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ABSTRACT

The research methods, procedures, and data for determining the impact of eight cultural institutions on the St. Louis (Missouri) economy (1978) are outlined. A 30-equation model was used to identify a variety of effects on local businesses, government, and individuals. Researchers examined internal records of the eight institutions as well as local, state, and federal records. Audience research and staff surveys were also conducted. Divided into four sections, the report discusses data collection instruments and general procedures, local data collection procedures, local data summary, and weighting and estimation techniques. Subtopics in each section are the audience survey, staff survey, institutional data inventory, community data inventory, and tax-related data. Appendices provide audience survey dates and response rates, instructions to the study coordinator for annotating budget and functional expense statements and institutional data inventory, community data inventory, instructions for developing a calendar which depicts sampling dates, and documentation protocol. All research instruments are included and most instruments provide numerical results of the research. (KC)

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TECHNICAL SUPPLEMENT TO  
THE ECONOMIC IMPACT  
OF EIGHT CULTURAL INSTITUTIONS  
ON THE ECONOMY OF THE ST. LOUIS SMSA  
VOLUME I

[and] Volume II--Appendices.  
1980

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## TABLE OF CONTENTS

	Page
LIST OF EXHIBITS.....	i
PREFACE: ORGANIZATION OF THE REPORT.....	ii
SECTION I: DATA COLLECTION INSTRUMENTS AND GENERAL PROCEDURES.....	1
A. Overview.....	1
B. The Audience Survey.....	2
C. The Staff Survey.....	8
D. The Institutional Data Inventory and Annotation of Expenses.....	8
E. The Community Data Inventory.....	12
F. Additional Documentation.....	12
SECTION II: LOCAL DATA COLLECTION PROCEDURES.....	14
A. Overview.....	14
B. The Audience Survey.....	15
C. The Staff Survey.....	17
D. The Institutional Data Inventory.....	17
E. The Annotation of Expenses.....	18
F. The Community Data Inventory.....	18
SECTION III: LOCAL DATA SUMMARY.....	19
A. Overview.....	19
B. Audience Data Summary.....	19
C. Institutional Data Summary.....	21
D. Employee Data Summary.....	23
E. Tax-related Data.....	25
F. Other Community Data.....	28
SECTION IV: WEIGHTING AND ESTIMATION TECHNIQUES USED IN THE STUDY.....	32
A. Overview.....	32
B. Audience Data.....	32
C. Employee Data.....	33
D. Institutional Data.....	34
E. Community Tax-related Data.....	35

LIST OF EXHIBITS

		Page
Exhibit 1	Audience Questionnaire.....	3
Exhibit 2	Survey Event Report Form.....	6
Exhibit 3	Staff Survey Instrument.....	9
Exhibit 4	Audience Data Summary.....	20
Exhibit 5	Institutional Data Summary.....	22
Exhibit 6	Employee Data Summary.....	24

## PREFACE: ORGANIZATION OF THIS REPORT

This technical supplement provides additional information on the research methods and procedures used to develop case studies of the economic effects of forty-three arts and cultural institutions in the following six U.S. cities\*:

Columbus, Ohio  
Minneapolis/St. Paul, Minnesota  
St. Louis, Missouri  
Salt Lake City, Utah  
San Antonio, Texas  
Springfield, Illinois

The history and purpose of this six city project is briefly reviewed as part of each case study report.

The case studies utilized a thirty equation model to identify a variety of effects on local businesses, government and individuals. Data was required from the internal records of the examined institutions as well as from local, state, and federal sources. Audience research was also required as was a survey of each institution's staff.

Instruments and procedures relevant to the collection of these data were developed by staff of the Center for Metropolitan Planning and Research of The Johns Hopkins University (Metro Center). Training seminars for local study staff were conducted in Baltimore and additional procedures developed to document and monitor the management, implementation, and quality of local data collection efforts.

Section I of this technical supplement describes data collection instruments and general procedures. Section II describes the management and implementation of procedures by The Arts and Education Council of Greater St. Louis staff.

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\*The study sponsors in each city were The Greater Columbus Arts Council, Twin Cities Metropolitan Arts Alliance, Springboard, The Utah Arts Council, The Arts and Education Council of Greater St. Louis, and the Arts Council of San Antonio.

Data quality issues are also reviewed. Section III presents the data utilized to arrive at estimates of economic effects. Section IV describes weighting and other relevant data handling issues. Separate appendices provide data on the audience survey dates and response rates, instructions and relevant protocols, and other matters on interest:

organization, management and execution of tasks, including circumstances that may have led to different practices on the part of individual institutions. This formal documentation, together with the ongoing evaluation based on our day-to-day contact with study coordinators, and the internal and external validity checks already noted (e.g., correspondence of SERF forms and data tapes, confirmation of community data by other local sources) were the basis for an institution-by-institution evaluation of data quality.

Section II below presents information on the organization and management of data collection procedures in St. Louis. Information relevant to an evaluation of data quality is also presented. Section III reviews data used in the study. Section IV reports on various weighting and estimation procedures required by the study.

## SECTION II: LOCAL DATA COLLECTION PROCEDURES

### A. Overview

In the first section of this technical supplement we described the general data collection techniques and basic research design tasks required of participants in the Partnership Cities Project. We also indicated the procedures used to evaluate and assure data quality. These procedures included ongoing correspondence and telephone contact with study coordinators in each city to review local management plans and approaches to data collection and otherwise assess progress and potential problems. These oversight and documentation procedures included a "for-the-record" review by each study coordinator of the procedures employed in the conduct of each major data collection task and sub-task (cf. Appendix F which presents the Documentation Protocol). In St. Louis this information was provided by Joe Davis.

We are most pleased to acknowledge the principal project staff at the Arts and Education Council of Greater St. Louis. Richard Tombaugh, Executive Director, served as Study Director. Joe Davis of Resources Management, Inc. was responsible for coordinating the project including the wide array of day-to-day tasks and responsibilities described in this technical supplement. Exhibit 1 in the case study report lists the staff persons and volunteers identified by the Arts and Education Council of Greater St. Louis as individuals who actively participated in the study. The following sections describe local data collection techniques and local study management.



## SECTION I: DATA COLLECTION INSTRUMENTS AND GENERAL PROCEDURES

### A. Overview

The case studies described in this technical supplement were developed in partnership with local arts agencies in the six U.S. cities noted earlier. Each agency was responsible for the local study conduct following procedures developed at the Metro Center and piloted in Baltimore.\* Study Coordinators were selected by each partnership agency and included a graduate student intern, a private consultant, agency staff persons, and a professor at a local college. Staffing arrangements and local management procedures in St. Louis are described in Section II.

Coordinators from each city participated in workshops held in Baltimore at the Metro Center from October 11-13, 1978. These workshops were developed to orient study coordinators to all phases of the data collection process. Supplemental materials specific to the conduct or documentation of each data collection procedure were developed and forwarded as procedures were implemented. Attention focused initially on the audience survey. Subsequently, materials were developed and forwarded to each city dealing with procedures for the staff survey, for identifying local spending and gathering requisite data from each examined institution, and for gathering requisite community data from local, state, and federal documents or other data sources (e.g. local data bases).

The ability of each city to undertake these tasks simultaneously was materially affected by constraints in study coordinator time, the ongoing

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\*Cf. David Cwi and Katharine Lyall, Economic Impacts of Arts and Cultural Institutions: A Model for Assessment and a Case Study in Baltimore, Research Division Report #6. New York: Publishing Center for Cultural Resources, 1977.

availability of other local study staff, and cooperation from local agencies. In the interest of data quality, agencies were encouraged to engage in only those data collection efforts that could be successfully managed by local study staff. Consequently, at any point in time the cities may have been engaged in differing aspects of the data collection effort, necessitating constant monitoring by phone of progress and problems encountered. Documentation and quality control procedures are described below as part of our review of each data collection procedure.

### B. The Audience Survey

The audience survey required the development of self-administered questionnaires, implementation procedures and management plans, sampling frames and procedures, documentation procedures, and data handling procedures relating to the editing and keypunching of questionnaires.

Audience questionnaires and procedures reflected the Baltimore pilot study and were designed to allow each city to add additional questions. Survey management procedures are described in Section II below. Exhibit 1 presents the questionnaire as utilized in St. Louis.

Prior to the October orientation workshop noted above, study coordinators gathered requisite data for each event/day during the survey period. This included projected attendance by performance (for performing arts groups) and event day (for museums and other groups). Separate sampling frames were developed for each of the forty-three participating institutions and reviewed with study coordinators at the October workshop. (Sampled event days for each institution together with other relevant information are presented in Appendix A.)

Exhibit 1

The Arts & Education Council of Greater St. Louis with assistance from the National Endowment for the Arts and The Johns Hopkins University is conducting a study of audiences for selected cultural activities. We appreciate your cooperation and hope that you will fill out the following questionnaire. Your responses are totally anonymous. Please do not identify yourself in any way. Thank you!

AUDIENCE SURVEY

Instructions: This form contains two types of questions. Some are multiple choice questions: for them, write in the box provided the number corresponding to your answer. Other questions request information which you should simply write in the box provided (e.g., your zip code). Please fill this form out by yourself. Feel free to consult other people in your party.

ANSWER FOR YOURSELF ONLY

Where do you live? (Write in number corresponding to the correct response.) (1) St. Louis City (2) St. Louis Co. (3) Jefferson Co. (4) St. Charles Co. (5) Franklin Co. (6) Elsewhere in State of Missouri (7) St. Clair Co. (8) Madison Co. (9) Clinton Co. (10) Monroe Co. (11) Elsewhere in State of Illinois (12) Elsewhere in the U.S. outside of Missouri and Illinois (13) Outside the United States

17-18-19

How many years of education have you completed? (1) less than 12th grade; (2) high school graduate; (3) some college; (4) bachelor's degree; (5) graduate or professional degree

31

Approximately how many miles one-way did you travel to get here? (If less than a mile, write 1. Round to nearest mile)

32-33

How many years have you been living in the St. Louis metropolitan area? (Write in corresponding number of years. If less than a year, write "1". Round to nearest year. Visitors to this area write "0".)

20-21

IF YOU HAVE A SINGLE TICKET OR A SINGLE ADMISSION for this event, how much did it cost? (Put in dollars and cents. If you do not know, write "0".)

34-37

What is your present zip code? (Write in all 5 digits.)

22-26

What is your age?

27-28

How many people are presently living in your household? (include yourself)

29-30

FOR PERFORMING ARTS ONLY

IF YOU HAVE A SUBSCRIPTION to this series, what was the price of your subscription? (If you do not know, write "0".)

38-40

ANSWER FOR YOUR ENTIRE PARTY

Including yourself, how many people are in your party?

41-42

Restaurant, bar or gift shop inside institution?

51-54

Other than the cost of admission, approximately how much money did you and your party already spend or much money did you and your party already spend or would you expect to spend in connection with today's event? (Write in the appropriate amount in each category; please write in zero if no money was spent in a category.) On:

Lodging (hotel/motel)?

55-58

Parking?

59-62

Public transportation (taxi, subway, bus, train, etc.)?

43-46

Babysitters?

63-66

Restaurant and bar outside institution (food, cocktails, beverages, etc.)

47-50

Other?

67-70

FOR OUT-OF-TOWN VISITORS ONLY

When you were making plans to come to this community, did you expect that you would be attending this cultural event or institution? (1) Yes; (2) No

71

How many people, including yourself, are with you on your visit to this area?

75-76

IF YES, was it your sole reason for coming to this community? (1) Yes; (2) No

72

Approximately how many dollars do you and your party anticipate spending while in this area?

77-80

How many nights will you spend in the metropolitan area on this visit?

73-74

city (SMSA code) 7040

institution

performance

### Exhibit 1 (con't)

The following questions are concerned with your use and support of local cultural activities. Please answer all three questions for each institution.

Question 1	Question 2	Question 3
<p>Do you have a subscription ticket or have you purchased a membership? (1) Yes; (2) No</p>	<p>Including today, how many times have you attended in the last 12 months? (Write "0" if you haven't attended in the last 12 months.)</p>	<p>How many dollars have you contributed in the last 12 months, not including subscription fees, ticket costs or membership fees? (Please write "0" if you have not contributed in the last 12 months.)</p>
<p>St. Louis Art Museum <input style="width: 100%;" type="text"/> 2/18</p>	<p><input style="width: 100%;" type="text"/> 19-20</p>	<p>\$ <input style="width: 100%;" type="text"/> 21-23</p>
<p>CASA <input style="width: 100%;" type="text"/> 24</p>	<p><input style="width: 100%;" type="text"/> 25-26</p>	<p>\$ <input style="width: 100%;" type="text"/> 27-29</p>
<p>Saint Louis Symphony <input style="width: 100%;" type="text"/> 30</p>	<p><input style="width: 100%;" type="text"/> 31-32</p>	<p>\$ <input style="width: 100%;" type="text"/> 33-35</p>
<p>Missouri Botanical Garden (Shaw's Garden) <input style="width: 100%;" type="text"/> 36</p>	<p><input style="width: 100%;" type="text"/> 37-38</p>	<p>\$ <input style="width: 100%;" type="text"/> 39-41</p>
<p>McDonnell Planetarium <input style="width: 100%;" type="text"/> 42</p>	<p><input style="width: 100%;" type="text"/> 43-44</p>	<p>\$ <input style="width: 100%;" type="text"/> 45-47</p>
<p>Loretto-Hilton Repertory Theatre <input style="width: 100%;" type="text"/> 48</p>	<p><input style="width: 100%;" type="text"/> 49-50</p>	<p>\$ <input style="width: 100%;" type="text"/> 51-53</p>
<p>Museum of Science and Natural History <input style="width: 100%;" type="text"/> 54</p>	<p><input style="width: 100%;" type="text"/> 55-56</p>	<p>\$ <input style="width: 100%;" type="text"/> 57-59</p>
<p>Dance Concert Society <input style="width: 100%;" type="text"/> 60</p>	<p><input style="width: 100%;" type="text"/> 61-62</p>	<p>\$ <input style="width: 100%;" type="text"/> 63-65</p>
<p>Muny Opera <input style="width: 100%;" type="text"/> 66</p>	<p><input style="width: 100%;" type="text"/> 67-68</p>	<p>\$ <input style="width: 100%;" type="text"/> 69-71</p>
<p>St. Louis Opera Theatre <input style="width: 100%;" type="text"/> 72</p>	<p><input style="width: 100%;" type="text"/> 73-74</p>	<p>\$ <input style="width: 100%;" type="text"/> 75-77</p>

In the last 12 months, how much have you contributed to the Arts and Education Council of Greater St. Louis? (If none, write "0")

What is your marital status? (1) Single; (2) Married; (3) Separated or divorced; (4) Widowed

 3/33

What is your sex? (1) Male; (2) Female

 34

To which race or ethnic group do you belong? (1) White; (2) Black; (3) Mexican American or Spanish speaking; (4) Oriental; (5) American Indian; (6) Other

 35

Last year, what was your total annual family income, before taxes? (1) Less than \$4,999; (2) \$5,000 to \$9,999; (3) \$10,000 to \$14,999; (4) \$15,000 to \$19,999; (5) \$20,000 to \$24,999; (6) \$25,000 to \$29,999; (7) \$30,000 to \$49,999; (8) \$50,000 or more

 36

What is your present job status? (1) Employed full time; (2) Employed part time; (3) Unemployed

 37

If employed, what is your main occupation?

Sampling frames used systematic sampling of individuals, assumed a 50% response rate, and sought to obtain no less than 500 completed questionnaires for each institution. Response rates of approximately 70% and higher were common in all cities. Audience study quality was uniformly high, with varied factors affecting the adequacy of sampling procedures at individual institutions, including overestimates of attendance, understaffing, and only one or a few institution performance days available for sampling during the study period. Issues that arose in St. Louis that affected the sampling design for particular institutions are discussed in Section II below.

Implementation of the audience survey involved the distribution of an assigned number of questionnaires each event/day following procedures developed with local coordinators. These included briefing sessions reviewing the impact of entry/egress patterns on the choice of distribution sites. Typically, questionnaires were distributed separately but at the same time programs were distributed at performing arts events. In most cases, special survey teams were utilized rather than ushers or other institutional staff. Exceptions are noted in Section II. Collection of instruments occurred before the start of the program and during intermission--if a performing arts event--as well as at the close of the program.

To monitor the quality of the audience survey effort, local staff completed Survey Event Report Forms. These documented various aspects of survey implementation and focused particularly on matters relating to documenting the distribution of questionnaires and response rates. These reports were later checked at the Metro Center against final data tapes. Exhibit 2 presents the form utilized in each city.

JOHNS HOPKINS UNIVERSITY CULTURAL POLICY GROUP  
SURVEY EVENT REPORT FORM

1. Event Control Number: 

(smta)				(inst)			(date: yymmdd)					(seq)				

2(a) Institution Name: \_\_\_\_\_ (b) Regular Site? (Y or N) \_\_\_\_\_

3(a) Type of Event: \_\_\_\_\_ (b) Program Content: \_\_\_\_\_  
(c) Featured artist(s) or group? (Y or N) \_\_\_\_\_

4(a) Event Starting or Opening Time: \_\_\_\_\_ (b) Event Ending or Closing Time: \_\_\_\_\_

5(a) Total Attendance: \_\_\_\_\_ (b) Estimate? (Y or N): \_\_\_\_\_

6 List of questionnaire control numbers allocated to the event: \_\_\_\_\_

7 List of questionnaire control numbers distributed at the event: (answer this question only if you do not fill out question 10 below): \_\_\_\_\_

8(a) Number of questionnaires returned: \_\_\_\_\_ (b) Response Rate: \_\_\_\_\_ %  
(c) Time Surveying Started: \_\_\_\_\_ (d) Time Surveying Ended: \_\_\_\_\_

9. Sampling Interval: \_\_\_\_\_



Exhibit 2 (cont.)

10.	Questionnaire distribution data: Distribution Location	Control Numbers Allocated	Control Numbers Distributed
(a)	_____	_____	_____
(b)	_____	_____	_____
(c)	_____	_____	_____
(d)	_____	_____	_____
(e)	_____	_____	_____
(f)	_____	_____	_____
(g)	_____	_____	_____
(h)	_____	_____	_____
(i)	_____	_____	_____
(j)	_____	_____	_____

- 11. Date Editing Done (yymmdd): \_\_\_\_\_
- 12. Questionnaire numbers rejected during edit: \_\_\_\_\_
- 13. Suspicious Questionnaires: \_\_\_\_\_
- 14. Comments: \_\_\_\_\_





The editing of questionnaires was conducted locally by study staff with keypunching in Baltimore and other sites. Local management plans for keypunching and editing are discussed in Section II. Local staff followed edit and keypunch protocols developed by the Metro Center. All questionnaires were forwarded to the Metro Center and a 10% sample inspected and compared to the data tape. This inspection examined editing quality and keypunch error rates. The keypunch error rate for each city is less than one-half of one percent (computed as the number of errors per item).

### C. The Staff Survey

Procedures for the implementation of the staff survey and issues affecting data quality are reviewed in Section II below. The staff survey was self-administered and distributed to all staff whether paid or volunteer. Exhibit 3 presents the survey instrument used in St. Louis. Local staff edited the staff survey following protocols developed at the Metro Center. Keypunching was performed in Baltimore. Instruments were distributed by institution management together with return envelopes assuring confidentiality. Response rates varied dramatically by institution, necessitating various weighting and estimation procedures described in Section IV below.

### D. The Institutional Data Inventory and Annotation of Expenses

Coordinators were provided with suggested procedures for securing requisite data from the internal accounts of examined institutions. These procedures sought to be responsive to institutional unwillingness to "open the books" for inspection and yet to gather data of sufficient



city (SMSA code)

institution

year/month

7042

### Exhibit 3

#### STAFF SURVEY

The Arts and Education Council of Greater St. Louis with assistance from the National Endowment for the Arts and The Johns Hopkins University is conducting a study of the status and impact of selected cultural activities... We appreciate your cooperation in completing this questionnaire. BE ASSURED THAT ALL RESPONSES WILL BE KEPT IN STRICTEST CONFIDENCE. PLEASE SEAL COMPLETED QUESTIONNAIRE IN THE ATTACHED ENVELOPE.

Instructions: This form contains two types of questions. Some are multiple choice questions; for them, write in the box provided the number corresponding to your answer. Other questions request information which you should simply write in the box provided (e.g., your zip code). Thank you!

#### QUESTIONS ABOUT YOURSELF

Where do you live? (Write in number corresponding to the correct response.) (1) St. Louis City (2) St. Louis Co. (3) Jefferson Co. (4) St. Charles Co. (5) Franklin Co. (6) Elsewhere in State of Missouri (7) St. Clair Co. (8) Madison Co. (9) Clinton Co. (10) Monroe Co. (11) Elsewhere in State of Illinois (12) Elsewhere in the U.S. outside of Missouri and Illinois (13) Outside the United States

What is your marital status? (1) Single; (2) Married; (3) Separated or divorced; (4) Widowed

What is your sex? (1) Male; (2) Female

How many years have you been living in the Springfield metropolitan area? (Write in corresponding number of years. If less than a year, write "1". Round to nearest year. Visitors to this area write "0".)

What is your present employment status at this institution? (1) full time; (2) part time; (3) non-paid full time staff; (4) non-paid part time staff; (5) CETA

What is your present zip code? (Write in all 5 digits.)

What is your age?

During how many weeks of the year will you work at this institution? (write "0" if you do not know)

How many people are presently living in your household? (include yourself)

How many years of education have you completed? (1) less than 12th grade; (2) high school graduate; (3) some college; (4) bachelor's degree; (5) graduate or professional degree

When you work at this institution, on average, how many hours a week do you work?

To which race or ethnic group do you belong? (1) White; (2) Black; (3) Mexican American or Spanish speaking; (4) Oriental; (5) American Indian; (6) Other

What percentage of your income -- exclude spouse -- is derived from employment at this institution?

QUESTIONS ABOUT YOUR HOUSEHOLD

Exhibit 3 (con't)

How many children under 18 are in your household?

What is the total annual income before taxes, of all persons living in your household (including yourself)?

(1) Less than \$4,999; (2) \$5,000 to \$9,999; (3) \$10,000 to \$14,999; (4) \$15,000 to \$19,999; (5) \$20,000 to \$24,999; (6) \$25,000 to \$29,999; (7) \$30,000 to \$49,999; (8) \$50,000 or more

How many of the children in your household attend public elementary or secondary schools?

Do you live in a residence that you own or are buying? (1) Yes; (2) No

What percentage of total estimated household income is derived from employment at this institution?

If you own your residence, or are buying, approximately how much do you pay in property tax?

For all members of your household, please estimate the amount currently kept in state banks, credit unions, and savings and loans: (1) 0 to \$99; (2) \$100 to \$249; (3) \$250 to \$499; (4) \$500 to \$999; (5) \$1000 to \$2499; (6) \$2500 to \$4999; (7) \$5000 to \$9999; (8) \$10,000 +

savings accounts

checking accounts

Below are a list of job areas associated with the operation of different types of cultural institutions. The job areas are divided into several categories for easier reference. Please select the duties that best describe your principal occupation. If more than one occupation, write in the number corresponding to the best description of your main occupation.

**ADMINISTRATIVE**

- (1) Director/General Manager/Business Manager
- (2) House Manager/Box Office/Department Heads
- (3) Development/Public Relations/Fundraising-Membership
- (4) Clerical/Secretarial

**ARTISTIC PROGRAM/PRODUCTION**

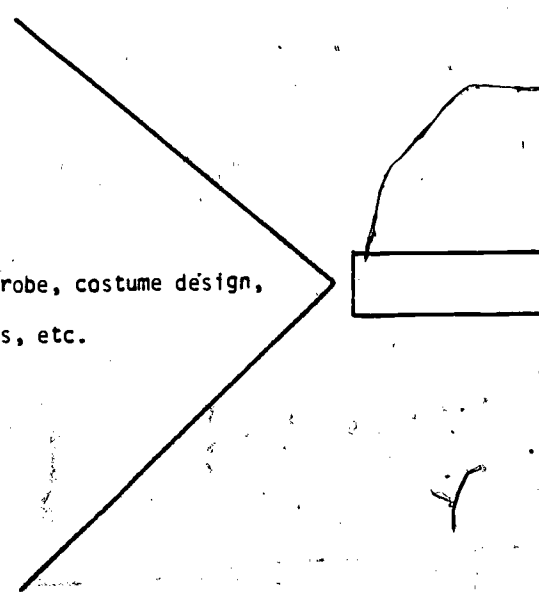
- (5) Non-performing technical/managerial (set, lighting, wardrobe, costume design, props, casting)
- (6) Performing: chorus, actors, musicians, conductor, dancers, etc.

**EDUCATION/RESEARCH/OUTREACH**

- (7) Librarian/Editor/Photographer/Designer
- (8) Instructor/Researcher/Curator/Conservator

**SPECIALIZED SERVICES**

- (9) Maintenance/Grounds/Restaurant-Bar/Gift shop/Shipping
- (10) Stagehands/Ushers/Box-Office/Guards/Security/Guide



quality for study purposes. A principal concern was to identify non-salary expenditures made with local firms. Arts and cultural institutions are on the whole quite labor-intensive, so that it is often easy to identify the bulk of local expenditures since they take the form of salary and wage items rather than non-labor expenditures.

The volume and variety of non-labor expenditures was such that institutional personnel responsible for accounts payable could often be expected to have personal knowledge of the vendors for a considerable portion of non-labor expenditures. Appendix B presents the instructions adopted for annotating institutional budget statements. These instructions represent a three-part strategy of identifying the staff person in the examined institution most knowledgeable concerning accounts payable, seeking the most detailed statement of expenses, and requesting that institution staff name the local vendors with whom expenditures were made as a test of their judgement. When institutional staff did not appear able to accurately judge local vendors for particular categories or when it appeared unreasonable to rely on their judgement, invoices were inspected for the items in question. By relying on their personal judgement, it was felt possible to avoid the actual inspection of all or a sample of invoices. (This would require the design of sampling procedures responsive to each institution's bookkeeping procedures and would represent a marked increase in effort for each examined institution that local staff felt intolerable.) Inspection of invoices was avoided unless there was reason to believe that institution staff might be materially in error regarding their judgement of expenditures with local vendors.

Additional data on attendance, staffing, and other matters was provided utilizing an institutional data inventory. Appendix C presents

the form utilized by each institution. The exhibit includes a procedure for the sampling of checking and savings account balances using a random number table.

#### E. The Community Data Inventory

As part of the Baltimore workshop, study coordinators were oriented to requisite community data and likely local sources. Subsequently, coordinators were sent a Community Data Series Reporting Protocol to which was attached a revised Annotated Community Data Inventory intended to take account of the unique features of each community. These are presented as Appendix D.

The procedure required the provision of data and the documentation of sources. Subsequently, these community data items were forwarded by the Metro Center to local planning agencies and Chambers of Commerce for their review. Additional research by the Metro Center included the gathering of data from these sources as well as from federal documents on the economy, business and employment characteristics of each city.

#### F. Additional Documentation

Project data collection tasks described to this point included various documentation procedures. In order to develop for the record a comprehensive overview of study procedures, each study coordinator was asked to provide information on the management, organization and execution of each data collection and data handling task.

This documentation included the development of calendars for each surveyed institution indicating actual attendance on surveyed and other event days as well as other matters (cf. Appendix E). Appendix F presents the documentation protocol developed to identify matters relating to the

## B. The Audience Survey

### Distribution and Collection

At each of the eight institutions in the St. Louis study one person was responsible for supervising the distribution and collection of surveys. Joe Davis trained these eight individuals. The people who actually distributed the instruments were different for each institution and different for each performance. The following is a general breakdown:

Dance Concert Society--50% staff and 50% volunteers  
 Loretto-Hilton Repertory Theatre--50% staff and 50% volunteers  
 McDonnell Planetarium--ticket takers at the one and only gate  
 Missouri Botanical Garden--ticket takers at the one main entrance  
 Museum of Science and Natural History--distributed by guard at one and only entrance  
 The St. Louis Art Museum--the guards on duty distributed and collected the instruments  
 St. Louis Conservatory and School for the Arts--employees  
 St. Louis' Symphony--ushers

In all cases, these people were trained by Joe Davis, who monitored the process for at least half the events or days being surveyed. Constraints are listed on an institution-by-institution basis:

Dance Concert Society--only two performances available to sample during time period, they were the least representative of performances done during the year.  
 Loretto-Hilton Repertory Theatre--no constraints or problems  
 McDonnell Planetarium--gross over-estimation of attendance at events during survey period, with many unescorted children and teenagers  
 Missouri Botanical Garden--long lines occasionally prevented ticket takers from taking the time to give full explanation of the survey to attenders  
 Museum of Science and Natural History--no constraints or problems  
 The St. Louis Museum of Art--only allowed one box in an out-of-the-way place to collect completed surveys, refused to give out pencils but made them available at the Information Desk.  
 St. Louis Conservatory and School for the Arts--small audiences with many repeat attenders  
 St. Louis Symphony--not allowed to hand out surveys separately, insisted on folding them into program, no verbal explanation of survey was made, no announcement was allowed from the stage

In general, time and resources dictated that the surveying be compressed into a one-month time period, rather than spread out over three months as suggested. This was largely due to the level of effort committed by each institution.

The study coordinator participated in the physical handout/collection process at all institutions, trained the institutions' personnel and monitored the institutional supervisors' work while actually distributing instruments. Within each institution, the same procedures were very carefully implemented at each event or day. In most cases the use of volunteer help was not seen as detrimental to the survey effort.

#### Editing

Editing was supervised by each institutions' study coordinator (the same as with the distribution and collection process). Joe Davis trained each supervisor and most institutional staff editors for every institution. The supervisors did most of the editing, and Joe Davis spot-checked each institution's editing. There were no reported difficulties in understanding the Metro Center's edit protocols. The average time required to edit an instrument was one to three minutes.

Keypunching was handled by Precision Systems in St. Louis. They keypunched most of the instruments rather than provide the Metro Center with a failsafe tape as requested. When this first tape was processed, the keypunching was found to be in error. Later efforts to correct it using a computer program were only partially successful, and some fields had to be keypunched by Thirty-Two Programmers of Towson, Maryland and merged into the data files. A second tape with the remainder of the St. Louis instruments was punched with no differentiation between zeros and blanks (no response) in expenditure fields. These instruments had to be entirely rekeyed; a task handle by Thirty-Two Programmers. All keypunching by Thirty-Two Programmers was verified. Precision Systems



claims to have verified the keypunching, but no written substantiation was provided. However, the keypunch error rate on the final data files was less than one-half of one percent overall (.0012 errors per item).

### C. The Staff Survey

#### Distribution and Collection

The staff surveys were distributed by each institution's study coordinator. The survey consisted of a cover letter explaining the purpose of the survey, the survey form itself, and a stamped return envelope addressed to the Arts and Education Council. Joe Davis believes this part of the project to be one of the best due to the absolute uniformity of the procedures across institutions and the high response rates (for a mail survey). No constraints were imposed by any institutions in the distribution of these surveys.

#### Editing

The surveys were edited by Joe Davis with the help of one person that he trained. It took approximately 12 hours (a little over two minutes per instrument) for this editing.

### D. The Institutional Data Inventory

The data inventory was mailed to each institution with a cover letter. This was followed by a personal meeting. Phone calls were used to monitor progress with another meeting subsequent to completion. Joe Davis used this latter meeting to assist the institutional study coordinator in completing the form and to verify information already filled out. In smaller institutions the institutional study coordinator completed the form, but in the larger ones the institutional study coordinator supervised the process since various department heads had to provide the required information. The major constraint on this process was time. The imposing length and low priority accorded to the inventory by some institutions took several months, many phone calls,

and no small amount of bad feeling to complete according to Joe Davis. Many institutions do not compile data as required for the inventory or found (as is normal with standardized forms) that some sections were inapplicable. Joe Davis believes the quality of the data to be good, except for the problems discussed above.

#### E. The Annotation of Expenses

The annotations were done jointly by Joe Davis and the institutional study coordinator of the smaller institutions, or the chief financial officer of the larger ones. In all cases, the person providing the information was the person most familiar with accounts payable. On average, this procedure took about two and one-half hours per institution. Joe Davis believes the data to be quite accurate due to the small dollar value of each item queried and the knowledge of the person in charge of accounts payable. Joe Davis reviewed each item. In many cases the individual volunteered the vendor's name, however, the estimates were not challenged.

#### F. The Community Data Inventory

The scope of the St. Louis Metropolitan area made this data collection quite time-consuming and expensive. For this reason, this part of the project was contracted out to Mark Twain Bancshares. They were able to provide only very aggregated numbers for many items, often with little information as to source. Much of the data was estimated. For instance, data from the 3,000 property taxing districts in the SMSA would require a tremendous amount of work even if all were compiled in a central computer. The quality of some of this data is questionable, but the Arts and Education Council could not afford to verify or upgrade it. Tax-related items were later substantiated by a Metro Center mailing to the St. Louis Regional Commerce and Growth Association and the Regional Planning Council.



## SECTION III: LOCAL DATA SUMMARY

### A. Overview

Sections I and II of this supplement reviewed data collection procedures. (The appendices to this supplement include various study instruments and protocols.) This section presents the data in conjunction with the 30 equation model to derive the effects on local business, government and individuals reviewed in the case study report. Data derived from the audience study and institutional financial/operating data are provided on an institution by institution basis. Employee data is presented in aggregate form only due to confidentiality requirements. Tax-related data and other community data are presented at the level of detail at which they were compiled. Special estimations, if applicable, are discussed in the appropriate sections below. General estimation and weighting techniques are discussed in Section IV.

### B. The Audience Data Summary

Exhibit 4 presents the Audience Data Summary. Included for each institution are the total attendance, percentage local attenders, percentage non-local attenders, percentage non-local attenders indicating that their interest in the arts institution was the "sole reason" for their visit, and total spending by local and non-local attenders.

Exhibit 4  
Audience Data Summary

	St. Louis Art Museum	St. Louis Conservatory and School for the Arts	St. Louis Symphony	Missouri Botanical Gardens	McDonnell Planetarium	Loretto-Hilton Repertory Theatre	Museum of Science and Natural History	Dance Concert Society	<b>BEST COPY AVAILABLE</b>	Total
Total Attendance <sup>1</sup>	786,604	7,553	842,246	313,864	273,163	124,975	145,500	9,595		2,503,500
% Local attendance	73%	97%	93%	62%	71%	95%	79%	93%		80%
% Non-local attendance	27%	3%	7%	38%	29%	5%	21%	7%		20%
% Non-local (sole-reason) attenders	1.5%	1%	1.4%	2.4%	1.5%	1.3%	1.5%	4.3%		1.6%
Number of local attenders	574,221	7,326 <sup>2</sup>	783,289	194,596	193,946	118,726	114,945	8,923		1,995,972
Number of non-local attenders	212,383	227	58,957	119,268	79,217	6,249	30,555	672		507,528
Number of non-local attenders (sole-reason)	11,936	76	12,033	7,383	4,024	1,590	2,221	409		39,672
Per capita spending by:										
Local attenders	\$2.21	\$1.00	\$4.36	\$3.32	\$3.34	\$3.84	\$1.15	\$3.00		\$3.31
All non-local attenders	--	--	--	--	--	--	--	--	\$147.31	
Non-local attenders (sole-reason)	--	--	--	--	--	--	--	--	\$32.52	
Total spending by:										
Local attenders <sup>2</sup>	\$ 1,269,028	\$ 7,326	\$3,415,140	\$ 646,059	\$ 647,780	\$455,908	132,187	\$26,769	\$ 6,600,197	
All non-local attenders	\$31,285,424	\$33,439	\$8,684,757	\$17,568,967	\$11,669,189	\$920,519	\$4,500,954	\$98,990	\$74,762,240	
Non-local attenders (sole-reason) <sup>2,3</sup>	\$ 388,159	\$ 2,472	\$ 391,313	\$ 240,095	\$ 130,860	\$ 51,707	\$ 72,227	\$13,301	\$ 1,290,134	

Source: Audience Surveys and Institutional Data Inventories.

<sup>1</sup>From Institutional Data Inventory, excludes attendance at in-school performances and attendance at events outside SMSA.

<sup>2</sup>Included in economic impact analysis.

<sup>3</sup>Does not sum due to rounding error.

### C. The Institutional Data Summary

Exhibit 5 presents the Institutional Data Summary. Included for each institution are total operating expenditures, total gross wages, taxes, total spending on goods and services, the percentage and amount of spending on goods and services that went to local vendors, the average institutional time and demand deposit, average spending per guest artist day, total number of guest artist days and total guest artist spending, the number of full-time and full-time equivalent employees, real estate taxes paid, self-provided municipal services, and special municipal services provided to the examined institutions. Comments regarding individual data items are provided in the footnotes to the exhibit.

**Exhibit 5  
Institutional Data Summary**

	St. Louis Art Museum	St. Louis Conservatory and School for the Arts	St. Louis Symphony	Missouri Botanical Gardens	McDonnell Planetarium	Loretto-Hilton Repertory Theatre	Museum of Science and Natural History	Dance Concert Society	Total
Total operating expenditure <sup>2</sup>	\$2,909,907 <sup>3</sup>	\$1,139,866	\$5,142,704	\$2,600,928	\$269,525 <sup>4</sup>	\$1,074,817	\$554,233	\$222,409	\$13,922,589
Total gross wages	\$1,256,137 <sup>5</sup>	\$661,243	\$3,490,612	\$1,098,687	\$205,675	\$594,676	\$294,931	\$50,043	\$7,652,004
Taxes	\$9,618	\$1,900	\$2,300	\$0	\$0	\$927	\$0	\$0	\$14,745
Total spending on goods and services	\$1,644,152	\$476,723	\$1,649,792	\$1,610,241	\$63,850	\$479,214	\$259,302	\$172,366	\$6,255,840
% spent locally on goods and services	86.05%	85.18%	76.23%	90.94%	94.91%	87.54%	93.64%	43.03%	82.19%
Local spending on goods and services	\$1,414,789	\$406,093	\$1,257,559	\$1,373,366	\$60,600	\$419,480	\$242,011	\$74,016	\$5,248,714
Average time deposit	\$421,843	\$0	\$20,563	\$0	\$0	\$303,642	\$295	\$0	\$746,343
Average demand deposit	\$81,049	\$31,716	\$165,907	\$5,000	\$0	\$28,303	\$39	\$2,286	\$314,300
Average spending per guest artist day	\$91	\$43	\$50	\$37	\$0	\$21	\$0	\$35	\$32.74
total number of guest artist days	43	01	540	30	0	2,590	0	368	3,652
total spending by guest artists	\$3,913	\$3,483	\$41,580	\$740	\$0	\$56,980	\$0	\$12,880	\$119,576
Number of full-time employees	105	18	141	160	12	48	23	3	510
Number of full-time equivalent employees	118	20	171	164	26	75	27	4	605
Real estate taxes paid by the institution	\$0	\$0	\$2,300	\$0	\$0	\$0	\$0	\$0	\$2,300
Annual cost of institution-provided police and security services	\$0	\$18,500	\$25,000	\$0	\$0	\$0	\$1,500	\$0	\$45,000
Annual cost of institution-provided street maintenance	\$0	\$0	\$25,000	\$0	\$0	\$0	\$0	\$0	\$25,000
Annual cost of institution-provided lighting (outdoor)	\$0	\$625	\$40,000	\$0	\$0	\$3,000 <sup>6</sup>	\$0	\$0	\$43,625
Annual cost of private trash removal	\$0	\$300	\$0	\$0	\$0	\$170 <sup>6</sup>	\$800	\$0	\$1,270
Assessed value of institutional tax-exempt property	\$163,000 <sup>8</sup>	NA	\$8,120,000	NA	NA <sup>8</sup>	NA	\$1,000,000	\$0	\$9,283,000
Special municipal services provided to institution									

Source: Institutional Data Inventories, Auditors' Reports

<sup>1</sup>All monetary amounts rounded to nearest dollar.

<sup>2</sup>Excludes capital expenses and depreciation charges.

<sup>3</sup>Excludes \$2,255,073 in building betterments.

<sup>4</sup>Based on March 1979 appropriation, may understate expenses.

<sup>5</sup>Provided by Alan Brimble, St. Louis Art Museum.

<sup>6</sup>Water, sewers, inspection fees.

<sup>7</sup>Plus \$1,716 in "snow removal."

<sup>8</sup>Owned by Metropolitan Zoological Park and Museum District.

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#### D. The Employee Data Summary

Exhibit 6 presents the Employee Data Summary. Included in aggregate form across all examined institutions is information on the number of full-time and full-time equivalent employees, total persons and number of children attending public elementary or secondary schools in employee households, home-ownership and property tax data, and average employee time and demand deposits. Methods and procedures for arriving at these estimates are described in Appendix E of the User Manual of the Baltimore Case Study,<sup>1</sup> and further discussed in Section IV of this supplement.

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<sup>1</sup> David Cwi and Katharine Lyall, Economic Impacts of Arts and Cultural Institutions: A Model for Assessment and a Case Study in Baltimore, Research Division Report #6. New York: Publishing Center for Cultural Resources, 1977.

Exhibit 6

Employee Data Summary\*

Total number of full-time employees	510
Total number of full-time equivalent employees	699
Percentage of full-time equivalent employees living in St. Louis	39%
Total number of persons in full-time equivalent employee households	1,468
Total number of children attending public elementary or secondary schools from full-time equivalent employee households	224
Percentage of full-time equivalent employees owning home	46%
Average property tax payment by full-time equivalent employee owning home	\$ 591
Percentage of full-time equivalent employees renting	54%
Average property tax paid out of rent of full-time equivalent renters	\$ 795
Average time deposit of full-time equivalent employee	\$3,234
Average demand deposit of full-time equivalent employee	\$ 708

\* Across all examined institutions.

## E. Tax-Related Data

Inasmuch as the local tax structure directly affects the revenues to local governments that can be attributed to the local arts and cultural institutions examined in this study, this section presents in some detail the relevant tax structure and tax rates for the St. Louis SMSA. These taxes include property, sales, income, hotel, restaurant, gasoline and transit taxes where applicable. This information was compiled from various sources. Each set of data items includes a footnote reference to the appropriate information source.

## 1) Property taxes:

The local property tax rate is the same for residential property as for business property.

Unit	Total Assessed	Weight	Tax Rate	Weighted Tax Rate
St. Louis City	\$1,137,000,000	.16	6.49	1.04
Franklin Co.	593,000,000	.08	5.04	.4
Jefferson Co.	172,000,000	.02	7.37	.15
Clinton Co.	194,000,000	.03	5.35	.16
Madison Co.	949,000,000	.13	5.66	.74
Monroe Co.	84,000,000	.01	5.64	.06
St. Clair Co.	749,000,000	.10	6.46	.65
St. Charles Co.	470,000,000	.07	7.42	.52
St. Louis Co.	2,900,000,000	.40	7.94	3.18
Total-	\$7,248,000,000	1.0		\$6.90 per \$100 assessed valuation

Source: Mark Twain Bancshares.

The ratio of assessed value to full market value for both business and residential property is .3 for all jurisdictions.

Source: Regional Commerce and Growth Association as reported by Marc Twain Bancshares.

2) Sales taxes:

Illinois portion of SMSA

4% state sales tax = \$66,828,000\*  
 1% county sales tax = 14,207,000 (i.e. 1/5 of sales tax is automatically retained locally)  
 81,035,000

Missouri portion of SMSA

3% state sales tax = \$197,600,000\*  
 1.5% average local sales tax = 98,800,000 (i.e. an average of 1/3 of the sales tax is automatically retained locally)  
 \$296,400,000

\* In Missouri and Illinois, the State sales tax becomes part of the general state budget and a portion is returned to the local area through various inter-governmental transfers. Neither the State Revenue Office in Springfield, Illinois nor Jefferson City, Missouri were able to give a reasonable estimate of the portion returned to local area.

Sales tax revenue generated locally, by County:

Illinois	State sales tax generated
Clinton	\$ 3,626,000
Monroe	1,776,000
St. Clair	29,649,000
Madison	<u>31,777,000</u>
Total	\$66,828,000

Missouri	State sales tax generated
St. Louis City	\$ 61,295,000
St. Louis County	113,662,000
Jefferson County	6,443,000
Franklin County	5,717,000
St. Charles County	<u>10,483,000</u>
Total	\$197,600,000

Figures are for 1977

These sales tax are applied to retail sales including restaurant and lodging sales.

Source: Mark Twain Bancshares.

3) Income taxes:

Neither Illinois nor Missouri compile income tax on a county to county basis. The State Income Tax Revenue becomes a part of the general revenue base and a portion is returned through various inter-governmental transfers. The Tax Office in Jefferson City and Springfield were unable to estimate what proportion was returned to local communities.

Source: Mark Twain Bancshares.

St. Louis City earnings tax;  
 1% on earnings of everyone employed within the city limits.

State tax schedules:  
 Not yet available.



## 4) Hotel taxes:

State of Missouri	0%
State of Illinois	0%
St. Louis City	3%
St. Louis County	3%

Source: Joe Davis, the Arts and Education Council of Greater St. Louis.

## 5) Restaurant taxes:

St. Louis City	1%
St. Louis County	1%

Source: Joe Davis, the Arts and Education Council of Greater St. Louis.

## 6) Gasoline taxes:

State of Missouri	7¢ per gallon
State of Illinois	7.5¢ per gallon
No local tax	

No allocation of amount returned to local jurisdictions is currently available.

Source: State Government Tax Collections in 1978, U.S. Department of Commerce, Bureau of the Census.

## 7) Transit taxes:

None reported (but there was one in 1973, ½%).

Data not attributed to the Arts and Education Council of Greater St. Louis was compiled by Mark Twain Bancshares

## F. Other Community Data

Other community data required for model estimations include total local business volume, the assessed value of business real property, local time and demand reserve requirements, residential and business property tax rates, the assessed value of residential housing, the number of children enrolled in local public elementary and secondary schools, state aid per pupil, other state revenues allocated to local governments on a per capita basis, local government operating costs (excluding public school and non-locally generated revenues), local public school operating budget (excluding non-locally generated revenues), total local population, assessed value of all non-school local government property and the assessed value of all local school property. These data items are presented below.

### 1) Total Local Business Volume (SMSA)

Total Retail Sales in 1977	7.1 Billion
Total Wholesale Sales in 1977	18.4 Billion
Value added by Manufacture 1976	7.3 Billion
	<hr/>
	\$32.8 Billion

Sources: "Annual Survey of Manufactures" 1976 Gerald Hubbard,  
U.S. Commerce Department.

"Spotlight on St. Louis Economy" 1978 Regional Commerce &  
Growth Association.

## 2) Assessed Value of Business Real Property (SMSA)

The 9 county assessor offices supplied the assessed value of all real property in their jurisdiction. None of them compiled this data on a commercial versus residential basis. In some cases, the Assessor's Office or County Planning Department gave us their best estimate of what the breakdown between commercial and residential property was. In the other cases we relied on the best estimate of people familiar with the area.

County	Total Assessed Value	Estimated Commercial Value	Estimated Residential Value
St. Louis City	\$1,137,000,000	\$398,000,000	\$739,000,000
Franklin County	593,000,000	178,000,000	415,000,000
Jefferson County	172,000,000	86,000,000	86,000,000
Clinton County	194,000,000	49,000,000	145,000,000
Madison County	949,000,000	712,000,000	237,000,000
Monroe County	84,000,000	21,000,000	63,000,000
St. Clair County	749,000,000	562,000,000	187,000,000
St. Charles County	470,000,000	141,000,000	329,000,000
St. Louis County	2,900,000,000	580,000,000	2,320,000,000
Total	\$7,248,000,000	\$2,727,000,000	\$4,521,000,000

## 3) Ratio of Assessed Value to Full Market Value

.3

Source: Regional Commerce and Growth Association.

## 4) Local Time Deposit Reserve Requirement

.03

This is state reserve requirement.

Source: Pat Waggoner, Mark Twain National Bank.

DIFFERENT THAN  
MARK TWAIN BANKSHARES

## 5) Local Demand Reserve Requirement

7% of first \$2 million.

9-1/2% of deposits between \$2 million to \$10 million.

11-3/4% of deposits between \$10 million to \$100 million.

12-3/4% of deposits greater than \$100 million.

Federal Reserve System, Demand Deposit Reserve Requirements.

## 6) Value of Residential Housing

\$4,521,000,000

Sources: "Housing Survey" U.S. Commerce Department, 1976. Contact Gerald Hubbard, Clayton, Missouri office.

Data is for October, 1976. Applying an average growth rate of 3% gives 872,000 assessed residences of October, 1978.

## 7) Number of Assessed Residences

822,000

Source: "Housing Survey," op. cit.

## 8) Total Local Households

817,667

Number of households based on 1978 year end estimated population and assumes 3 persons per household. Derived value checked against 1976 "Housing Survey," U.S. Commerce Department.

## 9) State per Pupil Education Grant

\$600

Figure based on sample of School Districts in metropolitan area.

## 10) Other State Revenue Attributed to Institutions and Employees

Information not available.

## 11) Local Operating Excluding Public School Costs

County Operating Budgets excluding school costs:

St. Charles Co.	4.8 million	Clinton County	1.0 million
Franklin County	3.4	St. Louis City	119.2
Jefferson Co.	3.0	Monroe County	2.4
Madison County	34.0	St. Louis Co.	291.6
St. Clair Co.	33.0	Total	\$492.4 million

No source listed.

## 12) Total Population (SMSA)

2,453,000 (1978)

No source listed.

## 13) Public School Operating Budget

Data was collected from all individual school districts in SMSA.

St. Charles Co.	28.9 million	St. Clair Co.	91.9 million
Jefferson County	45.5	Clinton Co.	9.9
Franklin County	19.5	St. Charles Co	337.9
Monroe County	5.0	St. Louis City	119.4
Madison County	87.1	total	\$745.1

## 14) School Enrollment in Primary and Secondary Schools

526,074 (1977)

Source: "Spotlight on St. Louis Economy" Regional Commerce and Growth Association

## 15) Value of Local Government Property

Data not available.

Each County Assessors Office was called regarding this item. Some of them did code government exempt property separately but did not aggregate the individual values. The other counties were unable to isolate government property except on a one to one basis. All counties pointed out that the assessed value carried on these parcels has not been updated since the parcel was given government/exempt statue. The values would not be a reliable estimate of the true assessed value of the property.

## 16) Assessed Value of Institutional Tax Emempt Property

Data not available.

Tax exempt property in all counties is not appraised after the property receives exempt status. Book values are not reliable estimates of the current assessed value since the surrounding area has often changed considerably and new structures may have been built on the property.

A realistic estimate will require a complete documentation of all institutional real property and a current appraisal of each.

Data compiled by Mark Twain Bancshares.

## SECTION IV: WEIGHTING AND ESTIMATION TECHNIQUES USED IN THE STUDY

### A. Overview

This section orients the reader to the general weighting and estimation procedures used in this study, and orients the reader to the wide range of technical problems involved in economic impact studies. The "User Manual" portion of the Baltimore Case Study\* includes an earlier discussion of some of these matters. Methods and procedures described in this final section of the technical supplement should be considered in conjunction with the discussion in the "User Manual."

### B. Audience Data

The systematic sampling of individuals in an audience necessitates the weighting of the number of respondents of differing party-sizes due to the differing probabilities of different size parties receiving a questionnaire. This weighting can be effected by multiplying the number of parties of a particular size times the party-size and then dividing by the sampling interval. For a detailed description of this procedure and caveats regarding its use, see the Metro Center working paper on this subject.\*\* This procedure adjusts the number of parties of a particular size, and then uses these new party strata sizes as the basis for computing weighted averages for party expenditures. All estimates of party-spending or portions thereof were estimated in this fashion.

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\*David Cwi and Katharine Lyall, Economic Impacts of Arts and Cultural Institutions: A Model for Assessment and a Case Study in Baltimore, Research Division Report #6. New York: Publishing Center for Cultural Resources, 1977.

\*\*D. Alden Smith, "The Systematic Sampling of Parties at Arts and Cultural Events: Weighting Procedures for Party-Specific Items". Working paper. Center for Metropolitan Planning and Research, 1980.

The limited number of visitor cases due either to small sample size or to there being only a small percentage of visitors in the audience on the dates surveyed, necessitated an analysis of visitor mean spending across all sampled institutions rather than on an institutional basis. For this reason, mean visitor spending should be considered with caution. Furthermore, since selected institutions had few out-of-SMSA visitors during the sampling period, estimates of total "sole reason" visitors may be based on a small number of sampled visitors. These institutions are noted in the case study (c.f. Exhibit 7). Results for these institutions should be treated as tentative.

Spending was only attributed to local attenders and non-local sole reason attenders for purposes of estimating economic impact. This spending was calculated by taking the adjusted per party expenditures, converting them into per capita expenditures (on an institutional basis for local attenders, across all institutions for non-local sole reason attenders), and then multiplying these per capitas by the appropriate number of local and non-local sole reason attenders for the season. The total number of attenders for fiscal 1978 was reported by each institution's staff in the institutional data inventories and was later adjusted to exclude attendance at events outside the SMSA, and attendance at events held in schools.

### C. Employee Data

The employee survey asked respondents to provide the zipcode of their place of residence. These zipcodes were used to allocate employees into local taxing districts that crossed political boundaries. The distribution of non-respondents place of residence was assumed the same as that of respondents.

The statistics used for calculations utilize institution full-time equivalents which include aggregated part-time employees. The residence of respondent full and part-time employees was used to distribute each institutions full-time equivalents among local political and taxing jurisdictions. Similar procedures were required to weight other sample statistics to full-time equivalents including household size, home ownership, average time and savings deposits, and number of children in public primary and secondary schools. In order to solve one model equation for all institutions and to derive summary data for all employees, sample means were weighted by number of full-time equivalents at each institution. This procedure sought to assure that no one institution was over-represented in the sample.

Estimates of local spending by institutional employees were based on their own salary and wage income and not on total household income. (Each case study cites employee salaries and wages as a per cent of their total household income.) However, costs to local government are based on employee households (unless otherwise noted) since the majority of these effects are only meaningful in terms of households. This section concludes with a discussion of procedures used to estimate direct tax effects.

#### D. Institutional Data

Institutional data were collected using procedures described in Sections I and II. Total annual operating costs attributed to each institution exclude capital costs and depreciation expense (a non-cash item). Institutional fiscal years were generally not concurrent. The case studies simply identify and aggregate the impact of each institution's last fiscal year.



Basically, these tasks were straightforward accounting tasks requiring substantial fail-safing procedures but little estimation or weighting. Specific comments or assumptions are detailed in the institutional data summary portion of Section III. In the few cases where governmental agencies or portions thereof could not provide expense statements, then appropriation budgets were used. This procedure excludes institutional spending of earned income from the analysis, and is thus very conservative. Such cases are footnoted in Section III where applicable.

#### E. Community Tax-related Data

##### Business Property Taxes

Estimation of property taxes attributable to the examined institutions proved difficult for the following reasons:

- (1) selected taxes changed over time,
- (2) there were a large number of taxing authorities,
- (3) taxing districts were overlapping,
- (4) procedures required data that was not always readily available, including market value or taxable value, the assessment ratio and the property tax rate for each jurisdiction for each kind of property under consideration,
- (5) differing local procedures by type of local property, e.g. business inventories may or may not be taxable, or taxable at a different rate than business real property,

In general, the procedure followed was to weight the assessment ratio (ar) by the assessed market value (MV) for all taxing jurisdictions and then to weight the property tax rate (pt) by the taxable value (AV). This method must be used if ar differs by jurisdictions (otherwise ar may be weighted by AV). This procedure was used, where possible, to weight up to an aggregate tax rate for all local jurisdictions within a county, then the counties were weighted across the SMSA.

owners and renters. It should be noted that this procedure assumes that all employees either own a home or rent.

### Sales Taxes

The calculation of sales taxes must take account of differing tax rates and taxable transactions by local jurisdictions. One can "tax" the attributable cash flow if one knows the jurisdictions affected and economic sectors involved. The calculation of sales tax effects requires the identification and aggregation of all institution, audience, and guest artist spending subject to sales tax which is then multiplied by the appropriate tax rate. If, for example, the cost of accommodation is not subject to sales tax, then spending in this sector must be excluded. The study uses the coefficient .004375 as the percentage of employee salaries that will result in sales tax revenue per 1% of the local tax rate.\*

If only a percentage of locally generated sales tax revenues are returned to local jurisdictions then the local sales tax revenues are equal to that percent times the sales tax dollars generated locally.

Jurisdictions with differing sales tax rates can cause further disaggregation, if so attributable sales taxes were apportioned by the percent sales tax collected in each jurisdiction.

### Transit Taxes

Transit taxes, where applicable, were levied in a similar fashion to sales taxes and were treated similarly.

---

\*Coefficient provided by Dr. David Greytak, of the Maxwell School of Citizenship and Public Affairs, Syracuse University.

### Residential Property Taxes

Local residential property tax attributable to institutional employees that own homes, was calculated directly using average property tax reported by the full time employees in the employee survey weighted by the number of full-time equivalent employees at each institution.\*

Property taxes due to institutional employees who rent living quarters was estimated in the following manner.\*\* 20% of average rent was assumed to eventually go to landlord property taxes and it was assumed that 25% of rentor employee's household income goes to rent. The following calculations show the amount attributable per rentor employee:

	Mean Renter's Household Income	Rent (monthly)	Property Tax Attributable
Columbus	\$14,500	\$302	\$725
Minneapolis/St. Paul	\$13,381	\$279	\$669
St. Louis	\$15,909	\$331	\$795
Salt Lake	\$13,527	\$282	\$676
San Antonio	\$13,636	\$284	\$682
Springfield	\$16,438	\$342	\$822

The calculation, then, is simply: (Property Tax Attributable) (1-h) (FTE's), where FTE's is the number of full-time equivalent employees. The final calculation involves summing the taxes attributable to

---

\*See the section on employee data for other weighting procedures.

\*\*This procedure was suggested by Dr. Katharine Lyall.

### Hotel Taxes

The same type of jurisdictional problems encountered with sales taxes are confronted with hotel taxes. To provide a conservative estimate of attributable direct hotel taxes, the following method was used. The estimated number of non-local attenders who came solely to attend an examined institution was multiplied by the average length of their visit to get the estimated number of person-nights in the area. This figure was adjusted by the percent reporting spending on lodging (corrected for party-size) to identify the number of paid person-nights in the area. According to Laventhal and Horwath the average daily rate for occupancy in 1977 was \$31.62,\* or \$15.81 per paid person night assuming two persons per room. Multiplying the \$15.81 times the number of person nights gives the estimated dollar value of hotel spending by non-local attenders who are in town solely to attend the examined event. This amount of money, when added to the spending on hotels by guest artists at the examined institutions (from the institutional data inventories) gives an estimate of total spending attributable to the hotel sector. This amount was then "taxed" at the appropriate rate(s). This method does not count spending by local attenders on accommodations.

### Parking Revenues to Local Governments

Parking revenues to local governments were calculated as follows. Assuming one party per car, the adjusted number of local and non-local sole reason parties was multiplied times the estimated per cent arriving

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\*Laventhal and Horwath, "U.S. Lodging Industry, 1978."  
Philadelphia, Pa. 1978, p. 14.

by car to get the number of attributable cars. This figure was multiplied by the estimated per cent using public parking to get the number of cars using public parking. This number of cars was multiplied by the estimated cost per car (average length of stay in hours times average cost per hour in public lots) to get the parking revenues to local government for each institution. The figures were then summed across all examined institutions.

#### Gasoline Taxes

Gasoline taxes were estimated by multiplying the average distance traveled times the adjusted number of local and sole reason parties to get total miles traveled. This figure was then divided by an assumed 20 miles per gallon (to be conservative) to estimate attributable gallons used. Then local excise taxes per gallon were applied. No estimate was made of gasoline usage by the examined institution's employees (either business or personal usage) or gasoline usage by guest artists.

#### Restaurant Taxes

Restaurant taxes, where applicable, were calculated directly from estimated spending in restaurants and bars, using appropriate local tax rates.

#### Admission Taxes

Admission taxes, where applicable, were taken from the examined institutions' data inventories rather than estimated.

### Income Taxes

Income tax estimates frequently involve jurisdictional problems as noted previously with other tax items. One frequent problem is whether the tax is collected where the employee lives, works or both. Income taxes, where applicable, were calculated in the fashion described in the Baltimore Case Study unless otherwise noted in a particular case study.

### "Multipliers"

"Multipliers" were calculated in the fashion described in "Multiplier Analysis: Arts and Cultural Institutions."\* This method requires estimates of the population of the study area, the ratios of employment to earning in the arts and cultural, retail, and hotel sectors of the economy, and attributable spending in these sectors. Employment to earnings ratios were calculated from 1976 County Business Patterns data, and adjusted for inflation using the consumer price index to provide 1978 estimates. The general analysis report prepared as part of this study includes a detailed discussion of "multiplier effects" and their place in regional economic impact analysis.

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\*David Greytak and Dixie Snively, "Multiplier Analysis: Arts and Cultural Institutions," unpublished paper. The Johns Hopkins University Center for Metropolitan Planning and Research, April 1979.

TECHNICAL SUPPLEMENT TO  
THE ECONOMIC IMPACT  
OF EIGHT CULTURAL INSTITUTIONS  
ON THE ECONOMY OF THE ST. LOUIS SMSA  
VOLUME II -- APPENDICES

The Johns Hopkins University  
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# TABLE OF CONTENTS

Page

## APPENDICES

A) Audience Survey Dates and Response Rates .....	1
B) Annotation Instructions .....	10
C) Institutional Data Inventory .....	14
D) Community Data Inventory .....	36
E) Sample Calendar Instructions .....	49
F) Documentation Protocol .....	53



APPENDIX A

Audience Survey Dates and Response Rates

## ST. LOUIS ART MUSEUM

Date	Distributed Forms	Returned Forms	Rejects During Editing	Valid Forms	Sampling Intervals	Total Attendance
11/21	44	37	4	33	1/4	452
11/22	27	14	0	14	1/4	1,118
11/23	29	22	1	21	1/4	721
11/24	97	69	4	65	1/4	2,080
11/25	60	47	4	43	1/4	2,170
11/26	70	56	2	54	1/4	2,154
11/28	33	41	4	37	1/4	309
11/29	39	30	5	25	1/4	878
11/30	16	10	0	10	1/4	943
12/01	27	12	0	12	1/4	731
12/02	24	21	0	21	1/4	780
12/03	39	31	0	31	1/4	1,684
n	475	390	24	366*	1/4	14,020

\* The overall response rate across the survey period was 77%. Two questionnaires were deleted in subsequent computer edits.

ST. LOUIS CONSERVATORY & SCHOOL  
FOR THE ARTS (CASA)

Date	Distributed Forms	Returned Forms	Rejects During Editing	Valid Forms	Sampling Intervals	Total Attendance
11/12	55	37	3	34	1/2	125
11/15	13	7	1	6	1/2	75
11/19	23	15	4	11	1/2	60
11/29	5	4	0	4	1/1	50
12/03	40	30	4	26	1/1	225
12/06	5	5	0	5	1/1	50
12/10	24	10	0	10	1/1	60
12/17	54	25	4	21	1/2	290
n	219	133	16	117*	--	935

\* The overall response rate across the survey period was 53%. One questionnaire was deleted in subsequent computer edits.

## ST. LOUIS SYMPHONY

Date	Distributed Forms	Returned Forms	Rejects During Editing	Valid Forms	Sampling Intervals	Total Attendance
11/18	229	173	0	173	1/7	1,763
11/24	153	75	0	75	1/7	1,424
11/25	201	137	0	137	1/7	1,791
12/01	300	158	0	158	1/7	2,467
12/03	290	144	1	143	1/7	2,474
12/04	38	18	1	17	1/7	383
12/07	117	41	0	41	1/7	910
n	1,328	746	2	744*	1/7	11,212

\* The overall response rate across the survey period was 56%. Sixteen instruments were deleted in subsequent computer edits.

## MISSOURI BOTANICAL GARDEN

Date	Distributed Forms	Returned Forms	Rejects During Editing	Valid Forms	Sampling Intervals	Total Attendance
11/20	40	25	1	24	1/3	272
11/21	28	20	0	20	1/3	336
11/22	32	17	0	17	1/3	149
11/23	115	75	1	74	1/3	316
11/24	100	52	6	46	1/3	914
11/25	150	72	4	68	1/3	573
11/26	50	28	3	25	1/3	213
11/27	0	0	0	0	1/3	n/a
11/28	40	11	1	10	1/3	387
11/29	30	14	0	14	1/3	282
11/30	28	23	2	21	1/3	232
12/01	40	25	1	24	1/3	375
12/02	95	29	3	26	1/3	297
12/03	130	63	4	59	1/3	486
12/04	17	10	5	5	1/3	194
12/05	19	10	0	10	1/3	246
12/06	13	8	0	8	1/3	161
12/07	4	3	1	2	1/3	169
12/08	9	4	0	4	1/3	26
12/09	28	20	0	20	1/3	224
12/10	2	1	0	1	1/3	438
12/11	0	0	0	0	1/3	64
12/12	9	6	0	6	1/3	429
12/13	31	19	0	19	1/3	268
12/14	34	18	0	18	1/3	317
12/15	7	3	1	2	1/3	248
12/16	19	8	0	8	1/3	322
12/17	11	10	10	0	1/3	821
n	1,081	574	43	531*	1/3	8,759

\* The overall response rate across the survey period was 49%. Seven instruments were deleted in subsequent computer edits.

## MCDONNELL PLANETARIUM

Date	Distributed Forms	Returned Forms	Rejects During Editing	Valid Forms	Sampling Intervals	Total Attendance
11/28	21	18	1	17	1/3	221
11/29	17	14	0	14	1/3	170
11/30	12	9	0	9	1/3	343
12/01	23	10	1	9	1/3	372
12/02	18	16	0	16	1/3	807
12/03	55	43	0	43	1/3	555
12/05	50	10	0	10	1/3	327
12/06	11	11	0	11	1/3	96
12/07	4	3	0	3	1/3	143
12/08	20	3	0	3	1/3	500
12/09	115	80	2	78	1/3	226
12/10	29	10	0	10	1/3	369
n	375	227	4	223*	1/3	4,129

\* The overall response rate across the survey period was 59%. Two of the instruments rejected during the edit were apparently not removed from the sample.

## LORETTO-HILTON REPERTORY THEATRE

Date	Distributed Forms	Returned Forms	Rejects During Editing	Valid Forms	Sampling Intervals	Total Attendance
11/15	154	126	1	125	1/3	551
11/16	153	134	0	134	1/3	531
11/18 1	172	168	1	167	1/3	596
11/18 2	110	96	0	96	1/3	556
11/19 1	144	105	0	105	1/3	597
11/19 2	135	111	1	110	1/3	560
11/21	141	119	1	118	1/3	495
11/22 1	112	78	0	78	1/3	395
11/22 2	128	113	1	112	1/3	505
11/24	148	115	0	115	1/3	797
n	1,397	1,165	5	1,160*	1/3	5,583

\* The overall response rate across the survey period was 83%. Two instruments rejected during the edit were apparently not removed from the sample.

## MUSEUM OF SCIENCE AND NATURAL HISTORY

Date	Distributed Forms	Returned Forms	Rejects During Editing	Valid Forms	Sampling Intervals	Total Attendance
11/14	20	20	0	20	1/2	51
11/15	25	24	0	24	1/2	66
11/16	14	14	1	13	1/2	27
11/17	20	19	2	17	1/2	42
11/18	50	48	1	47	1/2	186
11/19	119	108	9	99	1/2	267
11/21	21	21	1	20	1/2	77
11/22	25	25	0	25	1/2	90
11/24	25	25	0	25	1/2	103
11/25	50	43	3	40	1/2	367
11/26	94	83	4	79	1/2	240
11/28	23	23	0	23	1/2	62
11/29	2	2	1	1	1/2	13
11/30	12	11	1	10	1/2	35
12/01	7	7	0	7	1/2	28
12/02	50	46	5	41	1/2	139
12/03	57	50	7	43	1/2	192
n	614	569	35	534 *	1/2	1985

\* The overall response rate across the survey period was 87%.



## DANCE CONCERT SOCIETY

Date	Distributed Forms	Returned Forms	Rejects During Editing	Valid Forms	Sampling Intervals	Total Attendance
11/18	506	381	13	368	1/3	1247
11/19	769	462	0	462	1/3	1306
n	1275	843	13	830 *	1/3	2553

\* The overall response rate across the survey period was 65%. Seven instruments rejected during the edit were apparently not removed from the sample.

**APPENDIX B**  
**Annotation Instructions**



Instructions for Annotating Budget Statements  
and Statements of Functional Expenses

- 1) The study coordinator must collect the auditor's report, the last income and expenditure budget summary for the fiscal year included in the auditor's report, and any questionnaires completed for service organizations (ASOL, TCG, Opera America, etc.) The budget summary is an independent internal document reflecting the institution's proposed budget. It is often prepared for the Board. Collect the last budget prepared in the fiscal year for which you have an auditor's report. (Ideally, you will collect a final quarter budget containing actual expenses for the first three quarters and a budget for the last.) These budget statements are probably more detailed than the auditor's report.
- 2) The study coordinator should make (and keep) a copy of all documents and forward a copy to David Cwi.
- 3) The study coordinator should identify the person most familiar with accounts payable, e.g., the bookkeeper or controller. Prior to contacting this person, the study coordinator will contact David Cwi to review the adequacy of each institution's "statement of functional expenses" and budget statement. If portions of the "statement of functional expenses" are not adequate, the study coordinator may have to rely on the budget statement. If neither is sufficiently detailed, it will be necessary to sample invoices as noted below.
- 4) The study coordinator will meet with the person noted in #3 in order to identify institutional expenditures with local firms. Line items depicting staff salaries may be ignored inasmuch as the percentage of staff that reside locally and the amount staff spend locally will be identified by the staff survey. Contractural labor services, e.g., guest artists, should be identified as local or non-local using the procedure described below. (The amount non-local "guests artists" spend while they are in your SMSA is identified using the attached instrument. Treat all expenditures made with non-local "guest artists" as spent completely out of the SMSA.)

# BEST COPY AVAILABLE

## Procedure for Annotating Statements of Functional Expenses/Auditor's Report

After you have forwarded to the Metro Center the documents cited in #1 above, they will be examined to verify the appropriateness of the annotation strategy discussed below. Potential problems will be reviewed by phone before the study coordinator meets with institutional staff.

The notation described below seeks to identify total institutional expenditures with firms located in the examined SMSA. We are concerned with whether goods or services were purchased from a local source, even if the source was part of an enterprise with headquarters in another city. In short, expenditures are local if they are made locally, even if the firm is not locally owned and operated.

It is anticipated that the study coordinator and the person in charge of accounts payable will review each line of the statement of functional expenses. To help confirm the judgement of institutional staff regarding the proportion of each item that is spent locally, it would be helpful to ask staff to identify the local vendors from whom the goods and services in question were purchased. If there appears to be some doubt as to the accuracy of staff representation of local spending, in one or another categories, you will indicate this by "?" next to the line in question as described below.

- a) next to each line item should be placed the % of that expense spent within the SMSA
- b) if a majority of the remainder is spent out of the state, a check (✓) should be placed next to the % spent in the SMSA.
- c) if a majority of the remainder is spent in the state, no check mark is needed.
- d) When there is doubt about the remainder, write "?" next to the % spent in the SMSA.
- e) If there is doubt about the % spent locally, write "?" next to the appropriate line item.
- f) In special cases -- Twin Cities and St. Louis -- where two states are overlapped by the SMSA, "out-of-state" means out of both states and "in-state" means in either or both states.

Sample Annotation for Auditor's Reports  
or Budget Summary

		% in SMSA*
1) Legal and accounting	5,146	100%
2) Maintenance supplies	18,000	60%
3) Miscellaneous	461	90% ✓
4) Office supplies	3,290	80%

✓ on line 3 implies that the majority of the remaining 10% was spent both out of the SMSA and out of state.

The lack of checks on lines 2 and 4 implies that the majority of the 40% and 20% respectively spent out of the SMSA were spent in the state.

If the person in charge of accounts payable is not sure what % of any line item (especially large categories) is spent within the SMSA, then the invoices for that item must be sampled. If the statement of functional expenses is not sufficiently detailed and you are not allowed access to the supporting budget summary, you will have to sample invoices. In order to deal with this issue at the outset, please send both budget and auditor's reports before you visit the institution.

APPENDIX C  
Institutional Data Inventory



# THE JOHNS HOPKINS UNIVERSITY

CENTER FOR METROPOLITAN PLANNING AND RESEARCH

BALTIMORE, MARYLAND 21218

## E.I.S. Data Inventory

The current six city study involves many different types of institutions. This form will be used to supplement information gathered from institutional auditor's reports and budget statements. Many of the items of information requested are inapplicable to one or another type of institution. Please answer all items that apply, noting when the answer is an estimate.

### Instructions

Please do not leave any lines blank:

if you mean zero, write "0"

if you mean not applicable, write "N/A"; (if entire sections are not applicable, please, so indicate)

if you mean an estimate, write "E" after the answer.

Much of the information requested may be available from reports or applications prepared by the institution for their service organization or various funding sources. To minimize the burden on the participating institutions, study coordinators should collect such material from institutional managers and use it to complete as much of this form as is possible. We suggest that Section II be completed at the same time the study coordinator visits the institution to annotate the statement of functional expenses. All data provided should be for the last fiscal year, which should be noted below.

Section I  
Data Inventory  
Institutional Operating Characteristics

Date: \_\_\_\_\_

Fiscal Year you are reporting: \_\_\_\_\_

Name of Organization: \_\_\_\_\_

Name and title of managing director: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Name of staff person most familiar with financial information/internal accounts: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

SMSA Number: \_\_\_\_\_

Institution Number: \_\_\_\_\_

Audit basis:  
cash \_\_\_\_\_  
accrual \_\_\_\_\_  
hybrid \_\_\_\_\_

Fiscal Year begins: \_\_\_\_\_

IRS non-profit?:  
Yes \_\_\_\_\_ No \_\_\_\_\_

Year organization founded: \_\_\_\_\_

How many years in present facility: \_\_\_\_\_

In what year was present facility built: \_\_\_\_\_

69

70



PERFORMING ARTS ACTIVITIES

	Regular Season	Touring	Special Events**	In-School or other Programs**	Total
1. Total Paid Attendance					
2. Total Complementary or Free					
3. Total Attendance					
4. Total Attendance by Subscribers					
5. Total Attendance Group Sales					
6. Total Discounted Single Tickets					
7. Total Undiscounted Single Tickets					
8. Total Possible Attendance *					
9. % Capacity paid (1 ÷ 8)					
10. Total # of Productions					
11. Total # of Performances					

\* Total possible attendance should reflect the fact that different halls may be used and that orchestra pit seating may be used for some performances.

\*\* Please briefly describe these events and programs, e.g., "benefit concert local charity."

Special Events: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

In-school or other Programs: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

EXHIBITIONS, LECTURES, WORKSHOPS, OTHER ACTIVITIES  
NUMBER OF ACTIVITIES AND ATTENDANCE: MAIN FACILITY

Main Facility

Total #

Total Days Open to the Public per year  
Total Hours Open to the Public per year  
Total Attendance  
Total Paid

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Total Attendance

Total Paid

Total # of Permanent Exhibitions (excluding touring)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

-- on average, how many minutes do people  
spend viewing each exhibition?

\_\_\_\_\_

XXXXXXXXXX

XXXXXXXXXX

Total # of New/Special Exhibitions (excluding touring)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

-- on average, how many minutes do people  
spend viewing each exhibition?

\_\_\_\_\_

XXXXXXXXXX

XXXXXXXXXX

-- total # developed by the institution

\_\_\_\_\_

XXXXXXXXXX

XXXXXXXXXX

-- total # developed by others\*

\_\_\_\_\_

XXXXXXXXXX

XXXXXXXXXX

\* merely being shown, but not developed by in-house  
curatorial staff

(continued on next page)

EXHIBITIONS, LECTURES, WORKSHOPS, OTHER ACTIVITIES  
NUMBER OF ACTIVITIES AND ATTENDANCE: MAIN FACILITY  
(cont'd)

<u>Main Facility</u>	Total #	Total Attendance	Total Paid
Total # of lectures	_____	_____	_____
Total # of workshops	_____	_____	_____
-- on average, how many hours do people spend in each workshop?	_____	XXXXXXX	XXXXXX
Total # of classes	_____	_____	_____
-- on average, how many hours do people spend in each class	_____	XXXXXXX	XXXXXX
Total # of films	_____	_____	_____
Total # of other (please list):	_____	_____	_____
--	_____	_____	_____
--	_____	_____	_____
--	_____	_____	_____

Touring Activities -- see next page

EXHIBITIONS, LECTURES, WORKSHOPS, OTHER ACTIVITIES  
 NUMBER OF ACTIVITIES AND ATTENDANCE: TOURING/OUTREACH

Touring

	<u>Total #</u>	<u>Total Attendance</u>	<u>Total Paid</u>
Total # of Touring Exhibitions	_____	_____	_____
-- on average, how many minutes do people spend viewing each exhibition?	_____	XXXXXXXXXX	XXXXX
Total Days Available to the Public per year	_____	XXXXXXXXXX	XXXXX
Total Hours Available to the Public per year	_____	XXXXXXXXXX	XXXXX
Total # of Lectures*	_____	_____	_____
Total # of Workshops*	_____	_____	_____
-- on average, how many hours do people spend in each workshop	_____	XXXXXXXXXX	XXXXX
Total # of Classes*	_____	_____	_____
-- on average, how many hours do people spend in each class	_____	XXXXXXXXXX	XXXXX
Total # of Films*	_____	_____	_____
Total # of Other (please list):	_____	_____	_____
--	_____	_____	_____
--	_____	_____	_____
--	_____	_____	_____

\* Refers to outreach activities conducted outside the main facility.

Instructions

Contributions from individuals and businessmen may be received by the institution in either or both of two ways: as a cash contribution or a purchased membership treated by the institution as a contribution.

The information provided below allows institutions to distinguish between both sorts of cash contributions. Information is first sought on cash contributions that are not received as purchased memberships. Information is then requested on membership income.

"Individuals" refers to contributions from individuals taken by them as a tax exemption. "Businesses" refers to contributions taken as a tax deduction by a business. You are asked to identify the total number of contributions and then group them by size of contribution.

CONTRIBUTION PATTERNS

Cash Contribution (not including memberships)

Total number of individuals contributing \_\_\_\_\_

Total # grouped by size of contribution    \_\_\_\_\_ \$0-49    \_\_\_\_\_ 50-99    \_\_\_\_\_ 100-499    \_\_\_\_\_ 500-999    \_\_\_\_\_ 1000 and over

Total number of business contributions \_\_\_\_\_

Total # grouped by size of contribution    \_\_\_\_\_ \$0-49    \_\_\_\_\_ 50-99    \_\_\_\_\_ 100-499    \_\_\_\_\_ 500-999    \_\_\_\_\_ 1000-2499  
\_\_\_\_\_ 2500-4999    \_\_\_\_\_ 5000 and over

Memberships

Total number of individual memberships \_\_\_\_\_

Total # grouped by size of contribution    \_\_\_\_\_ \$0-49    \_\_\_\_\_ 50-99    \_\_\_\_\_ 100-499    \_\_\_\_\_ 500-999    \_\_\_\_\_ 1000 and over

Total number of family memberships \_\_\_\_\_

Total # grouped by size of contribution    \_\_\_\_\_ \$0-49    \_\_\_\_\_ 50-99    \_\_\_\_\_ 100-499    \_\_\_\_\_ 500-999    \_\_\_\_\_ 1000 and over

Total number of business memberships \_\_\_\_\_

Total # grouped by size of contribution    \_\_\_\_\_ \$0-49    \_\_\_\_\_ 50-99    \_\_\_\_\_ 100-499    \_\_\_\_\_ 500-999    \_\_\_\_\_ 1000-2499  
\_\_\_\_\_ 2500-4999    \_\_\_\_\_ 5000 and over

CONTRIBUTION PATTERNS

(cont'd)

Please list all government agencies and levels of government, e.g. State Arts Council, from which you have received grants and specify the amount.

Granting Agency	Amount

Please list all private foundations from which you have received grants and specify the amount.

Foundation	Amount



Instructions: Categories I through III should be used for persons regularly working for the institution. Included are salaried and hourly staff -- i.e., persons for whom a W-2 form is prepared -- and volunteer and CETA staff. (see note below regarding volunteers). Also include all staff positions for whom a contract instrument is used. This will include staff-paid on a per service basis, e.g., ushers and musicians, but not specialized consultant services, e.g., auditor. Do not include guest artists or staff/cast of booked-in shows. Do not include personnel turnover in I - III, i.e., the total # of persons who have worked in the institution, but rather the number of staff positions these persons have filled. If the number of positions varies by time of year or by event, e.g., some shows require more dancers, please estimate average number of positions at any point in time during the fiscal year for which information is being supplied. Cite total number of positions in each category and total hours worked per year, including overtime, whether paid or not.

ORGANIZATIONAL STAFFING

	PAID FULL-TIME		PAID PART-TIME		CETA		FULL AND PART-TIME VOLUNTEER	
	# of positions	hrs worked per year	# of positions	hrs worked per year	# of positions	hrs worked per year	# of positions	hrs worked per year
I. ADMINISTRATIVE								
Executive Director/General Manager/ Business Manager								
House Manager/Box Office Manager/ Dept. heads								
Development/PR/Fundraising								
Clerical/Secretarial								
Maintenance/Grounds/Restaurant-Bar/ Gift Shop/Shipping								
SUB-TOTAL								

Note: Volunteer includes Guilds, Boards, and all other unpaid labor involved in running the organization.

(continued on next page)



ORGANIZATIONAL STAFFING  
(cont'd)

II. ARTISTIC PROGRAM/PRODUCTION	PAID FULL-TIME		PAID PART-TIME		CETA		FULL AND PART-TIME VOLUNTEER*	
	# of positions	hrs worked per year	# of positions	hrs worked per year	# of positions	hrs worked per year	# of positions	hrs worked per year
Non-performing: technical/managerial (set, lighting, costume, wardrobe, design, props, casting, stage manager, artistic director, etc.)								
Performing: musicians, actors, chorus, dancers, conductors								
Stagehands/ushers/box-office assistants/guards/security/guides								
SUB-TOTAL								

III. EDUCATION/RESEARCH/OUTREACH	# of positions	hrs worked per year	# of positions	hrs worked per year	# of positions	hrs worked per year	# of positions	hrs worked per year
Librarian/Editor/Photographer/Designer								
Instructor/Researcher/Curator/Conservator								
SUB-TOTAL								
TOTAL								

\* Note: Volunteer includes Guilds, Boards, and all other unpaid labor involved in running the organization.



### WAGE STRUCTURE

**Instructions:** Please estimate average wage rates using per year for full-time and per hour for part-time. Please estimate wage rates per position not per person. (See instruction from previous data section.)

<u>Staff Categories</u>	<u>Paid Full-Time average income per year all positions</u>	<u>Paid Part-Time average income per hour all positions</u>
I. Administrative		
Executive Director/General Manager/ Business Manager	_____	_____
House Manager/Box Office Manager/ Dept. Heads	_____	_____
Development/PR/Fundraising	_____	_____
Clerical/Secretarial	_____	_____
Maintenance/Grounds/Restaurant-Bar/ Gift Shop/Shipping	_____	_____

(continued on next page)



## WAGE STRUCTURE (cont'd)

Staff CategoriesPaid Full-Time  
average income per  
year all positionsPaid Part-Time  
average income per  
hour all positions

## II. ARTISTIC PROGRAM/PRODUCTION

Non-performing: technical/managerial  
(set, lighting, costume, wardrobe,  
design, props, casting, stage  
manager, artistic director, etc.)Performing: musicians, actors, chorus,  
dancers, conductorsStagehands/ushers/box-office assistants/  
guards/security/guides

## III. EDUCATION/RESEARCH/OUTREACH

Librarian/Editor/Photographer/Designer

Instructor/Researcher/Curator/Conservator

Model Specific Data From Institutional Records

Average daily balance in all institution time (savings) accounts \_\_\_\_\_

Average daily balance in all institution demand (checking) accounts \_\_\_\_\_

Note: Both of the above figures may be calculated by choosing 3 days in each month randomly using the table below. This results in 36 balances which must be summed and divided by 36. If there is more than one checking or savings account, then the process must be repeated for each account (e.g., if two checking accounts, one would use the above procedure to create two averages, then simply add them and write the resulting number in the second blank).

RANDOM NUMBER TABLE

month in fiscal year

	1	2	3	4	5	6	7	8	9	10	11	12
selected days	22	24	16	13	19	2	7	12	25	28	31	1
	11	6	4	28	14	8	23	30	22	1	11	30
	10	29	5	15	3	18	21	20	15	9	17	26

Using the table: For month 1, the three days to sample are the 22nd, the 11th, and the 10th. The account statement may read as follows:

Date	Transaction	Balance	
1/5	check	\$20	
1/10	deposit	\$30	
1/11	check	\$10	92
1/23	check	\$5	

Using the random table, one finds that the balance for the 22nd is \$10, because no transaction occurred between the 11th and the 23rd and the balance on the 11th was \$10. The balance for the 11th and 10th can be read directly from the above statement.

Total local real estate taxes paid directly by the institution.\*

\_\_\_\_\_

Total payments to local government made in lieu of taxes.

\_\_\_\_\_

Total admissions tax collected. Please (✓) level of government.

Amount

\_\_\_\_\_ local tax

\_\_\_\_\_

\_\_\_\_\_ state tax

\_\_\_\_\_

Total sales tax collected. Please (✓) level of government.

Amount

\_\_\_\_\_ local tax

\_\_\_\_\_

\_\_\_\_\_ state tax

\_\_\_\_\_

Other taxes collected and fees paid by the institution to government. Please list type, level of government and amount. Exclude payroll taxes and federal, state, or local income tax deductions from staff payrolls.

Tax or Fee

Level of Government

Amount

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\*Since most artistic and cultural institutions are non-profit, tax-exempt institutions, they will pay no real estate taxes. Some may own property which is not used for non-profit purposes, in which case they will pay property tax.

Please estimate total annual cost of municipal-type services provided by the institution:

- 1. Street lighting (include parking lots) \_\_\_\_\_
- 2. Landscaping \_\_\_\_\_
- 3. Street maintenance \_\_\_\_\_
- 4. Sidewalk maintenance \_\_\_\_\_
- 5. Trash removal (not including janitorial or maintenance costs) \_\_\_\_\_
- 6. Security and police (not including the cost of central station alarm services) \_\_\_\_\_
- 7. Other (please list) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Please list and describe any special municipal services provided to your institution for which the city or county does not require reimbursement (e.g., 5 policemen for two hours per week, etc.)

- 1.
- 2.
- 3.
- 4.

Please estimate the number of guest artists employed by the institution during the fiscal year under consideration.

\_\_\_\_\_

Note: "guest artist" refers to any non-resident brought to the institution to direct, to give performances, exhibitions, lectures, etc. (e.g., a booked-in concert by a major symphony might involve 100+ guest artists). For our purposes, guest artists are non-residents in the community for a relatively short period of time. They may or may not be persons for whom the institution completes a W-2.

When guest artists are in your community, how many days on average do they stay?

\_\_\_\_\_

Note: The average should take into account guest artists that may stay for as long as a month (e.g., an actor brought in to do a play) as well as guest artists brought in for only one day.

On average, how much will a guest artist spend per day, excluding the cost of accommodations? You may use per diem rates that are part of contractual agreements or simply your best estimate of likely daily expenditures on food, incidentals and entertainment.

\_\_\_\_\_

When guest artists are in your community, how many nights, on average, do they stay?

\_\_\_\_\_

Where do guest artists at your institution stay while in your community? And what does it cost them to stay there? Please indicate the number utilizing the choices given and the cost to the guest artist per night.

	# guest artists using	cost to each per night
Apartment owned by institution	_____	_____
Hotel or motel (please name)	_____	_____
--	_____	_____
--	_____	_____
--	_____	_____
Other (please list)	_____	_____
--	_____	_____
--	_____	_____



What percentage of the institution's total annual paid ticket sales/admissions are sold through the following outlets:

- 1. Box/ticket office on premises \_\_\_\_\_
- 2. Group/block sales \_\_\_\_\_
- 3. Commercial ticket agencies \_\_\_\_\_
- 4.  Ticketron outlets \_\_\_\_\_
- 5. Other sales in retail stores \_\_\_\_\_
- 6. Co-operative ticket booths (e.g., arts alliance sets up booth with aid of local bank to sell tickets for all member organizations) \_\_\_\_\_
- 7. Other (please specify) \_\_\_\_\_  
 -- \_\_\_\_\_  
 -- \_\_\_\_\_  
 -- \_\_\_\_\_

Does the institution participate in any subscription series or offer memberships and services in conjunction with any other arts organizations. (e.g., a performing arts series that includes 2 plays, 2 dance recitals, etc.)

Yes \_\_\_\_\_ No \_\_\_\_\_

If Yes, please describe:



TO BE COMPLETED BY THE STUDY COORDINATOR ONLY

Please estimate the number of the following types of businesses within convenient walking distance of the institution that are open when the institution has performances or is open to the public.

	none	one or two	a few	many
Restaurants	_____	_____	_____	_____
Bars	_____	_____	_____	_____
Diners/fast food outlets	_____	_____	_____	_____
Galleries and specialty shops	_____	_____	_____	_____
Other retail establishments	_____	_____	_____	_____

Were any of these businesses built solely or primarily to serve the examined cultural institution?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If Yes, please indicate which and describe: \_\_\_\_\_  
\_\_\_\_\_

Are there parking facilities near the examined institution that are operated by local government or local public agencies?

\_\_\_\_\_ Yes \_\_\_\_\_ No

Do parking revenues go directly to local government as general revenues, or are they used solely to pay costs incurred by the parking facility?

\_\_\_\_\_ general revenues \_\_\_\_\_ the parking facility only \_\_\_\_\_ both





TO BE COMPLETED BY THE STUDY COORDINATOR ONLY (cont'd)

Are there privately run parking facilities near the examined institution? (including facilities owned and operated by the institution.)

\_\_\_\_\_ Yes \_\_\_\_\_ No

Were any of these parking facilities built solely or primarily to serve the examined cultural institution?

private lots \_\_\_\_\_ Yes \_\_\_\_\_ No  
public lots \_\_\_\_\_ Yes \_\_\_\_\_ No

Is there a local or state tax in addition to the parking fee?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If Yes, how is the tax computed?

Local \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

State \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What percentage of people utilizing the institution arrive by car?

\_\_\_\_\_ %

TO BE COMPLETED BY THE STUDY COORDINATOR ONLY (cont'd)

Private Lots

Public Lots

What percentage of parties arriving by car are likely to use these parking facilities?

\_\_\_\_\_

\_\_\_\_\_

Approximately how long will the average audience/visitor party park his car?

\_\_\_\_\_

\_\_\_\_\_

Approximately how much will they spend to park their car?

\_\_\_\_\_

\_\_\_\_\_

What percentage of parties arriving by car will use metered spaces?

\_\_\_\_\_ %

Approximately how much will they spend to park their car?

\_\_\_\_\_



What is the assessed value of the institution's facility?

Property owned by the institution \_\_\_\_\_

Facilities rented by the institution \_\_\_\_\_

% of facility occupied by the institution \_\_\_\_\_

Note: If not available from the institution, these figures may be available from the local tax and assessment department.

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APPENDIX D

Community Data Inventory

TO: Study Coordinators

FROM: David Cwi

DATE: March 1, 1979

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Attached is an expanded version of the annotated community data inventory distributed at the October Study Coordinator's Workshop. The revised draft has been developed after a review of the community data forwarded to date. We hope that it provides an adequate basis for data collection despite the differences that have appeared among partnership cities regarding such matters as type and number of taxing jurisdictions, state/local fiscal relations and the availability of particular data items.

After you have reviewed the attached, please contact me by phone. We will want to discuss problems and progress to date and identify if there are ways that we can assist you in gathering needed data or deriving estimates.

In the short run, your first priority is the implementation of the staff survey and the collection of budget statements and auditor's reports for our review. We would like to complete all data collection tasks by the end of March and look forward to promptly returning your audience studies as soon as keypunching is completed.



Community Data Series Reporting Protocol

Attached is a revised draft of the community data inventory distributed during the October Study Coordinator's Workshop. Each of the data items is reviewed and an attempt made to anticipate difficulties in collecting data.

The data required will be found in selected state, local and federal reports. The attached includes suggestions regarding appropriate state and local agencies to be contacted.

While many of the data items deal with the SMSA as a whole, it will be necessary in many cases to provide information on individual taxing districts within the SMSA. Even when the data item deals with the SMSA as a whole, you may find that the data has not been aggregated by an appropriate regional or state agency; in which case you will have to assemble SMSA data from reports prepared by appropriate local agencies within the several jurisdictions that comprise the SMSA.

We will be relying on you to document the community data series. Ideally, you could xerox relevant pages from reports cited, recording also the title of the report, the issuing agency, the fiscal year covered, and the date of publication -- in short, a standard footnote reference. You should also maintain a file of correspondence with agencies supplying information. Be assured that you need not forward copies of documentation to Johns Hopkins. (We will give full credit to you for the information you supply, so you should make sure that you have documented the data should persons raise questions concerning findings.)

After you have reviewed the attached inventory, it will become apparent that no form can be devised to take account of the idiosyncrasies of participating cities. Since the notion of a standardized form seems inappropriate, we think it best that you simply report data items in the same order as they are listed on the annotated inventory. We would also appreciate if you would cite the title of the report from which you took the information, the agency issuing the report, the page in the report, and the fiscal year covered. In short, please provide data values in the same order as the attached inventory, and include a footnote reference for our records.



When you must construct data for the SMSA as a whole by adding together local data, please cite all local agency reports and data values used. Similarly, when data on individual jurisdictions is called for, please cite each data values and reports used.

After reviewing the attached, it will be apparent that some local impacts, especially tax revenues generated, may require inventiveness on your part and the advice of local or state agency staff. For example, data on tax revenues retained or generated locally may be impossible to determine in cases when the tax is a state tax, and revenues are not returned to the locality on a formula basis. When revenues are collected in the SMSA by the state, mixed with funds from other local jurisdictions and returned through various state-local intergovernmental transfers, it may be difficult to determine locally retained revenues attributable to the examined institutions. It may be necessary to consult local experts on your state's tax policies should per capita or other formulas for state aid and/or the return of particular tax revenues not exist.

Finally, there may be special local taxes of interest which are not dealt with in our model, and which may be applied by all or only some local jurisdictions. As a first step, you would do well to simply identify the major state and local tax sources by examining the Budget reports of your city and county localities or by contacting knowledgeable persons in your regional planning agency. Similarly, you would do well to request reports from the State Treasurer's Office that detail state/local fiscal relations. This discussion may help to make clear why we recommended at the outset that you involve knowledgeable local planners in this project.

The following inventory of community data is a revised version of the draft reviewed during the October Study Coordinator's Workshop. The inventory lists the data item, its notation, model equation in which it appears, page reference in the user manual and suggested sources of information.

Data Items

1. Total Local Business Volume (total local retail sales + total local wholesale sales + value added to raw materials by local manufacturers): TBV, B-4.1, p. 43.

Source: Local planning or economic development department; Bureau of Census publications - Retail Trade Area Statistics, Wholesale Trade Area Statistics, and Census of Manufacturers.

Comment: Identify TBV for the SMSA as a whole, except if sales tax rates vary within the SMSA (see #14). A regional planning or economic development department may have aggregated this information for the several units of government within the SMSA, otherwise the information must be gathered for each local unit in the SMSA and aggregated. Census or community data may be old (e.g. 1967) in which case the figure for TBV must be increased to reflect current values. TBV can be updated by assuming an increase equal to the increase in sales tax receipts during the period in question, adjusting for changes in the tax rate. If it is necessary to adjust TBV, contact Doug Smith.

2. Total assessed valuation of business real property: AV, B-4.1, p. 43.

Source: Local tax office.

Comment: Because the SMSA may consist of several taxing jurisdictions, this may complicate your efforts to identify AV. There are two complications. AV may be comprised of separate valuations for business (a) buildings, (b) equipment, and (c) inventory. If differing assessment ratios (ar) are used for (a), (b), or (c) by all or some of the SMSA's taxing jurisdictions, then the assessed valuation for (a), (b), and (c) must be listed separately for each taxing authority in the SMSA. Otherwise, we cannot utilize equation B-4.1 which divides AV by the appropriate ar. See #3 and #13 below.



3. The ratio of assessed valuation to full market value of business property: ar, B-4.1, p. 43.

Source: Local tax office.

Comment: "ar" refers to the percentage of full market value used in determining the assessed valuation of business property. It is conceivable that "ar" might vary by jurisdiction or by type of property, prompting the need for separate AV values for each type of property in each local jurisdiction (c.f. #2 above). When assessed valuation is 100% of full market value, ar is 1. Should "ar" values vary by type of business property or by jurisdiction, then a list should be prepared citing all local jurisdictions that tax business property, the type of property tax, and AV and ar values for each type. This will allow a weighted SMSA value for AV and ar. In addition, see #13 below. You may need, in assembling AV and ar values to also cite business property tax rates by jurisdiction and type of property.

4. Local inventory-to-business volume ratio: ir, B-4.2, p. 45.

Source: Local planning, tax assessment, or economic development agency; or use a national ratio derived from an IRS (Internal Revenue Service) publication, Statistics of Income.

Comment: The local area is the SMSA as a whole. This item is calculated as the ratio of the value of end-of-year inventory to gross sales; it is thus the value of inventory as a percentage of gross business receipts. (Cite the national figure used in the Baltimore Study if local data is not available.)

5. Local time deposit reserve requirement: t, B-5, p. 46.

Source: State banking regulatory agency; a local savings institution official.

Comment: When subtracted from 1, the item indicates the percentage of deposits in time (savings) accounts that may be used by financial institutions for loans. The value to be used is for the SMSA as a whole. A complication is introduced because commercial banks and state chartered banks and savings and loans may have differing reserve requirements inasmuch as they are regulated by differing federal or state agencies. This will require that t be weighted to reflect the volume of savings with particular types of local savings institutions. Polk Profile of Change may be available at a local bank research department or data may be collected by the appropriate state regulatory agency listing total time deposits (savings) in Banks, Savings and Loans and Credit Unions. The calculation of t should be weighted to reflect the percentage of savings dollars held by federal and state chartered banks, savings and loans and credit unions and the differing state and federal reserve requirements. Contact Doug Smith for details.

6. Local Demand deposit reserve requirement (checking institution regulation): d, B-5, p. 46.

Source: State banking regulatory agency; a local checking institution official.

Comment: Same as number 5 above for deposits in checking accounts. Inasmuch as savings and loans, and credit unions may not have demand (checking) accounts, the complications identified in #5 above may not arise.

7. Local cash-to-business volume ratio: cbv, B-5, p. 46.

Source: State economic development agency; Bureau of Census, U.S. Statistics of Income, and IRS (Internal Revenue Service), U.S. Corporate Tax Returns. (Selected years)

Comment: The ratio reflects cash held in reserve by businesses as a percentage of total business volume. Since this may vary due to economic conditions, an average cbv may be calculated by averaging cbv ratios for two or more years. If a local cbv cannot be calculated, we will use an updated national figure.

8. Local residential property tax rate: pt, G-1.1.1, p. 51

Source: Local tax office or planning department.

Comment: There is no SMSA property tax rate; rather, there is usually a different rate for the various property taxing jurisdictions within the SMSA (general service governments, school districts, and/or other property taxing units.) Institutional employees may reside in more than one taxing district. If reliable data is available from the staff survey, then there is no need to utilize equation G-1.1.1 to estimate property tax payments by employee homeowners. Consequently, there will be no need to identify "pt", "TRA" or "R". (See #11 and #12). However, if there are low response rates to the staff survey or the question dealing with property tax payments, or if reported values appear unreliable, then it will be necessary to utilize equation G-1.1.1 and develop values for "pt", "TRA", or "R". Study coordinators have been asked to examine employee residence to determine how employees are distributed among local jurisdictions and taxing districts. In particular, it will be important to identify the taxing districts in which homeowning employees reside and the number of homeowning employees in those jurisdictions. This can be accomplished utilizing the staff survey, again assuming adequate response to this question.

9. Total Full-time Employees and Full-time Equivalents: Emps, B-5.

Source: Institutional Data Inventory

10. Percentage of employees owning homes locally: h, G-1.1.1, p. 51.

Source: Staff Survey.

Comment: Examine staff survey response rates to determine if the survey can be used to identify percentage of employees owning homes, and reported property tax payments. Even if there are low response rates, we may be able to estimate homeownership and tax payments. If it proves necessary to use equation G-1.1.1, we hope you will not only report residential AV for each of the taxing jurisdictions in which employees reside, but also identify if AV is calculated other than as a percentage of fair market value, e.g., in terms of replacement or original cost.

11. Value of local residential housing: TRA, G-1.1.1, p. 51.

Source: Local tax office or planning department.

Comments: See #8 above. If it is necessary to use equation G-1.1.1, then TRA and R (see #12) must be developed for each local jurisdiction in which employees own homes. (Percentage owning homes and jurisdictions of residence can be determined via the staff survey.)

12. Total number of assessed residences: R, G-1.1.1, p. 51.

Source: Local tax office or planning department.

Comment: R must be consistent with TRA (#11). If the value of residential housing (TRA) includes rental or condominium apartments as well as single family homes, then R must include the total number of apartment units and not simply the total number of buildings with apartments.

13. Business property tax rate (Business inventory tax rate): pt, G-1.1.2, p. 53.

Source: Local tax office or planning department.

Comment: The notation "pt" appeared in #8 above. In many cases, residential property tax rates (#8) and business rates (#13) are identical. However, this may not be so or business rates may be different from residential rates in some but not all local jurisdictions. In addition, pt may vary for plant, equipment, and inventory (see #2 above). While we sought to escape assembling data on jurisdictions that tax employee residential property, you will have to assemble data on business property tax rates for all jurisdictions in the SMSA that tax business property. Contact Doug Smith. See #3 above.

14. The percentage of locally generated sales tax revenues retained locally: st, G-1.2, p. 54.

Source: State tax office; local tax office.

Comment: Sales taxes may be imposed by the state, by all or some local jurisdictions, or both. "st" is the percentage of sales tax revenues retained, not the sales tax rate. If a local jurisdiction assesses a sales tax and all revenues are retained, then  $st = 1$ . If sales tax rates or percentage revenues retained locally vary by taxing jurisdictions within the SMSA, then it may be necessary to determine a TBV for each of the counties (and the city if it is not covered in county data). In this case, you would list all jurisdictions whose TBV values were aggregated to derive the SMSA-wide TBV and also cite the sales tax rate in each jurisdiction and st, the percentage of revenues retained locally. If there is a variance in the type of sales that are taxed, this should also be noted.

If the sales tax is collected by the state, it may be returned on a formula basis to the localities or become a part of the state's general revenues. If the former, then a separate st should be cited for the state. If the latter, then it will be necessary to consult local experts on your state's tax policies. Contact Doug Smith should sales taxes vary within the SMSA.

15. Sales tax revenues generated locally: STR, G-1.2, p. 54.

Source: State tax office; local tax office (retail sales tax divisions).

Comment: STR may be any combination of the following: state, local, both state and local, and bi-state. For each case, related STR and st values should be listed together by local jurisdiction and state. Where  $st = 0$  this should be noted. Separate local STR values should total the SMSA-wide STR.

16. Total income tax revenues retained by the local jurisdiction: TYT, G-1.3, p. 55.

Source: State or local fiscal officer.

Comment: Income taxes may be imposed by the state, by all or some local jurisdictions or both. In addition, a locality may charge a commuter tax on the earnings of non-residents as well as tax the income of residents. Finally, the state may collect income tax and return a portion of it to the local jurisdiction in which the tax payer resides (or, the locality may "piggy back" its tax on the state tax). Similar to #14, if the income tax rate varies -- either "piggy back"; percentage returned by the state, commuter versus resident or by local jurisdiction -- then it will be necessary to list each jurisdiction's retained income tax revenues, distinguishing tax revenues paid by commuters for those counties with both commuter and resident income taxes.

Please also list income tax rates for the taxing jurisdictions in which employees reside including "piggyback" taxes, commuter taxes and the state tax if the state is required to return a percentage to each jurisdiction. The percentage revenues retained by the local jurisdiction should be noted if less than 100%.

17. Total local households: HH, G-1.3, p. 55.

Source: Local or regional planning department.

Comment: Identify total local households. If there is a commuter tax, then a separate HH will be required indicating the number of local households paying the commuter tax rate.

18. State per pupil educational grant to the local community: SE, G-1.4.1, p. 57.

Source: State education agency; local fiscal officer; local school agency fiscal officer.

Comment: As stated in the model user manual, it is supposed that SE is a grant per pupil and the grant is the same for each local jurisdiction. This may not be correct and the grant may vary, in which case SE should be cited for each school district in the SMSA. Or, it may be possible to construct an SE value for each school district by dividing state aid for regular programs (as opposed to special education) by total enrollment in each school district.



- 19. Other state revenues attributable to the institution and its employee households (provided solely on a per capita basis): OR, G-1.4, p. 56.

Source: State fiscal agency; state planning department; local fiscal officer.

Comment: If OR is treated like SE -- per capita aid to educate the public school children in employee households -- this requires that individuals in employee households eligible for aid be identified. But OR may refer to per capita aid not directed at persons with special needs but rather jurisdictions as a whole. For example, state revenue sharing may be provided on a per capita basis or per capita aid provided for roads or other services used by the entire local population. If aid is forthcoming on other than a per capita basis, it may be possible to construct OR by listing state aid to services in the SMSA that can be utilized by all residents, then dividing by the local population. Again, this may have to be done separately by county.

- 20. Local operating budget excluding public school costs and non-locally generated revenues: B, G-2.1, p. 59.

Source: State local government agency report on local government finances; local fiscal officer.

Comment: The local area is the entire SMSA. There will be a B value for each local jurisdiction within the SMSA where institutional employee households reside. You will have to assemble total operating budgets for all jurisdictions in the SMSA for which you will have information from the employee survey. If there are scores of incorporated municipalities, you should strive for all major jurisdictions in which staff reside (contact Doug Smith). Exclude from all local operating budgets the cost of public schools as well as all non-local revenues. Do not include non-recurring costs. Non-local revenues include federal and state aid.

- 21. Total local population: POP, G-2.1, p. 59.

Source: State planning department; local or regional planning department.

Comments: This should be provided for each of the jurisdictions included in #20, with each jurisdiction's POP listed separately.

22. Local public school operating budget, excluding revenues from non-local sources: SB, G-2.2, p. 61.

Source: Local school agency fiscal officer.

Comment: The comments to #20 above apply here as well. Cite budgets for all school districts in which employees have enrolled children. Exclude revenues from non-local sources.

23. Number of children in employee households attending public schools: C, G-2.2.

Source: Staff Survey

24. Total number of persons in staff households: EHH, G-2.1.

Source: Staff Survey

25. Total enrollment in local public primary and secondary schools: TC, G-2.2, p. 61.

Source: State education department; local school agency.

Comment: Data should be provided for each school district in which employees have enrolled children.

26. Value of all non-school local governmental property: GPM, G-3, p. 62.

Source: State tax (assessment) office; local tax (assessment) office.

Comment: The values for these items may be in costs today of replacing governmental property or the original cost of these facilities expressed in current dollars. Cite convention used in lieu of fair market value by local assessors.

27. Value of all school-related governmental property #2: GPs

Source: State tax (assessment) office; local tax (assessment) office.

Comment: The value for these items may be in costs today of replacing governmental property or the original cost of these facilities expressed in current dollars. Cite convention used in lieu of fair market value by local assessors.

28.. Assessed value of institutional tax-exempt property: AV, G-4, p. 63.

Source: State or local tax (assessment) office.

Comment: An assessed value must be identified for all institution owned or rented tax exempt property. Cite the jurisdiction assessing the property and the method utilized if other than fair market value. -- e.g., replacement cost or original cost in current dollars. The jurisdiction's assessment ratios and business property tax rates should also be noted here if not already cited in providing values for #3 and #13. If a property is owned by the local jurisdiction -- e.g. municipal museum -- please note this.



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APPENDIX E

Sample Calendar Instructions

TO:

FROM: Doug Smith

RE: Sample Frame Documentation

DATE: July 3, 1979

Enclosed you will find "calendars" from each of the institutions participating in your audience study. Each calendar has been filled in with the local\* performance/exhibition information for all events that took place at that institution during the sampling period. Also, each day that sampling occurred has been marked:

For the purposes of documentation, the sampling period is defined as the time span that includes the opening night (day) of the production/exhibit that precedes the first event sampled thru the closing night (day) that follows the last event sampled.

We would like you to verify this information. In addition, we would like you to make additions/deletions of performances/exhibitions in those instances where we do not currently know of schedule changes or whether other performances/exhibitions were held. Unless this is done, we will not be able to make any final decision as to the representativeness of the sample. We need your prompt attention to this matter, so that we can return your audience studies to you. The managers of the various institutions should be able to assist you in this matter.

Even for the events that were not sampled (but did occur during the sampling period), it is imperative that we know the total attendance for these events. Please write this information in the appropriate "day-block," with the name and type of performance. An example is given on page two.

In cases where only a handful of performances are given over the entire season, they should all be listed. This may require a separate sheet attached to the calendar.

\* Local, as usual, means in SHSA.

TO:  
FROM: Doug Smith

Example: The Repertory Theatre (XX)

September 1978					1	2
3	4	5	6	7 Hamlet 7:30 pm	8 8 pm TA 103 SI 44 NR 19 RR 57%	9 2 pm 8 pm
10 2 pm, 8 pm	11	12 Hamlet 8 pm	13 8 pm TA 103 SI 44 NR 19 RR 57%	14 8 pm	15 8 pm	16 2 pm 8 pm
17 2 pm, 8 pm	18	19	20	21	22	23

Key: TA = total attendance  
 SI = sampling interval used  
 NR = number of questionnaires returned  
 RR = response rate (raw)

TO:  
FROM: Doug Smith

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In the example, we see that "Hamlet" opens on the 7th -- the start of the sampling period. The first event sampled is the 8th. The last event sampled is the 13th and the closing night is the 17th. You would verify that these dates and times are correct, add or delete performances as necessary, and fill in the total attendance figures for the 7th, for both shows on the 9th and 10th, for the 12th, 14th, and 15th, and both shows on the 16th and 17th.

It should be noted that we have provided calendars for six (6) months. Only the months that cover the applicable sample period need be filled in.

When you return the calendars to us, please include any performance calendars that the institutions distribute. If you have any questions, please feel free to call.

Thank you.

cc: David Cwi

Attachments

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APPENDIX F

Documentation Protocol

Documenting Data Collection Efforts

The six city project has involved a number of data collection tasks. Except for the community data inventory, all efforts have focused on individual institutions -- their audiences, financial and operating characteristics, and staff households. As part of an overall evaluation of data quality, we are seeking to document various aspects of data collection and data handling.

Much of the information needed has already been provided, e.g., the Survey Event Report Forms. The aspects of data collection that particularly concern us now involve the organization, management and execution of tasks. We are especially concerned with the identification of the practices that were adopted for most of the studied institutions and circumstances that led to different practices on the part of individual institutions. This information can help us to identify the extent to which differences or similarities might be due to the data collection procedures as well as identify potential impacts on data quality.

If you are aware or suspect for any reason that data quality varies by institution -- e.g., some institutions did not seriously attempt to identify local expenditures -- please identify the institutions and the reason for your suspicion.

Please read over the attached documentation issues and contact Doug Smith if you have any questions. We hope that this last task is not too burdensome and that it can be completed within the next two weeks.

## 1) Audience Survey

(a) Completed and "cleaned" SERF's

(b) Distribution and Collection:

-- Was the same person responsible for supervising the distribution and collection of questionnaires at every institution, or did this vary by institution? Was the same person responsible within individual institutions? How was this person trained?

-- Did the same group of people distribute and collect at each institution? Who were these people? Ushers? Other volunteers? Arts Agency staff? How were they trained?

-- What constraints were imposed, either by the institution-type or the management? (Be sure to discuss problems such as underestimated attendance or large numbers of ineligible respondents.)

-- Did the study coordinator participate in the physical handout/collection process? If so, what portions, and to what degree? (Be sure to fully describe the relationship between the study coordinator and surveying personnel.)

-- What is the study coordinator's opinion of the survey procedures? Did the process vary by institution? (e.g., questionnaires distributed in programs instead of separately, announcement from the stage at some places and not at others) Were staff trained prior to distributing and collecting questionnaires?

-- Essentially, how was the process organized and monitored and what improvements could be made?

(c) Editing:

-- Was the same person responsible for supervising the editing of questionnaires at every institution, or did this vary by institution? Was the same person responsible within individual institutions?

-- Did the same group of people edit the questionnaires for each institution? Who were these people? Volunteers? Institutional staff? Arts Agency staff?

-- How were the editors trained? By whom?

-- Did they have any difficulty understanding the editing protocols provided by the Metro Center? What improvements, if any, could be made on these protocols?

-- How much time, on average, did it take to edit one questionnaire?

(d) Complete documentation of sampling frames. You will receive a calendar for each institution. It will show all the events in the sampling period, of which we are aware, and indicate those sampled. In many cases, this information will be complete, and you need only verify it. In other cases, it will be necessary to fill in performances that are not listed. Specific instructions will accompany the calendars.

(e) Was the keypunching verified?

## 2) Staff Survey

### (a) Distribution and Collection:

-- Who handed out and collected surveys?

-- What is the study coordinator's opinion of the quality of the survey procedures and on what facts is this opinion based?

-- What constraints were imposed, either by the institution-type or the management?

-- Did the study coordinator participate in the physical handout/collection/edit process? If so, what portions, and to what degree?

-- Essentially, how was the process organized and monitored and what improvements could be made?

### (b) Editing:

-- Who edited the surveys?

-- How were they trained?

-- How much time did they spend?



## 3) E.I.S. Data Inventory

- Did one person meet with all institutions, or did several persons each meet with several institutions?
- Were the inventories completed by someone at the institution or were they completed jointly with the study coordinator or someone designated by him/her.
- Who supplied the information?
- Were the same procedures used for each institution?
- What constraints were imposed on this process (if any)?
- What is the study coordinator's opinion of data quality? (Cite the reason for your judgment.)  
Please review problems in gathering data.

## 4) Annotation of Auditor's Report on Budget Summary:

- Did one person meet with all institutions, or did several persons each meet with several institutions?
- Who supplied the information?
- Was it the person most familiar with accounts payable?
- How much time did they spend?
- What is the study coordinator's opinion of the quality of the data? (Cite the reason for your judgment.)
- Was the same procedure applied to every institution?
- What constraints were imposed on this process (if any)?
- Was the person who provided the data asked to name local suppliers, or was their estimate simply accepted without challenge?

--Did the study coordinator personally participate in the review of each item or was he only able to request information which was supplied at a later date?

5) Community Data Inventory:

- (a) If completed properly, the Community Data Inventory should include an appendix of sources, references and comments about the data. Please review problems in gathering data, special tabulations that might have been required, etc.

6) Adjustment for Touring out-of-SMSA:

- (a) The E.I.S. Data Inventory asks for various kinds of attendance figures. However, we need an estimate of the total attendance at performances/exhibitions in the SMSA, for each institution, including touring activities within the metropolitan area. Please forward this data as soon as possible, distinguishing main facility from other sites. It should be noted that all touring out of the SMSA would be excluded, as would performances given in schools. It would include attendance at the institution's main facility as well as attendance for tours in the SMSA.