the private sector.
- . University of Jordan enrollment of accounting majors increased substantially from 350 to 600. An evening session is planned for Fall 1980.
- . Yarmouk University has added a major in accounting and will have separate courses for intermediate and advanced accounting.

4. Current number of university graduates with a major in accounting:

University of Jordan	-	350
University of Yarmouk	-	<u>80</u>
		430

5. Institute of Public Administration courses for 1980:

- . Financial Accounting (320 hours)
  - Elementary
  - Intermediate
  - Advanced
- . Governmental Accounting (192 hours)

6. Jordan Institute of Management courses for 1980:

- . Project Appraisal (1 month)
- . Stock Control
- . Financial Analysis (1 month)
- . Cost Accounting (2 weeks)
- . Corporate Income Tax (2 weeks)
- . Accounting for Non-Accountants (1 week)
- . General Accounting.

7. University of Yarmouk uses English language textbooks. University of Jordan courses do not use a single text, but draw from a selection of more than sixty different accounting textbooks in the University library.

8. Development of instructional materials is done by instructors for each course. This complicates the task of finding and training of trainers since the instructional packages for each course are not always available for a new trainer.

9. Problems.

- 9.1. Demand for accounting education is greater than the supply.
- 9.2. Lack of trained staff (only 11 full-time instructors at two universities and two major institutes).
- 9.3. Shortage of full-time accountant trainers at IPA (one full-time).
- 9.4. Financial control of the JD 10,000,000 inventory at the Ministry of Supply. Financial controls have not been developed to meet new operational needs. Should be top priority!
- 9.5. Insufficient training courses in computer sciences.
- 9.6. Training in operational auditing is provided only in the private sector. It is needed in the public sector.
- 9.7. Lack of written accounting manuals containing policies and procedures, needed for administration and training.
- 9.8. There has been no major update in the budget and accounting system in 18 years.
- 9.9. There is no unit of government assigned primary responsibility for the budgeting and accounting modernization program.
- 9.10. Budget function does not include evaluation of performance and effectiveness.
- 9.11. Shortage of staff in budgeting function (now 15 budget examiners; should have 18).
- 9.12. There is no accurate data available on numbers of students studying accounting outside Jordan in universities.

- 9.13. Instruction materials for the same and similar courses are not standardized and each instructor chooses appropriate documentation. While this provides flexibility, it doesn't assure education quality control. It also increases the time for training trainers and course preparation.
- 9.14. There is a lack of flexibility in use of key personnel. Lack of adequate remuneration for skilled instructors is the basic problem.
- 9.15. The Institute of Public Administration does not have sufficient modern accounting textbooks.

10. Every training group acknowledges a need to institute intensive short-term courses in computer sciences and development of accounting systems.

#### SUMMARY OF ISSUES

1. Development of national or regional accounting concepts, principles, and standards for both the public and private sector.
2. Accounting systems are based largely on budget systems. Therefore, many accounting issues will need to be closely coordinated with proposed changes in the budget system.
3. The conceptual framework for budgeting and accounting provides for using same classifications of data, methods of measurement, basis for accounting, and timing of actual expenditure reports.
4. Current accounting systems development and training must be closely coordinated and based on the unified government accounting concepts, principles, and standards adopted by the Organization for Administrative Sciences (Arab League).
5. Will the budget function include evaluation of performance and effectiveness or is a separate unit of government needed for auditing and evaluation functions?

6. Development of salary scales for public sector:
  - . Need for incentives.
  - . Comparability with private sector.
7. Coordination in development of instruction materials for basic course in accounting.
8. There is no generally accepted definition of accounting/accountant.
9. The current and projected shortage of accountants, near-term, is related to computerizing accounting operations and importance of using pre-packaged instruction materials.

#### DEVELOPMENT OF PRINCIPLES AND STANDARDS OF ACCOUNTING

The foundation of education in accounting theory is based on understanding accounting principles and standards. Accounting education and practice in Jordan is in a state of transition between reliance on rules of accounting adopted in other countries, particularly the United States, and development of a body of accounting knowledge especially suitable to the needs of Jordan and other Arab states.

At present, there are no official Jordan or regional principles and standards of accounting promulgated by an official state or regional professional organization established for such a purpose. In the absence of official accounting rules, it has been necessary for the major accounting firms to determine the principles and standards to guide their professional role of developing accounting systems and auditing financial statements.

Until recently, American principles and standards of accounting were adopted by Jordanian professional accountants in performing audits in the private sector. Leading educators and professional accountants in Jordan realize the necessity to adopt accounting rules applicable to the economic and accounting realities of Middle East countries. As a result, there has been some rejection of formally adopted American rules which are no longer applicable. This phenomenon is indicative of the trend

toward regionalization of accounting practices.

It is now recognized by leading Middle East professional accountants that a new code of principles and standards need to be adopted which are more relevant to the needs of Middle East professional accounting organizations.

Principle factors which cause the Arab countries to seek more suitable principles and standards of accounting has been the delay of Western professional accountants to adopt rules to deal with current commonplace economic and accounting realities, such as inflation, current valuation of monetary items, disclosure of cost of hedging against currency rate fluctuations, and indexing loans, etc.

#### TRAINING CENTERS IN GOVERNMENT MINISTERIES

The need for training business and government personnel in Jordan can partially be met through a practical approach to preparing "packaged" training courses providing individual and small-group instruction. This approach is particularly suited for use in the Ministries where clerical and business skills are required. Local training centers can be established within the various ministries. The centers would utilize technological approaches to education which are based on modern methods and systems of teaching with pre-packaged instructional materials. This approach is ideal when there is a shortage of teaching personnel and flexibility in delivering training programs is important. Also, it offers the major advantage of assuring pre-determined high quality content of the educational programs.

The training centers would utilize the latest development in media technology which in the next few years will exert a profound influence on the traditional methods of teaching accounting and other management sciences at all levels of career development. This use of media technology provides an opportunity to improve the quality of management and finance education while reaching more persons presently in business and government career positions.

Improve the mediation support for present instructional programs by producing video-cassettes of lecture presentations including skill training and case workbooks and solutions to case studies.

An essential cornerstone of successful accounting training programs is the development of well-designed and effective instructional materials. We recommend plans to utilize a variety of instructional materials, depending on the specific needs of each individual and each subject area. In most programs, this would include student workbooks and instructors' guides. Because of the special nature and variety of training needs, we recommend the use of video program instructions. This would consist of twenty-five minute video instruction in separate modules. Each module would consist of lectures and also visual illustrations of the applications being discussed in the lecture. These can be applied to a broad range of accounting applications, especially where practical applications need to be illustrated.

Co-ordinated Cassette-Workbook Programs. These individual study courses offer important benefits to the accountant who cannot always find the time to participate in "live" career development programs. Each program utilizes the "listen and learn" convenience of taped lectures, supported by a fully coordinated workbook. What you hear reinforces what you see. And what you do--in the workbook--reinforces both.

We provided the Institute of Public Administration with a set of instructional materials for a unit of a course on cost-benefit analysis. The title of the unit was, "Time Value of Money". It consisted of an Instructor's Guide, 126 slides with audio tape of 30-minute presentation, slide narrative, student text, and problem solutions. This instructional material was prepared by the Economic Development Institute of the World Bank. It represents a good example of the types of instructional materials which are needed for the short-term courses in accounting and financial management.

We also provided the Institute of Public Administration with instructional material for basic bookkeeping in four modules. This material was prepared by the Economic Development Institute/World Bank with the understanding it would be given to IPA.

#### PREPARATION FOR SHORT-TERM COURSES

Short-term intensive courses in accounting-related topics need to be carefully structured. Course schedules and lesson plans indicate precise time allotments for each lecture, discussion, review questions, discussion questions, problems and case studies, and summarizations.

The careful design and development of short-term courses requires proportionately more preparation time for instructional materials than in college level courses conducted over a normal semester of fifteen weeks. The compression of instructional activity into a few days creates an opportunity and challenge to conduct each portion of the program according to a set plan.

#### ADDITIONAL TRAINING STAFF FOR SHORT-TERM COURSES

The two instructors recommended for addition to the staff of the Institute of Public Administration should have the following qualifications:

- . Two years' teaching experience at college level.
- . Graduate degree in accounting or equivalent experience.
- . Experience in public service and private accounting practice.
- . Experience in producing instructional materials.

#### COMPUTER TRAINING

At present, there is computer training provided through the Royal Scientific Society and also the University of Jordan. The courses we recommend for the Institute of Public Administration would be in addition to those courses now available. The new

courses at the Institute of Public Administration would provide specialization in the development of financial management systems.

#### ACCOUNTING COURSE TITLES

- . Introductory Accounting
- . Intermediate Accounting
- . Advanced Accounting
- . Accounting for Managers
- . Budget Planning and Control
- . Project Evaluation
- . Cost Accounting
- . Cost Analysis
- . Cost Benefit Analysis
- . Budgeting
- . Governmental Accounting
- . Introduction to Computer Programming
- . Accounting Systems
- . Accounting Information Systems
- . Introductory Statistics
- . Controllership and Budgeting
- . Institutional Accounting
- . Capital Budgeting
- . Managerial Accounting
- . Auditing
- . Statistical Sampling
- . Flowcharting Techniques
- . Inventory Control
- . Systems Analysis
- . Management Analysis
- . Management Information Systems
- . Data Base Management.

#### APPENDIX A - FINANCIAL ANALYST TRAINING PROGRAM

Included in Appendix A is a brief description of the units comprising the Financial Analyst Training Program offered by W. M. O'Reilly & Company. It consists of twenty-two modules/units. Each unit requires from three hours to fifteen hours. The program is flexible so that various groups may select only those units which are applicable.

Accounting courses provided to accounting majors at the University of Jordan provide all the subjects included in the 22 units. However, the separation of the total accounting curricula into the separate units provides a general framework of course content and also a practical classification of subject matter for presentation in short-term seminars.

W. M. O'REILLY & COMPANY  
FINANCIAL ANALYST TRAINING PROGRAM

1. Introduction.

Provide overview of course content, methods of instruction and objectives. Define the role of the financial analyst.

2. Financial Statement Analysis and Use of Statistics.

Comparative statement, basic financial ratios, trends in financial data, statistical analysis as a scientific method. The role of statistics in decision making.

3. Review of General Accounting Principles and Standards.

An update to refresh participants' understanding of the conceptual framework in which the process of accounting is applied. Examine and analyze the developments in international standards of accounting. Application of specific accounting principles to the problems involved in financial analysis.

4. Objectives of Financial Statement Analysis.

Illustration of theories, concepts and techniques in typical double-entry system. Examination of the postulates upon which the accounting structure is based; purpose and approach to establishing accounting classifications.

5. Tools and Techniques for Financial Analysis.

To enable the participants to understand and apply the tools and techniques of financial statement analysis.

6. Measurement of Financial Position.

Nature, purpose, and uses of the statement of financial position. Preparation and interpretation of contents of the statement of financial position. An appreciation of the basic accounting assumptions which underlie the measurement of enterprise financial position and changes in equity and fund balances.

7. Ratios as Tools of Analysis.

The use of ratios for analysis of financial statements; developing trend analyses showing absolute comparisons, relative changes, and percentage relationships.

8. Planning Cash Flow.

How to determine and maintain the optimum level of cash and working capital based on comprehensive analysis of factors affecting cash flow. Comprehensive picture of present and projected cash flows; the management of working capital. Preparation and use of the statement of changes in financial position.

9. Cost Accounting Basics for Cost Analysis.

Basic concepts and applications underlying cost accounting techniques used to provide data for cost analysis. Concepts underlying variable-cost budgeting; basic tools and techniques for cost accounting; accounting control for indirect costs; variance analysis; how to use cost accounting as a tool for analysis; cost variability; concepts of cost-volume analysis; principles of cost variability; distinction and methods of planning and controlling various types of costs based on their variability.

10. Cost Estimating and Uncertainty.

Application of techniques for appraising investment and estimating costs, giving due consideration to the risk and uncertainties involved in estimated costs. Use of techniques involving simple probability and decision making. Techniques for coping with uncertainty of cost.

11. Price Level Accounting.

Training in the most recent developments in accounting theory and practice to deal with problems of price level change and inflation. Preparation of financial statements in terms of purchasing power, rather than dollars...Approaches being adopted to deal with the world-wide phenomena of inflation relating to financial management and reporting...Design of financial planning system involving significant anticipated price level changes; Analysis of the Financial Accounting Standards Board (FASB) statement on "Financial Reporting in Units of General Purchasing Power."

12. Long-Term Capital Structure.

Techniques for long-term financial planning and determining needs for long-term funds required for projects, recognizing problems of timing and uncertainty. Understanding the uses of equity and debt for the proper balance in long-term funding; how to conduct an analysis to determine long-term financial requirements and alternative sources of capital.

13. Rate of Return on Investment.

Application of discounted and internal rate of return techniques for providing impartial comparisons for project investment decisions. .... Techniques for implementing a complete project analysis employing discounted and internal rate of return techniques and provide impartial comparisons for any type of investment concepts; traditional methods of investment evaluation; the interest concept and the rate of return; limitations on use of rate of return; and risk analysis.

14. Flowchart Preparation.

Introduction to the use and application of symbols and techniques of flowcharting. Design and preparation of flowcharts for management and financial analysis of projects.

15. Program Evaluation Review Technique (PERT).

Preparation of work breakdown structures networks; activity time estimates; network time calculations; scheduling; probability aspects of PERT.....The basic concepts, methods, and techniques required in the utilization of PERT techniques.

16. Evaluation of Management Systems and Internal Controls.

The basic elements of a Management Information System (MIS) and its relationship to project analysis....How to conduct internal management reviews and surveys of financial operations; how to develop internal control questionnaires to aid in management system evaluations; basic techniques for interviewing to obtain data; current approaches to operational audit and report writing.

17. Project Budgeting Planning and Control.

Preparation of project budgets as instruments for planning, measuring, and improving performance for each project... Use of Management by Objectives (MBO) techniques for assigning responsibilities, setting goals, using yardsticks and evaluating performance.....concepts and characteristics applicable to development of long-term project budgets.

18. Investment Criteria and Capital Budgeting Decisions.

Application of a variety of techniques for evaluating the feasibility of project investments. Rate of return on investment, the present discounted value criterion, dealing with uncertainty inherent in future projections.

19. Statistical Techniques.

Basic principles, concepts, and techniques of statistics used in budget planning and control. Application of scientific sampling techniques; basic principles of sampling; the nature of sampling error; confidence in sampling; practical value of sampling; the process of estimating from a sample; confidence or risk in using the estimate; designing statistical samples...tests of hypotheses.

20. Statistical Inference from Samples.

Application of statistical techniques involving statistical inferences, tests of hypotheses involving Type I and Type II errors, and tests of differences between arithmetic means in order to base estimated projects costs on quantitative analysis whenever feasible. ...Sampling error and bias; simple random sampling; how sample means are distributed; tests of differences between arithmetic means; sample survey methods based on probability sampling and nonprobability sampling.

21. Regression Analysis for Prediction and Control.

How to use historical accounting information combined with statistical techniques for quantifying and predicting estimated future events expressed in financial terms. Techniques of simple and multiple regression and correlation analysis in preparing estimates of project costs. Using simple regression and correlation; scatter diagrams; coefficient of determination; statistical inference in multiple regression; regression of time series; distinction between correlation and causation.

22. Analysis of Direct and Indirect Costs.

Distinction between direct and indirect costs; preparation of indirect cost rate proposals; measurement of the variability of indirect costs.