January 28, 2003

RICHARD J. STRASSER, JR.
CHIEF FINANCIAL OFFICER AND EXECUTIVE VICE PRESIDENT

SUBJECT: Audit Report – Postal Service's Total Factor Productivity
(Report Number AC-AR-03-001)

This report presents the results of our self-initiated audit of selected aspects of the Postal Service's total factor productivity model (Project Number 01JG003LB000). The audit objectives were to determine whether the data used in the Postal Service's productivity measure were appropriate and whether the Postal Service's productivity compared favorably with the private sector over time.

We concluded that the data used in the model was appropriate and consistent with Postal Service published data. However, despite significant capital investments, the Postal Service's productivity gains fluctuated and were less than that realized by the private sector. Factors contributing to the fluctuation and lower productivity gains included the Postal Service's focus on service instead of cost management, limits on its ability to adjust labor resources, and failure to fully realize expected returns on some capital investments. We noted that for fiscal years 2000 and 2001, the Postal Service increased its focus on cost management and reduced labor hours, capital investment, and material expenditures. This contributed to a combined 3.7 percent productivity gain. We also noted that in fiscal year 2002, subsequent to our audit, the Postal Service achieved a 1.1 percent productivity gain. We recommended the Postal Service continue proactively managing costs to further increase total factor productivity within current laws and regulations and educate stakeholders on its need for additional flexibility to fulfill its universal and public service obligations at a reasonable cost.

Management agreed with our recommendations and stated the report effectively addressed the challenges faced by the Postal Service in maintaining productivity gains in the future. Management's comments and our evaluation of these comments are included in this report.

We appreciate the cooperation and courtesies provided by your staff during the audit. If you have any questions, please contact Larry Chisley at (813) 261-5200 or me at (703) 248-2300.

B. Wayne Goleski
Assistant Inspector General
for Core Operations

Attachment

cc: Charles S. Hartsock
Louis E. Honore
Susan M. Duchek

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EXECUTIVE SUMMARY

Introduction

During the 1980s, a Postal Service contractor developed a total factor productivity model to measure the changes in the relationship between services provided and the resources expended in providing those services. The objectives of this self-initiated audit were to determine whether the data used in the total factor productivity model resulted in an appropriate measure of productivity and to compare the Postal Service's total factor productivity levels to private sector multifactor productivity.

Results in Brief

We concluded that the data used in the Postal Service's total factor productivity model was appropriate. Specifically, the data used in the model were consistent with financial information reported in the Postal Service's financial statements and the economic indices used were appropriate. Since fiscal year (FY) 1990, the Postal Service's total factor productivity grew about 2.9 percent, which translated into a $3 billion cost savings. However, despite significant capital investments, the Postal Service's productivity fluctuated and has been less than the 9.3 percent productivity increase realized by private sector companies. If the Postal Service had kept pace with productivity increases in the private sector, it would have realized an additional $2 billion in costs savings.[1]

Factors contributing to fluctuating and lower productivity gains included the Postal Service's focus on service instead of cost management, limited reduction in labor resources during periods of declining volume growth rates, and failure to fully realize expected returns on some capital investments. Despite these factors, during FYs 2000 and 2001, the Postal Service achieved 2.4 percent and 1.3 percent productivity gains, respectively–a cost savings of about $2.4 billion. Without these total factor productivity gains, the Postal Service's losses during this period would have been approximately $4.3 billion instead of the actual loss of $1.9 billion.

[1] As does the Postal Service in its annual reports, we compared Postal Service's total factor productivity to the nonfarm multifactor productivity published by the Bureau of Labor Statistics. We recognize that multifactor productivity is not an ideal benchmark for the Postal Service because it contains many companies and industries that are less labor intensive than the Postal Service.

Restricted Information

Summary of Recommendations	We recommended the Postal Service continue proactively managing costs to further increase total factor productivity under current law and regulations and educate stakeholders on its need for additional flexibility to fulfill its universal and public service obligations at a reasonable cost.
Summary of Management's Comments	Management agreed with our recommendations stating they intend to continue targeting and budgeting for total factor productivity growth. In addition, management stated that the purpose of the Transformation Plan issued April 2002 was to educate stakeholders on the need for further flexibility to fulfill its universal and public service obligations at a reasonable cost. Further, management reiterated that multifactor productivity was not an ideal benchmark for the Postal Service and stated that variations in total factor productivity was in part the result of the Postal Service sacrificing productivity gains for other goals. Management concluded that the report effectively discussed the challenges the Postal Service faced in maintaining productivity gains in the future.
Overall Evaluation of Management's Comments	Management's comments are responsive to our recommendations and the actions taken and planned should correct the issues identified in the report.

INTRODUCTION

Background

During the 1980s, a Postal Service contractor developed a comprehensive measure of productivity. The contractor developed the Postal Service's total factor productivity model and assisted the Postal Service in establishing the required data sets used in the model to calculate productivity changes. The model was used to measure the changes in the relationship between services provided and the resources used in providing those services. The Postal Service's main services or workload were mail volume and its delivery network–the number of household and business addresses served. Resources include all labor, capital,[2] and materials[3] used to process and deliver the mail.

Simply stated, total factor productivity changes are calculated as the percentage change in workload minus the percentage change in resources used. Productivity increases when services provided increase at a faster rate than the resources used to process the workload. For example, if workload increases by 2 percent and the resources used increase by only 1 percent, total factor productivity would increase by 1 percent.

The Postal Service's total factor productivity measure has been compared to the nonfarm private business sector's multifactor productivity–a measure used by the Bureau of Labor Statistics to report productivity changes. While the nonfarm private business sector multifactor productivity is the most comparable benchmark for the Postal Service's total factor productivity, it is not an ideal benchmark because changes in multifactor productivity are heavily influenced by capital and technology intensive business sectors. Although the Postal Service invested billions in automation, it still relies largely on its labor workforce to provide mail services. Roughly 78 percent of the Postal Service's cost structure is labor cost.

[2] Capital includes buildings, land, vehicles, processing equipment, and service equipment.
[3] Materials include transportation, supplies and services, utilities, research and development, and miscellaneous judgments.

In addition, total factor productivity along with postage rates and resource prices affect financial performance.[4] In fiscal year (FY) 2001, the Postal Service used total factor productivity as the sole national measure of financial performance in its pay for performance program. While changes in total factor productivity affect financial performance, total factor productivity only measures how resources are used to produce services and does not always directly correlate with net income. The Postal Service recently discontinued its pay for performance program but continues to track total factor productivity changes.

Objectives, Scope, and Methodology

Our objectives were to determine whether the data used in the Postal Service's total factor productivity model resulted in an appropriate measure of productivity and to compare the Postal Service's productivity levels to the private sectors' multifactor productivity. To accomplish our objectives, we interviewed Postal Service Headquarters personnel in the Office of Budget and Financial Analysis, to obtain information on the development, implementation, and uses of total factor productivity within the budget planning process and financial performance analysis. We interviewed the Postal Service contractor responsible for developing and providing total factor productivity results and interviewed industry officials and reviewed various studies to gain background and benchmarking information related to the model.

In addition, we obtained, reviewed, and analyzed input and output data used in the total factor productivity model during FYs 1999 to 2001 to determine whether the data were reasonable. To assist in our analysis, we utilized economists to determine whether the indices and base years used in the total factor productivity calculation for FY 2001 were reasonable. Finally, we relied on the Office of Inspector General (OIG) financial management team that annually tests and validates the Postal Service's financial systems and data for security, reliability, and accuracy.

[4] Financial performance represents the achievement of net income and productivity gains, and investments in future improvements in service and productivity by making substantial capital investments.

Our audit was conducted from March 2002 through January 2003 in accordance with generally accepted government auditing standards and included such test of internal controls as were considered necessary under the circumstances. We discussed our conclusions and observations with appropriate management officials and included their comments, where appropriate.

Prior Audit Coverage

In the OIG report, Total Factor Productivity (Report Number PA-AR-98-002, dated September 30, 1998), we concluded that the total factor productivity model was conceptually proper and that measurements were calculated and consistent with the model using the available Postal Service data. However, we noted that timeliness and quality of service data were not included in the model. We recommended management develop a plan for introducing timeliness and quality of service-related measurements to the total factor productivity model. Management concurred with the recommendation; however, management has not resolved the issue of accounting for service quality in the total factor productivity model.

AUDIT RESULTS

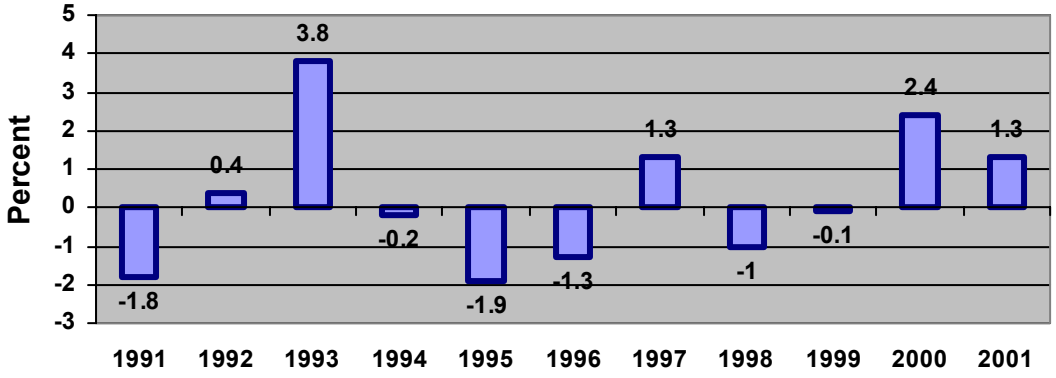
Data Used in Total Factor Productivity Was Appropriate

The data used in the Postal Service's total factor productivity model provided an appropriate measure of productivity changes each year. Specifically, we determined the data used to calculate annual total factor productivity changes were consistent with the Postal Service's financial statement data. The Postal Service used labor hours and employee pay and experience levels to determine the change in labor resources. Quantity and price indices were applied to capital and material expenditures to standardize the change in resource prices and to determine the quantity of those resources used each year. Mail volumes and network delivery points were used to calculate the Postal Service's workload each year.

We also determined that the indices the Postal Service used were the best available in that they were reported by the Bureau of Labor Statistics and Bureau of Economic Analysis. Also, where indices did not exist for specific goods or services, the Postal Service used historical operational data. As a result, the total factor productivity model provides a reasonable measure of productivity each year.

Total Factor Productivity Fluctuated and Was Below Private Sector Productivity Gains	While the total factor productivity model appropriately measured productivity, the Postal Service's productivity fluctuated and was below the gains of the nonfarm private business sector. Factors contributing to the fluctuation and lower productivity gains included the Postal Service's focus on service instead of cost management, limits on its ability to adjust labor resources and failure to fully realize expected returns on some capital investments. Since 1990, if the Postal Service had achieved the productivity gains measured in the nonfarm private sector, it would have realized costs savings of about $5 billion–$2 billion more than the $3 billion reportedly realized.
Total Factor Productivity Gains Fluctuated	Although, total factor productivity improved during several periods since FY 1990, the Postal Service's productivity fluctuated. For example, in FYs 1992 and 1993, the Postal Service's productivity grew by 4.2 percent but in FYs 1994 through 1996, productivity declined by 3.4 percent–yielding a net productivity gain of only .8 percent for that 4-year period. Specifically, during FYs 1992 and 1993, the Postal Service reduced labor resources while workload increased resulting in productivity gains. However, in FYs 1994 through 1996, the Postal Service labor resources used increased by more than the increase in workload, resulting in productivity losses. The following chart illustrates the Postal Service's fluctuating pattern of total factor productivity gains and losses from FYs 1991 through 2001.

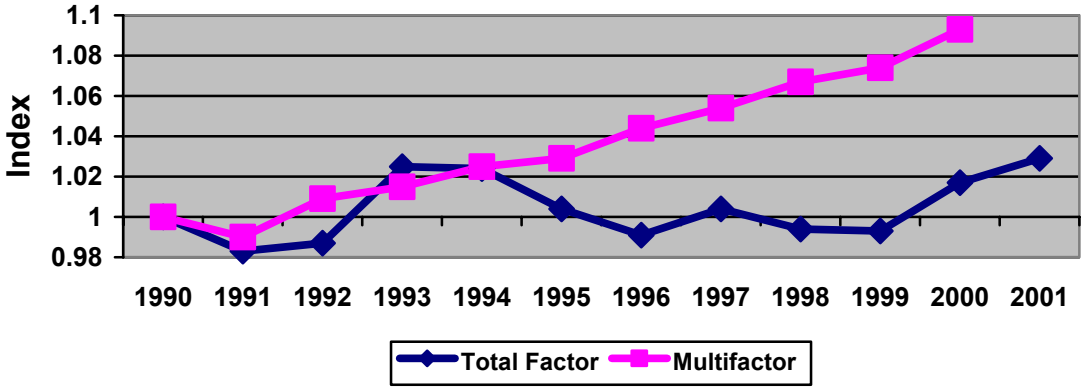
Total Factor Productivity Changes



Total Factor Productivity Gains Below Comparable Private Sector

In addition, the Postal Service's overall total factor productivity has been below the comparable private sector multifactor productivity. Specifically, the Postal Service's total factor productivity increased 2.9 percent while the comparable private sector's productivity increased by 9.3 percent since FY 1990. The following chart compares the Postal Service's total factor productivity to the private sector's multifactor productivity since FY 1990.

Postal Service Total Factor Productivity Versus Multifactor Productivity
Indexed to 1990



Postal Service management stated that the fluctuating and lower productivity gains occurred in part because they were focusing on improving delivery service and automation, instead of managing resources to improve productivity. In addition, we found the Postal Service's ability to reduce labor resources was limited and they did not effectively ensure returns on investments in technology. For example:

- In 1978, the Postal Service agreed to a 'No Layoff or Reduction in Force' clause with its unions which limited the Postal Service's ability to reduce labor when warranted by reductions in workload, which are still in effect. Thus, significant reductions in labor and improvements in total factor productivity have been limited to periods of hiring freezes or reductions in employees through attrition.

- OIG audits of the Tray Management System and Robotics Containerization System found investments in these projects totaling $639 million had not produced

expected returns of more than $800 million. In another audit[5] of seven projects totaling more than $800 million in capital investments, we disclosed that the accounting system did not track operating expenditures or actual savings for projects. As a result, the Postal Service did not know whether the expected returns on investments in these projects were being realized.

[5] Decision Analysis Report Process (Report Number DA-AR-01-005), dated September 27, 2001.

Proactive Cost Management Leads to Productivity Gains

During FYs 2000 and 2001 the Postal Service began managing cost to achieve total factor productivity improvements and achieved a 3.7 percent productivity gain– a cost savings of about $2.4 billion. Without these productivity gains, the Postal Service's losses during this period would have been approximately $4.3 billion, instead of the $1.9 billion loss.

For instance, in FY 2000, the Postal Service began planning for total factor productivity improvements by targeting productivity gains during the budgeting process. The Postal Service reduced labor resources by approximately 5 million hours and decreased material usage, while workload increased. As a result, the Postal Service's total factor productivity increased by 2.4 percent. In FY 2001, the Postal Service further decreased labor resources by approximately 34 million hours and decreased material usage while workload declined slightly. Thus, the Postal Service's total factor productivity increased by 1.3 percent.

We commend the Postal Service for the significant total factor productivity gains achieved during FYs 2000 and 2001. However, we question management's ability to maintain these gains because of the limitations previously discussed and we caution management to ensure that cost cutting measures are strategic and not short-term. For example, during FY 2001, the Postal Service instituted a freeze on hiring and capital spending for new facilities, which contributed to the total factor productivity gains but may result in long-term negative impacts on Postal Service operations.

Recommendations

We recommend the chief financial officer and executive vice president:

1. Continue targeting and budgeting for total factor productivity growth within its current laws and regulations.

2. Educate stakeholders on the need for further flexibility to fulfill its universal and public service obligations at a reasonable cost.

Management's Comments	Management agreed with our recommendations stating they intend to continue targeting and budgeting for total factor productivity growth. In addition, management stated that the purpose of the Transformation Plan issued April 2002 was to educate stakeholders on the need for further flexibility to fulfill its universal and public service obligations at a reasonable cost. Further, management reiterated that multifactor productivity was not an ideal benchmark for the Postal Service and stated that variations in total factor productivity was in part the result of the Postal Service sacrificing productivity gains for other goals. Management concluded that the report effectively discussed the challenges the Postal Service faced in maintaining productivity gains in the future.
Evaluation of Management's Comments	Management's comments are responsive to our recommendations and the actions taken and planned should correct the issues identified in the report. In addition, we revised the report as appropriate to address management's additional comments.

APPENDIX. MANAGEMENT'S COMMENTS

RICHARD J. STRASSER, JR.
CHIEF FINANCIAL OFFICER
EXECUTIVE VICE PRESIDENT

UNITED STATES POSTAL SERVICE

January 10, 2003

KIM STROUD

SUBJECT: Draft Audit Report/Management Advisory — Total Factor Productivity AC-AR-03-Draft

Thank you for giving us the opportunity to comment on your report on Total Factor Productivity (TFP). We have reviewed the Office of Inspector General's draft report of TFP and offer the following comments:

Multifactor Productivity as a Benchmark for Total Factor Productivity Performance

We agree with your conclusion that Multifactor Productivity (MFP) is not an ideal benchmark for the Postal Service. However, this conclusion is stated only in a footnote in the Executive Summary. This conclusion needs to be more fully developed in the body of your report.

The Private Nonfarm Business sector which is reflected in the MFP Index includes a wide array of manufacturing and service industries. Some of these industries have high rates of productivity growth; others have low and even negative rates of productivity growth. The Private Nonfarm Business MFP Index represents a weighted productivity performance of these different industries into an overall measure. There is no inherent reason why the particular weighting of these different industries represents a good benchmark for Postal Service TFP.

As stated in your report, Private Nonfarm Business MFP growth improved over its previous performance during the 1990s. However, productivity experts such as Professor Dale Jorgenson of Harvard University, have found that the improved productivity performance in the 1990s was primarily due to productivity gains achieved in the manufacture of computers, software, and communications equipment[1]. There is nothing in Postal Service operations that resembles this type of high-tech manufacturing. In light of this, one could conclude that comparing Postal Service productivity with the Private Nonfarm Business sector is not very illuminating.

At the very least, one would need to net out the effects of productivity gains in high-tech manufacturing before using Private Nonfarm Business MFP as a benchmark for the Postal Service. In addition, any such benchmark comparisons should address the very high degree of labor intensity of Postal Service operations that was identified in the OIG report. As further information, if one were to separate service-like industries from the MFP Index, the results would indicate flat or negative productivity trends. Ideally, we would like to see a recommendation to discontinue this comparison.

[1] Dale W. Jorgenson, "Information Technology and the U.S. Economy," American Economic Review, Vol. 91, No. 1, March 2001, pp. 1-32.

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Fluctuating Total Factor Productivity Results

The report at times seems to characterize Postal Service TFP results as being volatile. We do not think this characterization is particularly appropriate. There were variations in TFP growth over time due to various factors, just as there are variations in economy-wide productivity growth. Perhaps you may have been trying to say that at various times the Postal Service sacrificed TFP gains for other goals such as service improvement or investment in infrastructure, and we would agree with that.

General Comments

When referencing return on capital investments in your report, we recommend adding the word "all" or "some" before all references to failed return on investments (ROIs) of capital investments. Without this addition, these phases, if taken out of context, imply the Postal Service did not achieve expected returns on any of its capital investment decisions.

Recommendation 1

Continue targeting and budgeting for TFP growth within its current laws and regulations.

Management Response

We have been and intend to continue doing this.

Recommendation 2

Educate stakeholders on the need for further flexibility to fulfill its universal and public service obligations at a reasonable cost.

Management Response

This is the purpose of our Transformation Plan.

Your report does an effective job of laying out the challenges we face in maintaining productivity gains into the future. If you wish to discuss any of our comments, our staff is available at your convenience.

Richard J. Strasser, Jr.