The Effect of Internal Service Funds on the Comparability of Government Accounting Numbers

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ON THE COMPARABILITY OF GOVERNMENT ACCOUNTING NUMBERS

Governmental standard setters have expressed concern with consistency of accounting standards and the related effect on comparability of information in accounting reports. This study attempts to determine whether the choice to use or not to use internal service funds (ISFs) affects the accounting ratios of municipalities. A t-test comparison of several measures of the variability of municipal expenditure ratios between cities that do and do not use ISFs suggests that inconsistency in practice results in measurable differences between the two groups. Ordinary least squares analysis controlling for other variables confirmed these results. Additional analysis further investigates, in departments where expected service level patterns can be specified, whether use or nonuse of ISFs to account for the fixed assets is more likely to report expenditure patterns consistent with the service patterns. For fire and police departments, the use of ISFs for equipment management resulted in expenditure patterns more closely approximating the expected service patterns and, in that sense, more comparable over time.
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1. INTRODUCTION

Fund accounting and the modified accrual basis of accounting are two of the primary attributes that distinguish governmental from business accounting. The two attributes are interrelated since, of the eight fund types permitted for state and local government accounting, the modified accrual basis is required for five. The full accrual method is required for two, and both methods are permitted for the eighth, depending on the purpose of the fund.

Recent research has demonstrated an association between the variability of accounting ratios and the use of fund accounting by cities: cities that use all eight fund types exhibit lower variability, on average, in certain ratios over time than do cities that do not use all of the eight fund types (Ingram and Copeland, 1986). Other research has found that cities using all eight fund types exhibit lower credit risk, on average, than cities that do not use the eight fund types (Ingram, 1986). Explanations for these observed differences have been tenuous.

This study provides one explanation of the findings of the earlier research. The explanation hinges on the type of accounting used by the funds, rather than on the number of funds. Funds that must use the modified accrual basis of accounting are used by all cities; the general fund, for example, is used to account for most general government activities.¹ There is more flexibility in the choice to employ funds that use full accrual accounting. Certain activities that are common to nearly all cities are accounted for by some cities in funds that use full accrual accounting (e.g., internal service
funds) but are accounted for by other cities in funds (usually the general fund) that use modified accrual accounting. Our study confirms that differences in variability of municipal expenditure ratios and of departmental expenditures are related to the choice to account for certain activities in internal service funds, using full accrual accounting, or to account for them in the general fund, using modified accrual accounting.

The findings of this study, along with those of the earlier research, are important in demonstrating that certain governmental accounting principles can affect the intertemporal comparability of accounting numbers within and across governments. Such comparability is important to government financial report users (Jones, et al., 1985) and to the GASB (1986, par. 45):

Financial reports should be comparable. This is not to imply that similarly designated governments perform the same functions. Comparability implies that differences between financial reports should be due to substantive differences in the underlying transactions or the governmental structure rather than due to the selection of different alternatives in accounting procedures and practices. Financial reporting should enable users to make comparisons of costs of specific functions, such as police protection or garbage collection.

Current governmental accounting principles provide latitude in the selection of fund types and in the activities accounted for in each fund. Our research demonstrates that the resulting variations in accounting practice are at odds with the comparability objective of the GASB. Cost comparisons for certain functions (both across governments and across time within the same government) are made difficult by current governmental accounting practice.

Our discussion focuses on different methods of accounting for fixed assets. Some governments account for certain fixed asset purchases in governmental funds. These purchases are recorded as expenditures of the fund at the time of the purchase. Other governments account for some of these same
purchases in internal service funds (ISFs). These purchases are recorded as assets of the ISF set up to manage the assets and are subsequently depreciated. The user departments in the governmental funds record expenditures when they are billed by the ISF for use of those assets. The next section describes the accounting for these purchases and the effect of using ISFs in more detail.

2. THE ISF MODEL

Governmental Accounting, Auditing, and Financial Reporting (GAAFR, 1980) explains that ISFs can be used to account for goods and services that are provided by one department to other governmental departments on a cost-reimbursement basis. ISFs commonly handle purchasing activities, inventory management, data processing services, duplication and printing, motor pools, vehicle and equipment repairs, and motorized equipment service and rental. The alternative to handling these activities in departments set up as ISFs is to have each user department directly account for its own purchase of goods and services, using generally accepted accounting principles (GAAP) appropriate for each department. GAAP for ISFs and for most governmental departments are not the same, and, as a result, the choice to use ISFs, or not, will have different effects on the financial statements.

In most cities, accounting for fixed assets is handled within the general fund department using the assets. The total cost of a fixed asset is recorded as an expenditure in the general fund when purchased, and it is simultaneously noted in the general fixed asset group of accounts. No attempt is made to allocate the cost of these general fixed assets to the fiscal periods in which they are consumed. GAAFR refers to this as modified accrual accounting, but hereafter we will call it "expenditure accounting" for simplicity.
Purchases of assets controlled by an ISF are recorded in that fund on a full accrual basis (hereafter, "expense accounting"), as required by GAAP for ISFs. Expenses are recorded when the assets are consumed, with depreciation expense being recorded for the use of fixed assets. Sales, rental, and service revenues are recorded in the ISF based on charges to other departments for the goods or services they receive, resulting in net income or loss for the ISF. User departments record expenditures when the liability is incurred, based upon the billings from the ISF, resulting in a stream of expenditures over the useful life of the asset. Thus, the result of managing assets and services through an ISF is to embody some elements of commercial accounting in the traditional governmental accounting model for the departments consuming ISF assets and services.

The following simplified example illustrates the difference in financial statement numbers likely to result from accounting for fixed assets in the two types of funds. Let A and B represent two cities that are identical in all respects except that A accounts for the purchase of fire engines in the general fund and B uses an ISF to purchase the equipment. B's ISF then rents fire engines to the fire department accounted for in the general fund. At the beginning of year 1, both cities purchase trucks for $200,000. The trucks are expected to be used for 20 years at an approximately equal rate per year. The ISF in City B rents the truck to the fire department for $10,000, or 1/20th of the purchase price, per year. Fire department costs, other than equipment costs, are $100,000 per year for each city. The reported general fund expenditures for the fire department for the first four years of service are compared below:
<table>
<thead>
<tr>
<th>Year</th>
<th>City A</th>
<th>City B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$300,000</td>
<td>$110,000</td>
</tr>
<tr>
<td>2</td>
<td>100,000</td>
<td>110,000</td>
</tr>
<tr>
<td>3</td>
<td>100,000</td>
<td>110,000</td>
</tr>
<tr>
<td>4</td>
<td>100,000</td>
<td>110,000</td>
</tr>
</tbody>
</table>

Each time City A makes a major fixed asset purchase, a "jump" in general fund expenditures will occur similar to the one illustrated in year 1. Similar purchases by City B will result in a smoothed expenditure stream in the general fund because of the accrual accounting process of the ISF.

These patterns carry over to the general government expenditure and total expenditure numbers of the cities, as well. Both these figures will be $190,000 higher for City A in year 1 than for City B and will be $10,000 lower in each of the following nineteen years as a result of the difference in accounting practices. The activity of the ISF itself is not combined with governmental fund activity in the financial statements. Instead, it is reported (using accrual accounting) as part of the proprietary fund activities of the city.

Thus, while individuals who are reasonably knowledgeable of fund accounting may be able to adjust, at least partially, the accounting numbers of the two cities to make them comparable, it may be difficult for anyone looking at the financial statements to adjust the aggregate expenditure numbers to make them comparable without complete information about the underlying transactions.

2.1 EFFECTS OF ISFS ON VARIABILITY

One effect of expense accounting should be to reduce the variability of certain expenditures over time relative to expenditure accounting. For
example, depreciation of fixed assets smooths the expense stream for these assets relative to the practice of reporting the total expenditure in the acquisition period. Inventoriable asset costs are also affected by these practices. When ISFs charge user fees on a cost-reimbursement basis, smoothed expense patterns in the ISFs should result in smoother expenditure patterns in the user departments.

The variability of capital asset costs affects the variability of a variety of accounting numbers and ratios that might be used for internal and external decision-making. The amount reported for expenditures in a fiscal period for various departments, programs, functions, and for the general government as a whole may be separated into two parts. One we shall refer to as operating expenditures, composed of payroll, nonfixed, and noninventoriable costs. The other we shall refer to as capital expenditures, composed of charges for fixed and inventoriable assets. The variability of the expenditure ratio can thus be decomposed into the variability of each component as follows:

\[ s^2 = x_o^2 s_o^2 + x_c^2 s_c^2 + 2x_o x_c Cov_{oc} \]  (1)

where \( s^2 \) is the variance of total expenditures, \( x \) is the weight associated with each component, Cov is the covariance, \( o \) represents operating expenditures, and \( c \) represents capital expenditures. The variability of an expenditure ratio depends on the variability of the component expenditures in relation to the squares of the weights of the components.

On average, about 20 percent of total general government expenditures are in the capital category, although the percent varies considerably across departments. The covariance between operating and capital expenditures across governments and across time is very small and has little effect on the total variability measure (based on observations from the data set described later in
this paper). The weights associated with capital expenditures for various government departments and functions and the covariance measure will vary. Expenditure ratios for various departments, functions, and for the general government should differ across governmental units if (1) one governmental unit uses internal service funds and another does not, and (2) internal service fund services are an important component of the cost of a specific department or function.

2.2 EFFECTS OF ISFS ON COMPARABILITY

Although users, standardsetters, and theoreticians seem to agree that comparability is an important quality of financial information, this term has been defined only in a general sense (see FASB, 1980). Miller (1978) suggests that there are two general approaches to the definition of comparability. The first concentrates on the input rules used in the accounting process and takes the perspective that, if all entities consistently apply the same accounting principles to the same type of event, financial information will be comparable. This view is supported by Donald J. Kirk, chairman of the FASB, who stated "Comparability is high on [the FASB's] list of qualities that are needed for useful financial reporting and that will require a single method of accounting for similar situations" (in Haskins and Sells, p. 1). This approach appears to be reflected in the desires for consistency expressed by users of government reports (Jones, et al., 1985). Input comparability suggests that all entities should use the same accounting procedures, but it does not suggest which alternative procedure is best.

Output comparability emphasizes the need for disclosures to represent underlying economic events. This concept suggests that it should be possible to describe desirable characteristics of reported numbers independent of the
accounting process, thereby making it possible to determine which accounting
alternative produces numbers that are consistent with the characteristic. 
Therefore, in order to test the degree to which a particular accounting
procedure leads to greater or less comparability in terms of outputs
(accounting numbers), it is necessary to establish criteria that the accounting
numbers should satisfy. Because of the operating differences among
governments, it is difficult to specify in advance what characteristics their
accounting information should display relative to one another. Because of this
difficulty, we have elected to concentrate on one aspect of comparability
within governments over time. Within a single government, it may be possible
to identify some situations in which certain desirable information
characteristics can be specified a priori. Within a city, for example, there
are some departments whose expected service patterns should remain relatively
stable over time. For these departments, the accounting procedure that produces
a more stable expenditure pattern could be said to exhibit a greater degree of
comparability, relative to service level, over time.

Within a city, there are usually departments that would be expected to
deliver a reasonably constant level of service, or output, to the public from
year to year. Examples of these departments would include the police and fire
departments. Regardless of budget constraints, most cities must continue to
provide fire and police protection to their constituents. Thus, the need, more
than other constraints, determines the level of service, and the stable
service level would be expected to produce costs that would be reasonably
smooth over time. We will examine these departments specifically in some of
the tests that follow.
In the discussion of both input comparability and output comparability, we are concerned with the variability produced in reported expenditure patterns and whether the choice between use and nonuse of ISFs results in measurable differences in those patterns. With regard to input comparability, we suggest that the choice to use ISFs or not to use ISFs will lead to differences in the patterns of the accounting ratios that are, for example, related to credit risk and are used for intercity comparisons. If those differences are significant enough to affect users' decisions, standard setters may wish to consider limiting reporting alternatives to eliminate them. With regard to output comparability, our analysis suggests that, in situations where evidence supports stable service levels, use of ISFs results in patterns that are smoother than the patterns produced by nonuse of ISFs. If the reduction in variability is material, it would provide some evidence that, for those departments, use of ISFs produces the more faithful representation of the year-to-year cost of services provided.

In the section that follows, we present an empirical analysis of expenditure ratio patterns of cities using ISFs with those of cities not using ISFs to determine whether the expected differences in patterns emerge. Then, we compare expenditure patterns for fire and police departments to determine whether use of an ISF to manage the equipment for those departments appears to increase comparability across time for those departments. The empirical analysis confirms the model developed in the first part of the paper and provides evidence on the magnitudes of the differences in reported expenditures of cities using and those not using ISFs.
3. EMPIRICAL TESTS AND RESULTS

3.1 INPUT COMPARABILITY

Our first analysis consisted of a comparison of accounting ratios from 498 municipalities for 1973-1982 that tested the hypothesis:

H1: The intertemporal variability of accounting ratios is greater for cities that do not use ISFs than for cities that do use ISFs.

If this hypothesis holds true and the accounting ratios of cities using ISFs exhibit different patterns than those not using ISFs, this provides some justification for users' demands for consistency of application of accounting principles across cities. Inconsistency with respect to the use of ISFs would appear to contribute to noncomparability of accounting ratios. A difference in the accounting ratios does not, however, provide a strong argument for choosing one practice over the other without reference to the relevant underlying economic attribute.

The hypothesis was tested using the ratio of general government expenditures to general revenues for the cities tested. The variability of total expenditures for the general fund should be affected if capital expenditures associated with ISFs are an important component of total expenditures. Revenues were used as a denominator in the ratio to control for differences in size across governments and to control for differences in price levels across time periods. Other research has shown that revenues provide a useful control for these problems (see Ingram and Copeland, 1984). Other methods of determining variability and controlling for size will be described later.
The sample used in the tests consisted of cities in the U.S. for which financial statement data were available from the Bureau of the Census for 10 years and for which accounting practice data were available. The accounting practice data were provided from a mail survey of city financial managers that included information about internal service fund practices. The sample was limited to cities with populations in excess of 25,000.

The measure of variability used to test the differences in patterns of expenditure ratios between the two groups is the average squared deviation from the mean:

\[
10 \quad \text{ASD} = \frac{\sum (r_n - \bar{r})^2}{10},
\]

(2)

where ASD is the average squared deviation, \( r \) is the expenditure ratio of interest, and \( n \) is the year.

3.1.1 Results

The average squared deviation statistic for the ISF group (\( n=327 \)) had a mean of .068 and a standard deviation of .617. The mean for the no ISF group (\( n=171 \)) was .199 and the standard deviation was .739. The t score for differences in the means was -1.995, significant at the .05 level.

The means (standard deviations) of the general expenditure/revenue ratios (for the 10 year period 1973-1982) for the ISF and no ISF groups were .507 (.155) and .515 (.189), respectively. The t score for differences in the means was -.476. Thus, the distributions of the ratios did not account for the differences in variations in the ratios.

These results demonstrate that the expenditure ratios for cities that use ISFs are less variable over time than are those of cities that do not use ISFs,
consistent with our hypothesis. We extended the tests in order to confirm these results.

3.1.2 Extended Tests

Two additional metrics were computed to measure the variability of the accounting numbers. The average absolute deviation (AAD) was computed as:

\[
AAD = \frac{\sum_{n=1}^{10} |r_n - \bar{r}|}{10}. \tag{3}
\]

Also, the average absolute first difference (AFD) was computed as:

\[
AFD = \frac{\sum_{n=2}^{10} |r_n - r_{n-1}|}{9}. \tag{4}
\]

For all three measures (ASD, AAD, and AFD) both the general expenditure to revenue ratio and undeflated general expenditures were examined. In addition to examining the effect of ISFs on these measures, we also examined the effects of two other factors that we posited to be associated with the use of ISFs: size and form of government.4

The probability that a city will use ISFs to manage its assets increases with the size of the city, since it is more efficient to establish a separate management function for larger numbers of assets. For the sample used in this study, the mean population for the ISF group was 180,000, compared to 112,000 for the no ISF group (significant at the .05 level).

Council-manager cities have been identified in several studies (e.g., see Evans and Patton [1983]) as being more likely to adopt recommended accounting practices than mayor–council cities because of incentives available to managers to demonstrate professionalism. For our sample, 65 percent of council-manager cities used ISFs compared to 40 percent of mayor–council cities (significant at the .01 level).
Our extended tests produced results consistent with those reported above. Table 1 contains results for OLS regression models in which the three measures of variability using undeflated expenditures were the dependent variables and ISF (0 or 1 dummy variable), size as proxied by population, and council-manager government (0 or 1 dummy variable) were included as independent variables. The ISF variable is significant at the .01 level in each of the models, confirming our earlier results.

The AAD and AFD coefficients can be translated into dollar effects in a straightforward manner since the dependent variable is expressed in (millions of) dollars. Accordingly, the use of ISFs reduced the average absolute difference from the mean of general expenditures by $1,306,000 on average for the 10 year period. The average reduction in annual differences in expenditure (AFD) was $763,000. The average general expenditures for the period for the sample was $32,327,000.

3.1.3 Limitations of the Analysis

The fact that groups of cities differ with respect to the variability of accounting numbers does not indicate which alternative (if either) is to be preferred. Selecting an accounting practice which reduces the variability of accounting numbers is not preferable if the underlying economic events exhibit high variability. Thus, if a user of the accounting numbers is interested in predicting the cash flow demands of an entity that exhibits wide swings in cash needs as a result of uneven demands for acquisition or replacement of major fixed assets, the user may need to be informed of the underlying expenditure pattern. On the other hand, if a user of the accounting numbers is interested in comparing the cost of providing certain services across governments and time, the user may be better served by information about the consumption,
rather than the purchase, of resources by the entity. If expenditure accounting adds artificial variability to the reported cost of services, it may be difficult for legislative oversight boards and citizens to make comparisons between fiscal years, across governments, or across departments, unless these individuals have a fairly sophisticated understanding of the accounting process.

Another limitation of the analysis is that no attempt has been made to draw a linkage between management of specific departmental assets in ISFs and the variability of the expenditure ratios. Without such a linkage, a conclusion that the use of ISFs causes the difference in variability is premature.

We address these limitations in the next section by examining the variability of expenditures of departments that are known to use or not to use assets managed by ISFs. The cost of these additional tests is a decrease in sample size.

3.2 OUTPUT COMPARABILITY

Comparing cities that used ISFs to manage their fixed assets to those that did not, we tested the hypothesis:

\( H_2: \) Fire and police departments operating in cities that manage those departments' respective assets through ISFs will demonstrate less variability in their reported expenditures than the same departments in cities that do not use ISFs for this purpose.

The patterns of reported total and capital expenditures of the fire and police departments of cities using ISFs to manage their equipment were compared
to expenditure patterns of the same departments in cities in which these assets were purchased and reported by the user departments.

The financial statements made available by approximately 325 of the cities surveyed were examined to identify those which appeared to have internal service funds managing the fixed assets used by fire or police departments. This was determined by reading descriptions of the ISFs in the financial statements (when this was disclosed), by reading letters of submission from the chief financial officers in which these funds were discussed, and by comparing the amounts of assets reported by ISFs with those listed in the General Fixed Assets Group of Accounts. Approximately 60 cities were identified that appeared to use ISFs to manage police vehicles and fire equipment and charge departments for asset use. (The ambiguity in many financial statements with regard to the assets managed by ISFs suggested that even "sophisticated users" might encounter problems in related analyses.)

From the survey of cities, a matching number were selected that were not expected to use ISFs to manage these fixed assets. These were randomly selected from the remaining cities. Because some ISFs managed one type of asset, such as police cars, but did not manage, for example, fire engines, it was not expected that the ISF and non-ISF groups would include the same cities for comparing each type of department. After the initial groupings were made, letters were sent to the finance directors of each city to specifically request information regarding the types of assets managed by ISFs and the origination dates of the funds. This information was used to finally classify cities as ISF or no ISF for each type of department.

To compare the variability of reported expenditures between ISF and no ISF departments, the expenditure patterns for the period 1973 through 1982 were
analyzed for all responding departments with consistent ISF practice over the 10 year period. The expenditures for fire protection and police protection as reported by the Bureau of the Census were used in this analysis.

3.2.1 Results

Table 2 reports results of the OLS regression models for police and fire department expenditures, controlling for size and form of government. The ISF variable is significant at the .05 level in each of the models. These results confirm our hypothesis that the use of ISFs reduces the variability of departmental expenditures. The variability related to the use of ISFs is on the magnitude of $181,000 less (AAD), on average, for police departments and $242,000 less, on average, for fire departments that use ISFs compared to those that do not. The average departmental expenditures for cities in the sample were $7,212,000 for fire departments and $5,604,000 for police departments.

These results support the results in the "Input Comparability" section. Even though they are based on a smaller subset of cities, these results provide stronger evidence concerning the effect of ISFs since we have determined that specific departmental assets are managed in ISFs for one group of those cities. Furthermore, we posit that the ISF practice provides a more faithful representation of the cost of services patterns of police and fire departments. We base this statement on the assumption discussed earlier that the service levels of these departments remain relatively stable over time. In this respect, use of ISFs appears to increase comparability of expenditures over time.
4. CONCLUSIONS

Governmental standard setters have expressed concern with consistency of accounting standards and comparability of information in accounting reports. We have attempted to determine whether the choice to use or not to use ISFs affects the accounting ratios of municipalities, and we have found that inconsistency in this practice appears to result in measurable differences between the two groups. Given these results, users' concerns for consistency of application of accounting principles appear to be justified.

We have also attempted to determine, in cases where expected service level patterns can be specified, whether use or nonuse of ISFs is more likely to report expenditures consistent with those patterns. For fire departments and police departments, the use of ISFs for equipment management resulted in expenditure patterns more closely approximating the expected service patterns and, in that sense, more comparable over time. In view of these findings, the GASB may wish to consider narrowing the choice of accounting methods with respect to ISFs or prescribing circumstances in which they should or should not be used. Our research indicates that, in order to facilitate informed comparisons between cities, financial statements should, at least, inform users which assets or activities are managed through ISFs and report classifications of General Fixed Assets by function and activity.
FOOTNOTES

1 All cities do not use the modified accrual basis for these funds. Some use the cash basis. All of the cities in this study used the modified accrual basis for these funds.

2 Similar differences exist in some governments for assets acquired by enterprise funds such as public utilities and transit services. These activities are beyond the scope of the current study which considers only activities that are common to nearly all cities.

3 Although we have found no national statistics on services provided by these departments, we did survey the police and fire chiefs of cities we selected for our study. These individuals were asked, "In the last 10 years, have there been any major changes in state or other requirements that have significantly added to or reduced the number of services your department provides?" Their responses supported our assumption of stable service levels. No major changes were reported by 51% of fire chiefs and 57% of police chiefs. With regard to the positive responses, 29% of fire chiefs and 22% of police chiefs reported one-time changes, such as takeover of emergency medical service, in the ten-year period. Thus, in nearly 80% of both cases, smooth patterns or smooth patterns with one "step" would be reasonable expectations. There was no observed correlation between the one-time changes and the use of ISFs.

4 Little formal theory is available to suggest why some cities use ISFs and others do not. The two factors we examined were selected because the linkages were intuitive and because empirical evidence supported the relationships with ISFs.
REFERENCES


Ingram, Robert W. and Copeland, Ronald, Planning and Control of Municipal Revenues and Expenditures (National Association of Accountants, 1984).


### Table 1

**OLS Regression Models for General Expenditures**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t score</th>
<th>Coefficient</th>
<th>t score</th>
<th>Coefficient</th>
<th>t score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-275.86</td>
<td>1.258</td>
<td>1.536</td>
<td>3.996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISF</td>
<td>-295.34</td>
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<td>-0.763</td>
<td>-2.126</td>
<td>-2.534</td>
<td></td>
</tr>
<tr>
<td>Size</td>
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<td>.191</td>
<td>.087</td>
<td>18.679</td>
<td>42.192</td>
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<tr>
<td>Government</td>
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<td>-.287</td>
<td>-.120</td>
<td>.805</td>
<td>-.748</td>
<td>-.416</td>
</tr>
</tbody>
</table>

[F=124.8; R^2=.436]  [F=1921.8; R^2=.941]  [F=617.9; R^2=.837]
### Table 2
OLS Regression Models for Police and Fire Expenditures

#### Police Department Expenditures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t score</th>
<th>Coefficient</th>
<th>t score</th>
<th>Coefficient</th>
<th>t score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
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<td>-2.184</td>
<td>.136</td>
<td>1.059</td>
<td>.096</td>
<td>1.890</td>
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<tr>
<td>SF</td>
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<td>-.117</td>
<td>-1.933</td>
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<tr>
<td>Size</td>
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<td>4.579</td>
<td>.005</td>
<td>5.488</td>
<td>.002</td>
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</tr>
<tr>
<td>Government</td>
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<td>2.220</td>
<td>-.010</td>
<td>-.277</td>
<td>.009</td>
<td>.472</td>
</tr>
</tbody>
</table>

\[ F = 23.57; R^2 = .540 \]

#### Fire Department Expenditures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
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<th>Coefficient</th>
<th>t score</th>
<th>Coefficient</th>
<th>t score</th>
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</thead>
<tbody>
<tr>
<td>Intercept</td>
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<td>-2.125</td>
<td>.058</td>
<td>1.419</td>
<td>.037</td>
<td>1.233</td>
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<tr>
<td>SF</td>
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<td>-.242</td>
<td>-2.735</td>
<td>-.146</td>
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<tr>
<td>Size</td>
<td>.104</td>
<td>6.403</td>
<td>.011</td>
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</table>

\[ F = 39.78; R^2 = .668 \]