ECONOMETRIC CONSULTING SERVICES SURVEY

Prepared for

COMPUTER SCIENCES CORPORATION Information Network Division 650 North Sepulveda Boulevard El Segundo, California 90245

Ъy

INPUT

2180 Sand Hill Road Menlo Park, California 94025

August 20, 1976

MS-ECON-1-22

Alexandrali X



TABLE OF CONTENTS

PAGE

I.	Introduction	1
II.	Management Summary	3
II.	Recommendations for Further Research	5
IV.	Analysis of Survey Responses	8

Attachment	1:	Suggested Mail Survey Questionnaire
Attachment	2:	Phone Survey Question Tabulations
Attachment	3:	Actual Telephone Survey Questionnaire Used for This Survey



ECONOMETRIC CONSULTING SERVICES SURVEY

I. INTRODUCTION

INPUT conducted a survey of some twenty-two companies to ascertain both their current use of econometric consulting services, and their plans or interest in both future and expanded use of services through timesharing. The survey was conducted by telephone in the period August 3 - 12, 1976. Approximately 35 minutes were spent with one or more persons at each company.

The geographic distribution of interviews was:

- 8 East Coast
- 7 Midwest
- 7 West Coast

The following types of companies participated in the interviews:

- 15 industrial
- 4 financial

3 government (including aerospace)

We found the respondents, once contacted, very receptive to being interviewed. Most expressed great interest in receiving a copy of the survey summary, promised in the interview. Only one executive refused to be interviewed. In all we were able to interview the people most intimately involved in using the various services offered. In many instances we interviewed more than one executive per company. We interviewed the following types of executives:



- 2 vice president and treasurer
- 9 manager/director market research
- 8 corporate economist
- 3 director corporate planning
- 2 comptroller
- 2 manager operations research



II. Management Summary

Although we found great interest in accurate and timely data bases of specific industries both within the United States and on an International basis, we did not find great interest in utilizing specialized micro-econometric models in conjunction with those data bases. Most of the persons interviewed gave a lukewarm to skeptical appraisal of the models in those companies which might or would make use of them. We have determined on the basis of this survey that even though industry model development may be feasible, it would be a hard sell.

However offering specialized domestic and international data bases in conjunction with adequate access software and data analysis (statistical, etc.) routines is of great interest to many respondents. Given the data bases, the access software and the analysis routine, and a cost/effective pricing structure, the interested corporate economists/ planners would, we believe, use their industry specific expertise to construct their own specialized industry models.

The following additional findings came from data obtained during the survey.

 All respondents who use on-line econometric services use both the vendor's data bases, and access and analysis software, with their own in-house developed models. These models may be operated both on the vendor's equipment and their own in-house equipment. The respondents frequently develop and test the model on the timesharing network and then transfer the model to their internal computer.



- Most of the on-line users subscribe to an econometric service for the following reasons (in priority order):
 - 1) data base
 - scope
 - accuracy
 - timeliness
 - 2) access/analysis software to operate on data base
 - 3) cost
 - 4) econometric forecasting models

- Users feel that timesharing costs are too high. They are turning to internal computing systems for continued operations. Combined computing (using timesharing services and in-house facilities) is being used as a cost/effective alternative.

INPUT recommends that, subject to research confirmation, CSC obtain both national and international industry data bases and create the necessary access and modeling software to penetrate the econometric services marketplace. Models in themselves together with consulting services should be secondary considerations.



III. Recommendations for Further Research

The results of this survey are encouraging:

- They point to a significant and growing market in the offering of economic and econometric services through timesharing resources.
- There are strong indications that both domestic and international aggregate and industrial data bases which are detailed, accurate and timely are in demand.
- There are indications that neither sophisticated econometric models nor a cadre of consultants are prerequisites for market entry.
- There are ample indications that adequate access software and data analysis routines which run economically on the timesharing network are key to user utilization.

Market Research

In order to confirm these findings it is recommended that an extensive mail survey be initiated. To that end we have prepared a suggested questionnaire (attachment 1). We would propose to analyze the data gathered from the survey together with the data gathered from this phone survey and internally provided as necessary to determine: (1) market size; (2) entry approach; (3) entry costs; (4) projected revenue buildup and break-even point; and (5) profitability projections.

Research should be performed to gather data and insight on "How to get to the 'protein' in the financial econometric/ economic analysis marketplace." For example, why aren't the



savings and loans, the credit unions, the independent banks using economic/econometric services utilizing timesharing resources? What are their needs? How should they be approached?

Financial Modeling Language Study

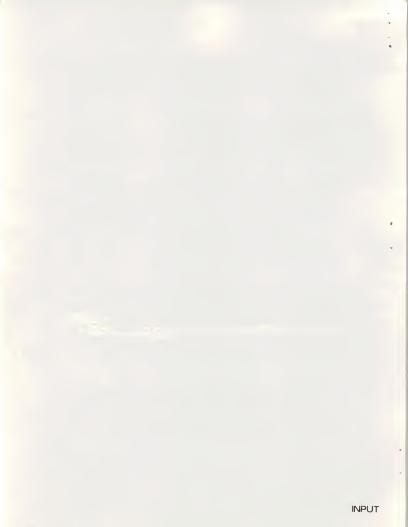
CSC should conduct research to define a competitive programming system which aids the user in accessing time series data, conducting data analysis on data and in constructing economic and econometric models. What exists on INFONET and what the competition is using, such as PROBE, XSIM and TSAM, should be reviewed. A select and knowledgeable number of econometricians should be interviewed to determine the statistical contents of the library routines and the best features of the various languages used. A serious look should be taken at extending APL through MACRO calls to accomplish the entire job.

Data Base Acquisition and Maintenance Costs

The domestic data bases which exist on INFONET should be compared with those which are available, including the fees charged. The availability of foreign data bases, their royalty fees and maintenance costs, should be ascertained. The data bases at SRI and A.D.L. are of potential interest; their costs and potential use should be evaluated.

Competition

Data and insight into what the existing competion is doing in this marketplace should be collected; not only Chase and DRI but Rapidata, Tymshare, Cyphernetics, Interactive Computing, NCCS, etc. Information could be gathered which would contrast



their strengths and weaknesses, their pricing structure, the composition of their revenues, and their customer types.



IV. Analysis of Survey Responses

- The number of respondents using econometric consulting services was very high - 15 out of 22. Of the 15 using such services, 9 were on-line; that is, using data bases and timesharing services. Of the 7 non-users, one (1) was in the process of selecting one or more services, and another (1) was in the process of considering it.
- Surprisingly, Chase Econometrics was used by more than half of the 15 users. Some respondents used multiple services. The distribution of services used was:
 - 8 Chase Econometrics
 - 3 Data Resources Inc.
 - 1 Wharton
 - 2 Lionel Edie (Merrill Lynch Econometrics, Inc.)
 - 5 Other

The time used varied from 6 months to 6 years, indicating an increasing market activity. The average was just short of 4 years, with second service more recent, an average of 2 years. This might indicate an openness to use second sources, or at least not a predisposition against second source usage.

- 3. For those on-line users, the data base contents (scope, accuracy, timeliness) was the strongest reason for selection. Access/analysis software was second for the on-line users. Interaction with consulting economists was most important to off-line respondents.
- Virtually all of the using respondents (14) looked at other competitive services in their selection process.



The major ones were:

9 DRI

6 Chase

5 Wharton

- The information is used for a wide variety of planning and forecasting functions, the two most important of which are: (1) corporate financial decision making; and (2) long-range planning.
- The majority (8) of the respondent users justified the service on a cost/effective use of the supplied data/ data bases.
- The respondents expressed three degrees of satisfaction with the services as contracted for:
 - 8 satisfactory
 - 4 acceptable
 - 3 unsatisfactory
- 8. The greatest strengths were, for the on-line users, (8), the data bases; and for the off-line users, the consulting economists (6). Surprisingly only two (2) respondents thought well of the econometric models utilized in the forecasting process. This could be interpreted as a warning sign in relation to developing micro-economic industry models.
- As counterpoint to question 8, the econometric forecasting, as could be expected, was the greatest weakness noted by 7 of 15 respondents.
- 10. The respondents were generally at a loss to identify services, products or features they would like to see provided. There was some desire (4 respondents) for more industrial aggregate data bases.



- A surprising number of respondents (9) were either using or would consider using a second source. Cost reduction was not a factor.
- 12. The average annual fixed cost for econometric consulting services was \$7,000 and the average cost of variable timesharing services for the on-line users was \$17,000.
- 13. Seven (7) respondents, primarily off-line users, reported that they had no current or anticipated growth. Eight (8) respondents, primarily on-line users, projected both a current and anticipated growth of 10% per year indicating an increasing usage (or price from inflation).
- 14. Most respondents would not break-out their payments by type of service used, i.e., publications, processing, consulting, etc. A detailed review of the contracts and bills through accounting would be necessary. Many respondents felt that this data would be company private.
- 15. Also most respondents could not further break-out their processing costs by use, such as retrieval of data or use of models. Only five would venture estimates. The averages are:
 - 42% data retrieval 26% vendor model use 34% own model use
- 16. Just over half (8) of the respondents who used econometric services used the data beyond their own departments. The other uses are quite diverse.



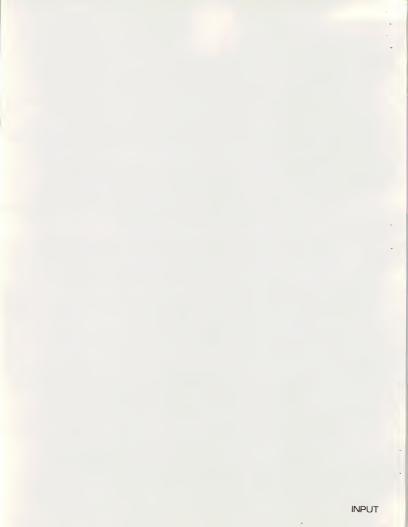
- As expected, virtually all the on-line users used PROBE or a similar language to do their own analysis and modeling.
- 18. All of the users of econometric consulting services do virtually all their studies in-house. In addition, several used the long-range planning services of SRI or A.D.L. for special projects. This might indicate that a staff of consultants is not a prerequisite for market entry of on-line services.
- 19. The relative importance of the vendor features was heavily dependent on whether or not the user is online or off-line.

Features	On-Line Rank	Off-Line Rank
Features	Kalik	Kalik
Data Base Scope	8	4
Model Characteristics	6	5
Consulting Availability	4	6
Industry Data Availability	6	2
Quality & Reputation of Economists	6	2
Nature of Access Tools	8	1
Network Availability	8	1

(10 = highest importance, 1 = no importance)



- 20. The respondents were questioned both as to the U.S. and the International Marketplace. Of the 15 users, six (6) were only interested in the U.S. marketplace, and the others used or desired to use industry data in a variety of other countries. The priorities were directly related to the level of industrial development.
- 21. There were seven (7) respondents that did not as yet use econometric consulting services. Of the seven, two (2) were in the process of review or selection of a service, and three (3) more said they would consider use of a service sometime in the future.
- 22. Five (5) of the seven respondents who did not currently have econometric consulting services looked at one or more available services in detail, primarily Chase and DRI. This might indicate that the market for such services is growing.
- 23. All other people in the non-user companies who had a possible interest in econometric consulting services were contacted, including one large subsidiary. The people contacted were by and large the correct ones to be interviewed.
- 24. The interviews indicated that the respondents were about equally divided between being mildly interested (9) and not interested (10) in industry models of either the U.S. or International Marketplaces.
- 25. The potential use varied from company to company and was really industry specific and probably company specific. For example, the consumer products industry seemed to have other variables such as product availability which were more important than economic data for product forecasting.



- 26. The data bases and econometric consulting services were used primarily (14) by the respondents, another indication that we were in touch with the right people.
- 27. The industry models desired were specific to both the type of industry and the areas of interest in the company which were current at the time of call. This would again indicate that a wide variety of industry specific models would be required to service this marketplace in the manner intended; hence the approach might not be cost effective.
- 28. The majority of respondents (14) felt that the micro models would not necessarily be related to the macro national model. However, five (5) respondents, all economists, thought they would be related through a common set of assumptions (the given variables).
- 29. Nearly all the respondents (18) thought that the geographic considerations were the same. Only one dissented, indicating the desire to explore new international market areas.
- None of the respondents was interested in exploring the many approaches to industry specific micro model contents.
- 31. Same question as 25 (redundant).
- 32. The majority of the respondents felt that they would not preclude a different vendor than the one that supplied the econometric consulting services.
- 33. Most (13) of the respondents were not willing to consider the monthly amount they would budget for use of industry specific micro econometric models with data bases. Of the nine (9) that did, the majority were willing to estimate only \$500/month/model.



Significant Comments (question 34)

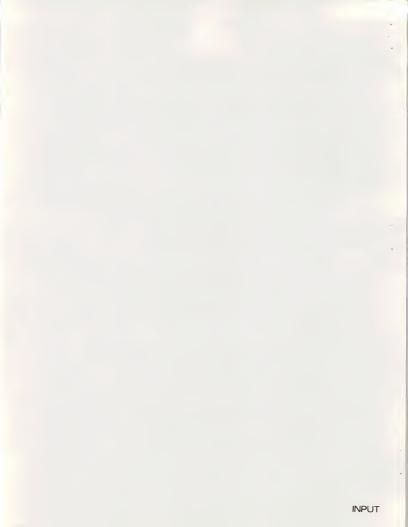
We gave the respondents ample opportunity to "let their hair down" and give their considered advice, in confidence, to guide the vendors of econometric consulting services in their long-range planning. Although we did get some airing of personal dislikes, we did receive a number of constructive and carefully considered comments. Those comments have been summarized below:

"The consumer product market appears too narrow to warrant the use of sophisticated new econometric modeling. The availability (distribution) of the products and the quality of the marketing effort appear to be the primary determinants."

"The staff required and on-line timesharing costs are too high to justify on-line econometric models. We use the data bases and the access/analysis software together with our own models which we build on the timesharing network and then transfer to our internal computers."

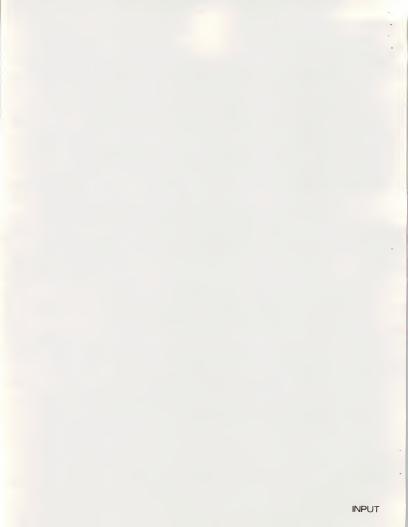
"The greatest criticism we have of econometric forecasting models is that they are not dynamic enough to allow for structural changes in the economy, and for cyclic swings."

"It is essential to have really good documentation. Some vendor's software does not do what it is advertised to do. The 'learn while doing' approach on a terminal is unsatisfactory.



- "A programmed approach using sample problems to indoctrinate the user is suggested. The users' staff members change over time so adequate documentation is essential. Place phase-in changes on a scheduled basis. The 'gimmick-a-month-club' approach is not satisfactory."
- "The timesharing companies are pricing themselves out of the market. The processing costs for econometric model use and for analysis software are too high."
- "Data as a cost is too intangible to top management. It is hard to attach a value when costs get too high. We feel that econometric consulting services are skimming the cream (fat) off the surface leaving the real protein untouched — the mass market."
- "We believe that greater attention should be given to data bases and to models which give physical production variables in an industry rather than just dollar equivalents (tonnage — gallons — etc.)"

"We feel three things are vital in offering on-line econometric services: (1) the data base — its scope, accuracy, and timeliness; (2) the software tools to access and analyze the data; and (3) reduce costs for user. The vendor-supplied econometric models are all well and good but not vital to using the service."



INPUT would be pleased to develop detailed proposals comprised of (1) technical approach; (2) statement of work; (3) expected output; (4) schedule; and (5) estimated fee to accomplish any or all of the research outlined above.

Attachment	1:	Suggested Mail Survey Questionnaire
Attachment	2:	Phone Survey Question Tabulations
Attachment	3:	Actual Telephone Survey Questionnaire Used For This Research



Attachment 1

ECONOMETRIC CONSULTING SURVEY

Suggested Mail Survey Questionnaire

SIC Code			
Date			

 Do you use one or more of the following econometric services? Please check all that apply.

	Less l yr	1-2 yrs	3-5 yrs	gtr 6 yrs
<pre>None (please go to question 10) Chase Econometrics Data Resources Inc. Wharton School Merrill Lynch Econometrics Inc. G.E. Info Systems Rapidata Tymshare Cyphernetics Interactive Computing Other</pre>				000000000000000000000000000000000000000

 Why did you select them? Please check all that apply.

	Data Base Scope Accuracy Timeliness
	Econometric Model
۵	Access Software
٥	Analysis Software
	Interaction with Consulting Economists
	Written Reports
	Other

3. Are you satisfied with current service?

Satisfied
Acceptable

Unsatisfactory



4. How much per year do you pay for these services?

Subscription (incl. data bases) Timesharing (variable) 0 - 1000 0 - 1000**1**000 - 5000 **D** 1000 - 5000 **D** 5000 - 10,000 **D** 5000 - 10.000 **D** above 10,000 greater than 10.000 5. Have you increased usage of these services? This year Next year 0 - 5% 0 - 5% 5 - 10% **D** 5 - 10% 10 - 25% □ 10 - 25% greater than 25% greater than 25% 6. Can you estimate the subscription costs of the following items? 0-1000 1000-2000 2000-5000 gtr 5000 000000 Publications ō Data base subscriptions Ē Consulting ā Education/training ŏ Special projects Ē D Other 7. Can you give an estimate of processing costs? 0-1000 100-2000 2000-5000 gtr 5000 Π Data retrieval 8 Use of vendor supplied software п Use of own models on tymsharing network 8. Which of the following financial modeling programming languages do you use? Please check all that apply. D PROBE XSIM TSAM Other None



9. In selecting a vendor, please rank each of the following features: Use the scale: 10 = highest importance, 1 = no importance.

Features	Rank
Data Base Scope	
Model Characteristics	
Consulting Availability	
Industry Data Availability	
Quality and Reputation of Economists	
Nature of Access Tools	
Network Availability	

Please skip to question 12.

10. Why don't you use them now?

6 mo 1-2 yrs

- Considering their use in near future Don't need that degree of sophistication
- No good industry data
- Decentralized planning, done by subsidiaries, etc.
- **D** Other
- 11. Have you reviewed any of the following econometric services? Please check all that apply.

	None
	Chase Econometrics
	Data Resources Inc.
	Wharton School
	Merrill Lynch Econometrics Inc.
	Rapidata
	G.E. Info Systems
	Tymshare
	Cyphernetics
	Interactive Computing
Π.	Other

17



12. Which geographic areas are of greatest interest for your company's products?

	Please rank 1 to 10
U.S. only U.S. Common Market Canada Japan South America Middle East Far East Oceania Soviet Bloc Other	

 Please list up to five (5) areas for which you feel detailed industry data bases are needed.

U.S.	International

14. Please indicate your position with the company.

Vice President/Treasurer
 Manager/Director Market Research
 Corporate Economist
 Director Corporate Planning
 Comptroller
 Manager Operations Research
 Output

Other_____

Thank You!



CONFIDENTIAL

INPUT QUESTIONNAIRE				CATALOG. NO. SIC. CODE SIZE CODE			
STUDY TITLE: TYPE OF INTERVIEW:				AREA CODE STUDY CODE DATE			
INTERVIEWER:				MM DD YY			
COMPANY:		CO. TY	PE:				
ADDRESS:		SALES	_ SALES:				
INDUSTRY		_					
DISCRETE MANUFACTURING		LITIES		URANCE			
PROCESS MANUFACTURING	O RET	AIL	🗆 G0	VERNMENT – FEDERAL			
TRANSPORTATION	D BAN	IKING	🗆 G0'	VERNMENT – STATE & LOCAL			
MEDICAL	🗆 МНС	DLESALE	🗆 EDI	JCATION			
SERVICES	D OTH	ER					
INTERVIEWS							
NAME	т	ITLE		TELEPHONE NO.			
SUMMARY							
REFERENCES							



CONFIDENTIAL

INPUT QUESTIONNAIRE

CATALOG. NO.				

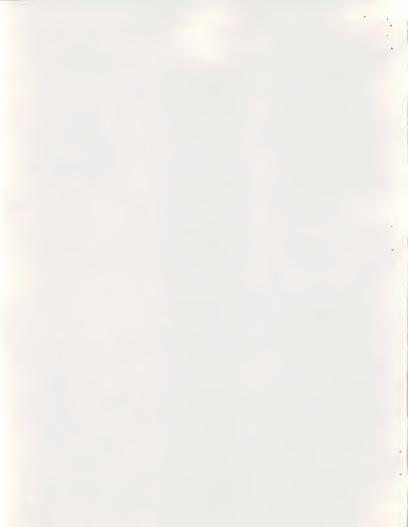
STUDY TITLE: ECONOMETRIC CONSULTING SERVICES

- Do you purchase economic consulting services? ______ (if answer yes, continue: if answer no, go to question 21)
- Which do you use? For how long?
- 3. Why were they selected?

- 4. Did you look at any others? Which ones?
- 5. What do you use the information for?

6. How do you justify the service?

7. Are you satisfied with your current service?



Page Two/Econometric Consulting Services

8. What are the strengths of services you use and/or have evaluated?

9. What are the weaknesses of the services you use and/or have evaluated?

 Are there any services, products or features you would like to see provided?

11. What would make you use another service?

a) Need for a second source?

b) Expanded capabilities? Which ones?

c) Reduced cost? How much? %

12. How much per year do you pay for your current service/s?

13. What was the growth from last year? %

What will be the growth next year? _____%



Page Three/Econometric Consulting Services

14.	How much of the money you pay goes for:
	a) Publications?
	b) Processing?
	c) Consulting?
	d) Education/Training?
	e) Special Projects?
15.	For processing, how much is due to:
	a) Retrieval of data?%
	b) Use of vendor supplied models?%
	c) Use of own system and/or models?%
16.	Do you use the data in other areas beyond the scope of the service?
17.	Do you use financial "English-like" tools?
18.	How much outside support do you need in hours per week?
	Economic

Technical (data processing)



Page Four/Econometric Consulting Services

 In selecting a vendor, please rank the following features in scale: 10=highest importance, l=no importance. (read through, then come back to top)

FEATURES	RANK	COMMENTS
Data Base Scope		
Model Characteristics		
Consulting Availability		
Industry Data Availability		
Quality and Reputation of Economists		
Nature of Access Tools		
Network Availability		

 Please list the countries (in priority order) that you would be interested in if you had international models.

COUNTRY	RANK	COMMENTS



Page Five/Econometric Consulting Services

FOR NON-USERS OF ECONOMETRIC CONSULTING SERVICES

21. Why don't you use them? Will you in the future?

22. Have you looked at any in detail? Which ones?

23. Does anybody else in the company buy such services? Who?

MICRO-ECONOMIC MODEL (Need to lead in with comments on uses of this model)

24. We may be able to offer very specialized models for several industries with international scope. Would this be useful to you?

25. What use would you make of them? (list uses)



Page Six/Econometric Consulting Services

26. Would it have different users from macroeconomic models? Who?

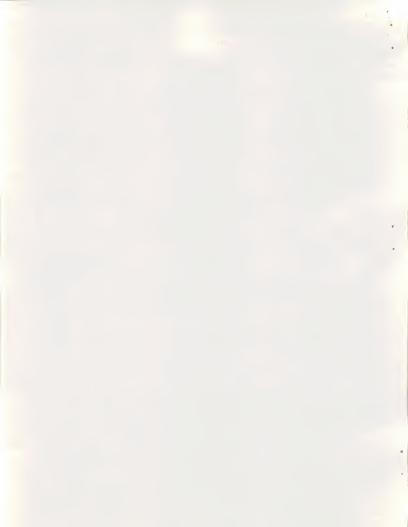
27. Which industry models would you use if available?

28. Would they relate to macroeconomic models?

29. Would geographic considerations be the same as we discussed before?

30. What should be the contents of these industry models?

31. What use would you make of them? (list uses)



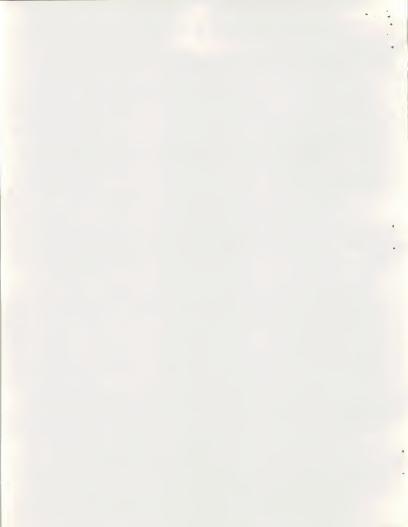
Page Seven/Econometric Consulting Services

32. Is it valuable to have the same vendor providing the macro and microeconomic services?

33. Assuming the potential value, there would be a monthly budget established; for such service, would you expect that to be in the \$10,000/month range, higher or lower?

\$____/month

34. Are there any comments you would offer to a vendor of econometric consulting and processing services?



ECONOMOTRIC SERVICES SURVEY

8/10/76

ng 3

QUESTION

DATA ITEM	ECON OF	ECOND 3	GCONOS	GCUNEY	ELINUS	ECUNOL	GLANOT	ECUNOR	Geonog	ECONIO	ECANI	ECONIZ	GCON13	GLANIN	Econis	GCANIG	ECONT	ECW18	GUNIS	Rano	Geowy	ECONE	GCWN23	
EXECUTIVE INTERVIENCO VP TREASURER	×						-						x											2
MANAGER / PIRECAR MKTRESEPECH	×	×	Land and the second second		×		×	×		×		x		x							×			9
ECONOMIST		×	x	x	x	x									X	×	X		2		-			8
DUR GURPURATE PLANNING									x		x	-									×			2
COMFRULLOC												x		-	-	1		-	×		-			2
MANDGER OPERATIONS KESEDRCH												-				and the second second second		x		×				2
					-					-				-					- - -					
							den var suns fri fi tall fand																	
		1																-						

.



ECONOMSTRIC SERVICES SURVEY

QUESTIN

.

DATA ITEM	ECON OI	GLANDS	GCONOS	GCUNEY	GENNOS	ECUNOL	GLANOT	ECONOR	Geowag	ECONIO	ECONIL	ECONIL	GCON13	Genin	Econs	GCONIG	ECONT	ECON18	ECONIA	Banw	Geory	GCANA	GCON23	
NODOSTRIAL	×			×		x	×			×		x	x		×		X	x	X	X	×	×		15
FINANCIAL		×	×								x					x								4
GOUG RNMENT (INCL AERUS PRCS)					×		4	x	×												-		-	3
LUCATION EAST CUAST		×		×			×						x		x	×					X	×		8
MIO WEST			×			×	d and an other set		×	X		x	-	to or manufacture of the state state		and a second second	λ	x				n righter to the second		7
FAR WEST	x	The and the same tables			x			x			×			×				1	x	χ	-			7
	,	1				متلجعها ورام مدر ردوارتها وراور مغمية	a paragent to the former shirts					in a stating security, from the security state	and the second second	and the second second second						6				
																						-		

4

8/10/76

-



ECONUMETRIC SERVICES SURVEY

QUESTION 1,2

. . . .

DATA ITEM	ECON OI	GONDS	GCON 03	GCUNEY	GENNOS	GEUNDE	GLANON	ECUNOR	GLONUS	ECONIU	ECONI	ECONIL	GCont3	GLANIN	Econs	GCANIG	ECONIT	ECON18	GLONIS	BLONZO	Geowy	GCarr	GEWRZZ	
USE ECONOMETRIC SERVICE		x	×	X		x	x	X	×	×			×	x		x	x			x	×	×		15
DONT USE ECONOMUTER SERVILO	x				x						x	x			x			×	×					7
2) WHO CHASE				×		×		x		x			x	x			×		1	x				8
DRI		x	×				NAME OF TRACK									×								3
WHARAN							No. 1 and 1		×						-				-		1			1
L10~5L E015					-		x															X		2
OTHER IR. G.E., RADIADTA TYMSHARE, CYPhernetic		×	and address of the same state and address	-	-		-	×		-			And a second	x		x					X			5
3) How Long FIRST (YRS)		3	6	2		4	4	2	2	2	-		4	6		6	Vz			4	5	4		3.8
SECOND (YRS)		1/2					and a state of the	13						3			3				2	-		2

8/10/76

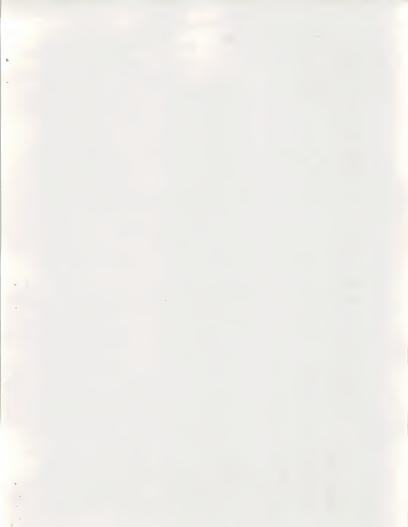


ECONOMETRIC SERVICES SURVEY

2

DATA I TEM	ECen ol	Ganas	Gennos	GCUNEY	Frank	ECUNOS	GLONOS	ECUNOR	Geonog	ECONIU	ECONI	ECONIL	GLONIS	GEANIN	Econs	GCantle	ECONT	ECONIE	ECONIS	Banno	Geory	ECAN	GEWN23	
Why selected data have contents			x			×		×		X		1		x		×	x			ð	×		3	9
Reporto		×															X			λ				3
Model			×							x														2
Sottuare		and strategies and the same	x					x			1					χ					X			4
news service			x							1														1
cumpatibility with "				x		x				-	-			-										2
not known already theme						And And And And And And And	x								the second		-							1
In known with Consulding Forwards		a La ra			Andreas Artification - The				×				x	x							The second se	X		4
		1.0	1	1			-											-				-		

8/10/76



ECONOMETRIC SERVICES SURVEY

8/10/76

UESTIN 4														-		1001		-			11	1	16	
DATA I TEM	ECON OI	GLONDS	GCONOJ	Geway	GENNOS	ECUNOS	ELANOT	ECUNOR	Geowug	ECONIO	ECONI	ECONIL	GConto	GEANIN	Econs	GCanlo	ECONT	ECon 18	ECONIA	BLOND	Geory	Easu	GCUN23	-
4) Louisso AT STHEES		x	ĸ		1	x	X	X	1	×			X	×		×	x				X	-		14
DID MIT LUCK AT OTHER																						X		
which ones DRE				x		x		X	x	x				×			X			x	×			9
CHASE		x	x				×		×							X					×			6
WHArrow			x			x	1			x				×		X								5
RADIDOTA	-			×		×																		2
GE						x	×	Contraction and the second				1							1					2
U.S. ECONOMETRILS													×					-						1
Lionel Edie																		-		X		-		1



ECONOMETRIC SERVICES SURVEY

8/10/76

1

X

NESTIN 5					-									-				-			1-	1.		
DATA I TEM	ECaN OI	Genes	GCONOS	GCUNNEY	Econos	ECANOS	GLANDY	ECENOR	GLONUS	ECONIU	ECONI	ECONIL	15C0 113	HIMPS	Econst	GCanto	ECANET	ECan18	ECONIA	Banno	Con	ECAN	(SCON23	-
ENFORMATION USE FINANCIAL DECLININ MARING		×							X				x							X		X	-	5
ECONOMIC FORECOSTINT		-	x	x		-										X			-					3
FINDALI OL FUCOCOSTAF			x				-			x						X								3
PRODUCT FURSCASSING				x				-		X				-										2
short Nunge Blanning						×	X	-						x							<u>.</u>			3
long tank pluming	-					×	-	X	-	-	:			x							X			4
		-	-	1		1-		-				1	1			1			1	1		1		

Sales tore cas try

6



1.

UESTINN 6						Lotionalities												•			1.	1-'		-
DATA ITEM	ECon of	Ganes	GLONOS	GCUNOY	FLANDS	ECUNO	6Canos	ECONOR	Geowug	ECONIO	ECONI	ECONIL	6Cont3	HIMPS	Econs	Geonte	ECONT	ECONTE	GCONIS	Blanzo	Gewyn	EGUL	GCONZZ	1
Tustitying Service IN BUDGET									x				×			X				x				4
AUTOMA TIC		×																				X		2
SANSS PEOPLE	1		×				-		-			-		-					2					1
Cost SFFSCIIVE dute buse use, etc			x	X	}	×	1 - CIM	X		×				X			×			x	1			8
sprend cost over all dents	-			x							1										X			2
HARD TO JUSTICY	1						x																	1
TIM liness of adv-	-	and the second second second second second						Adversed a source with a constraint of		x		-	Man you and advances of						2					1
		1		and a second second	na ann an 1988 i 198		and the same part of the same ratio					a serie serie and the product of												
		-	1	1																		-		



QUESTIN 7,8

	-		-											t										
DATA ITEM	SCON OI	ECONGS	ECON03	GCUNEY	FEWNOS	ECUNOG	ELANOS	ECUNOR	GLONUS	ECONIO	ECONI	ECONIE	GCON53	GLANIY	Econs	GCANIG	ECONIT	ECON18	ELONIS	Ranzo	Geory	ECANL	GEWRZZ	
SATIS FACTIN SATIGRALINAS		x	×				x		x							×				×	X	X		8
Acceptable		strate and a				x				X				X			x							4
UNSA TLSPACTA				x			The market	×			x				}				;		1			3
Strengths dute bank Scope accuracy etc		x	×	x		x	-	x		X						×	x				×			9
consulting economists		X					2		X		X			X		1			-	×	-		X	6
Sottime			x																r		X			2
Reports			×		_	-	×						er alleban men så er det men så		I and the second		-			λ		}	X	4
network Compatibility	-			x	-										toria ta				-					1
MIDEL							1		x	X														2



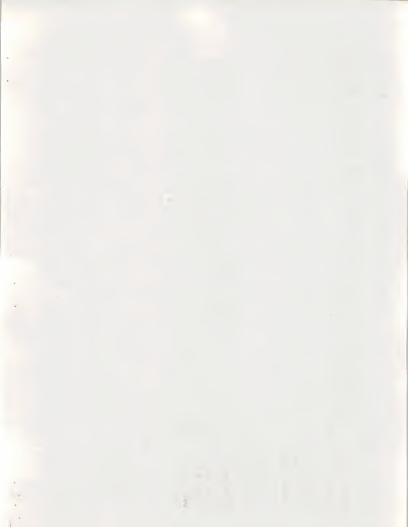
8/10/76

IESTINN 9																				-	1	1.		-
DATA ITEM	ECon ol	ECONOR	ECON 03	GCUNEY	FLANDS	ECUNOL	GLANOS	ECHNOR	GLONUS	ECONIN	ECONI	ECONIL	GLONES	GLANIY	Econis	GCANIG	EGNET	EC-18	ECONIS	Banno	Geowy	Gaut	GCWN23	
Weatnesses Etunumbrec Formann Munsc	r	×		×					x							x	X			x	X			7
ECONOMIC JUDGEMBAR	5	x								x				X	-				And in case of the	-				4
COST-SUBSCRIPTIN			x			A data for the second second										-	x	1			X			3
SURTHARD			×			Annual of the	5	x		-						X					-			3
ACUVRACY AND TAMLIAUSS WE DATA						X	-			*				1				-			and the second se			1
MINE MITED		hard frankright der helle a					x	Course and and the second					*			F						X		3
INOUSTRY DATA		to she'l francessafe and much str	a albede and a state of state of state			-		X				-												1
						-		the second second					1								1	1		
	1							1	1				1				1	1	1		1	1	1	

Qu



ECON	ECAN	GCON	GCUN	6Ture	ECON	ELAN	ECura	GLONG	Econ	ECan.	ECON	GCont	GLANI	Econs	GCAN	Econs	ECNI	EGN	BCon	Geowy	Gau	Gan	
	×	23	4	3	06	S	8	90	10	-	F	U	4	~	6	7	~	19	c	7	4	53	,
		x																					1
	-		X			the state of the	×					×							x				4
					x	χ		X	x			-		x		x				X	X		8
						1	-						X		1			••••••	-				
	×	×				×	x	×	×			-	-			×				Х	X		9
			×	-	x	and the second second					-	×	X	the second second second	×	-			×				4
	0	0				0	50	٥	0	•• •			-			30				0	D		
	ECaN OI	×	× × ×							$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									



8/10/76

9	NUESTIN 12113,14	is						ECO	NO	MG	TRI	c :	6 EN	vic	65	301	3053				88	110	0/3	76	
-	DATA I TEM	ECONOI	GONDS	GCAN 03	GCUNNY	Stavos	ECONO	GLANOS	ECANOR	Georg	ECONIU	ECONI	ECONIL	GLONIS	GLANIY	Econs	GCANIG	ECONIT	ECON 18	ECONIS	Bano	Geowy	GCANEL	GCWN23	1
2	COSTS K& ANNUAL SUBSCRIPTION		6		NA		1	10	5	7				6	4		17	NA			7		10		7
	ON LINE		0	12	44		20	0	10	0	6			6	NA		96	чч		8 1 1	.0	30	ь		17
3	GROWTH TO LANTHOR		0	5	10		10	0	10	0	30			0	0		10	6		2	6	10	0		10
	9 U NEXT YEAR		0	5	10		13	0	10	0	15			0	10		8	0		1	0	5	٥		10
4	FILED CUST BREDKOUWN		NA	NA	AN		NA	NP	NP	NP	NA			NP	NP	and of the second second	NA	4M			NA	No	AN		
5	PROCESSIAN 455 BREDROWN Retreinel(40)		AN	NP	50		40	NÞ	20	NÞ	17			MP	NÞ	and second streams are	જી	44			4 M	NP	AN		42
	Newton model Use Colo		NA	NP	10		0	MD	80	ЧŅ	16			4Ú	AN		20	AN		-	NP	NP	MP		26
	Own system/ Mudel vie (%)		AN	AM	40		60	NA	0	NA	66		and a second as we are second as	AN	NA		D	NA			NR	NA	MA		34
																							-		
				1				1		-				-							-				



ECONUMETRIC SERVICES SUBVEY 8/10/76 16, 17,18 QUESTION ECON OF GCONDO X ELANUS ECONIL GLON13 GEANIN GONY GEWNOS ELANOT ECUNOR Econs GCONIG ECONT ECON18 GCOULL GCWN23 ECONIO ECONI ECONIS Banzo GCWN44 × Scon of X DATA I TEM ADDITISME DATA USE X 8 Х × X X χ 7 NO ADDITUNAL USE XX \times where XX 3 OTHERE FILANCIAL SERVICES PRODUCT FORSCOSTING X X X 3 CURPONTE OFFICES × X 2

X

1

FINANCIAL TOOLUSE X X X X X 8 X Х NO FINANCME TULUE X X X X X 1 Outside Support \times 2 Primarily In house XXX XX X X X \times Х X X 15

CORPORATIO STAFF



QUESTION 19

DATA I TEM	ECON OI	GONDS	ECON03	GCUNOY	GENNOS	GCUNOS	GEANON	ECUNOR	Geonog	ECONIU	ECONI	ECONIL	GCON13	GLANIN	Econs	GCanlo	ECONET	ECON18	ECONIS	Banno	Glowy	EGUL	ECUN23	
FEATURES - on line			10	10		7		D		8				Ś		61	6				10			. 8
DATA BASE SCUPE OFF		4					1		8				2			6			L	6		2		4
MUNEL CHARPCOBNERS			4	5		1		7		10			1	7		5	5	1			7			4
		3				1	1		9				2						1	7	1	6		5
Cunsulding DUALL			3	1		1		2		5				9	1	5	5	1			2	-		4
		1					8	1 1	2				8							8	1	15		6
Enclusity Nata Availability		,	1	10		3		10		2				5		8	6				15			6
and the second se		1					1	1	9				12	1					1	1	1	1		2
Quality & Consultants	-	~	7	0		1		1	-	9			8	10	-	9	9	-		-	2			5
		7		01			7	1	10	-			8			-		-		8	·	9		8
NATURE OF ACCESS tout	5		9	8		9		10		8	_		-	8		7	2				9			8
N		1			-		1	- And	11				2		1					1		11		1
NETWORK AVAILOBILIT	1		10	8		10		10		K				8		8	2		1		7	:		8
		1					1		1	1			2		1			1	1	1	-	1		1
												0.000				1		-			1	1		
				1				1				1	1											
						1								-				-				-		
				1																		-		

. .

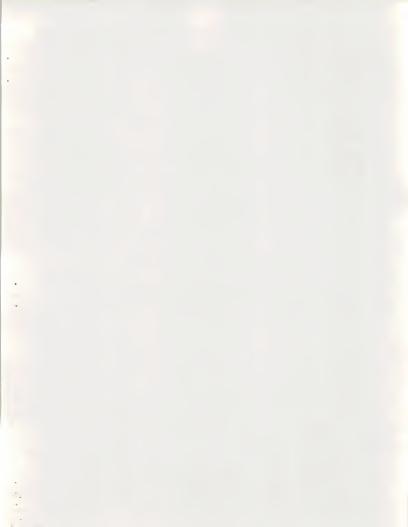
8/10/76



8/10/76

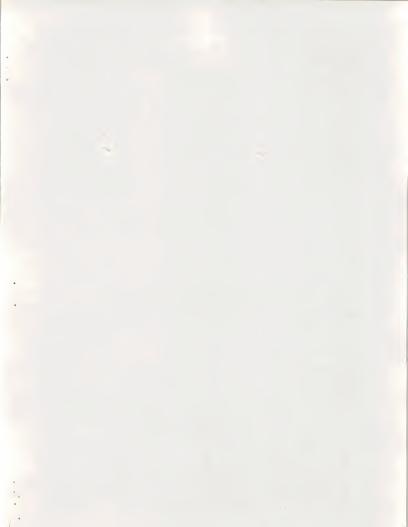
QUES	TINN	20
QUES	11000	20

DATA ITEM	ECan ol	Genes	15CON 03	GCUNOY	LEWNUS	ECUNOS	GLANDY	ECUNOR	Geonog	ECONIU	ECONI	ECONIL	560 m 13	GLANIY	Econs	GConto	ECONIT	ECONIS	ECONIS	Blanco	Gewy	GCONL	GCUN23	
Interest (including 150) in International data kases (mades																								
VSonly		×				×	×			x							X				×			4
Common Minket			./	1				1.	1				1	1		1				1		1		1
Japan			2				Autor - March	2					3	2		2				2		2.		2
Canenda			3	ч			Mar Tanadara and	3		to perform full - u	: : :		2			3				4		3		3
Lessen Darelopert			4	2									4	and the second se								4		4
Far East		-	5	3													-		1		1	5		4
Middle East			6	5					2								-					4		5
OCEANIA		-	1	1	1				-					3										3
AFRICA			7										5							3		7		5



QUESTINN 21 ECONIL Genid Econs ECANIT ECONIS Geory ECON OI ELANOS ELUNOS ELUNOS ELUNOS ELUNOS ECUNOR GLONUS ECONIO 560 N 23 Banw EGULL GUNZJ DATA I TEM whynot 4 get financulabete free × xX χ th process ut X selecting z X nit yet geared up X X for suphistertion 2 no good in dusty deter yet (fr. U.S) X 1 decentrulyed plang × 1 will in ferture XX × consulu X X 5 will not in future X X 2 consider

· . · . ·

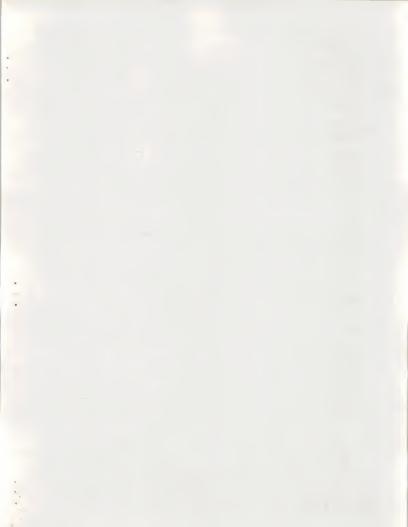


8/10/76

UESTIN 22,22	3				-		ECO	110	ma	1 101	6)	610	Vic	03	101			-			11	1	76	
DATA I TEM	ECan ol	Genes	GCONOS	Genney	GENNOS	ECANOL	ELANOS	ECUNOR	GCONUS	ECONIU	ECANI	ECONIL	6cont3	GCANIY	Econs	GCanto	ECONIT	ECON18	ECONIS	Banno	(Howy	GCANEL	GCUN23	1
A Services	V				V						1				V			1						5
CHASE	V				~						v				V			V	1					5
PKE	V				1						V				V			V						3
WHEREAN															V			-	<u>.</u>		1)
GE					V		1									-		1		1				12
VELA		1	-				-	1			1		1		+		-	V	-			1		
RAPIONTA	T				V		Section -				~		1	1	-					1				2
INTERDATA					V		1	1		1		1	1	1	1	1			i		1	1	1	1
NOT INTERESTED						Company of Long of Long						v	1	1	-		1		v		-			1
ANTONE ELSE IN COMPONY	r																	V	1		1	1	1	2
MACKET ROSEARCH	V			Ì	ł	-					~	1				1			1					3
SUBSIDIANES		1					-											V						1
No one else					V		- I Part -								1	'		1						3

. .

. . .



QUESTIN 24,25

* * * * *

DATA ITEM	ECon ol	Ganas	ECON 03	GCUNEY	ECONOS	ECUNOS	GLANDS	ECANOR	GCON US	Econio	ECANI	ECONIL	GCON13	GLANIN	Econs	GCONIG	ECONT	ECON18	ELONIS	Banw	Gewy	GCault	GCUN23	
Interest in Using International Models Incurry				×										×						×				3
U.S Inclus by mudels	×		Million - Million	X		- The state of the	×			X				×			х			X				7
not interested		×		1			-		-		×	X		-	X	X				+	X	X		10
Micoly Interested	×	-	X	X	X	×		X	X	-	1	-	X	X			X	X	X		1	-		9
Potential User Long Rauge Plang	x						1					X				-	x			x				5
Development Planning			×		i dotti nagati ya									1		-	Â			×				2
Economic Planny				x						-										^				1
Product Development				×		-						-			1	1	1			1		1		ι
supply Denen forekust							×			X		-						-			ŀ			2
Operating Omsums		*											X			1			1	1				1
commodities (AZ,)				1		1		1		1				X	1						1			1
ACQUISITION / DIVERSIGIO	ATIO	2				-		1		-		2	1	1		1	X	1						1
Contigency Planmy		(·												•		X					1
nouse		x	the second secon		×	×					×				x	X		x			×	X		2

S. . . .

8/10/76

....



26 QUESTIN ECON OI GCON03 GCON03 Stavos ECUNOS GLANON ECONIL GLONES GLANIY Econs Ganth ECONT ECONIS Gewy Gault GCNNAN ECHNOR Geowag ECONIN ECONI BLAND GCUNZ DATA I TEM 24 Used my deflect χ X AN X Peuple than Marine × X NP 6 Х Who AN Product nept Х 1 operating Dinsuns X Corplate plemen X 1 XX XX Same people XX XX XXXXX

. 1 . . .

8/10/76

4 . P



QUESTINN 27

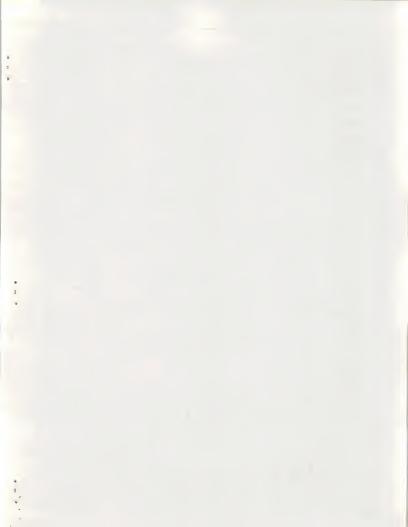
1 1 0 1 10 0

DATA ITEM	ECaN OI	Genes	ECONOS	GCUNOY	ELWAR	ECUNOS	GLANGY	ECUNOR	Geonug	ECONIO	GCONI	ECONIL	660013	GLANIY	Econs	GConto	ECONSY	ECon 18	ECONIG	Blanco	Geory	ECANEL	GCWN23
Industy Midels		Γ					-	1			1	1									1	İ	
Tentiler				X					,										1		X		
Quito				×					X	χ									×				
Panto				×					-														
Banking				-	x			-													-		
5/2					×			Canal Cana								1		-		•	<u>:</u> 		
Consumer finance					X									+		-							
(how museus)									×					X									
CUNSUMET products		-		1		x				 1				F -	-		-	-		×			
Housing New							x				X								X				
Howsing replacement							X				· · · ·		[1							
High Technologn								×											X				
Publica hours													1		X	-		1-	-				
Peto chemicale							1000														X		

W and P

8/10/76

10



8/10/76

m .. P

QUESTIN 18,29,30,31

	5	5	14	18		
ECON23						
Gault	4 U	ЫĄ	1/4	44,		40
120mg	×	\times		×		NP
BCONDO			X	χ		NA
ECONIS			×	NA		Nr
ECUNIE			×	X		NA
ECONIT			×	X		41
GCanlo			×	X		NA
Ecunis			Х	X	1	NA
GEANIN	X	X		X		44
GCONIS			X	Х		44
ECONIL	NP	4N	AN	X	-	1×4
ECONIL			X	X		µ∕ k
SCONIU	Х	X			×	ЧЧ
(Con ug			×	Х		NA
ECUNOR			, X	×		٩V
GLANOS			×	X		44
ECUNOS			×	X	-	NA
Stand	X	×		X		ND
GCUNOY			x	X		44
15CON 03	×	×		×		MP
Genes			×	Ж		NÞ
ECen ol	NP			NA		ŅA
I TEM	where to	ng ng	Cuted	He same	hie Gusiderahn	to of my misdule
		Same	het r	Are G enatur	Geograd	Cunt Ind
						29

9 . Lo P

c ... e cyller



QUESTINN 32,33,

DATA I	TEM	Econ of	Ganes	12CON03	GCUNOY	SCANDS	ECUNOL	GLANDS	ECANOR	Geowog	ECONIO	ECONI	ECONIZ	5C0 N 23	GLANIN	Econs	GCanth	ECONT	ECW18	ECONIS	BLAND	Gewy	GCONT	GUNZZ	
SAME VEN MICKO /MAC	INOR F.R. Ino SERVICES	au				X			Х			X	AN				×	X		A manufacture of the statement of		X	N٩		6
<i>DIFFEREN</i> Ассізять	A VENDURS	NP	X	X	X		Х	Х		×	X		NA	X	X	×			×	×	X				13
Montarly Co Duto base +	nude2/motel	Aγ	NA			NA	NA					NA	NA	NA		NA	NA			NA		NA	NA		13
\$ 500				×				χ		X					-		-	X			×	1			5
81000									X		X				×						1	-			3
1200	٩				Х									1						-					1
\$ 3000	2		An internet of some	-					and approximite the same						n and -					1					
																							1		
				2	1		and a filler in the second																		
								and a second																	

105020

