IOWA STATE UNIVERSITY Digital Repository

Retrospective Theses and Dissertations

Iowa State University Capstones, Theses and Dissertations

1966

The incidence of Iowa's consumption taxes: retrospect and prospect

John M. Leyes Iowa State University

Follow this and additional works at: https://lib.dr.iastate.edu/rtd



Overage of the Economics Commons, and the <u>Taxation-State and Local Commons</u>

Recommended Citation

Leyes, John M., "The incidence of Iowa's consumption taxes: retrospect and prospect" (1966). Retrospective Theses and Dissertations.

https://lib.dr.iastate.edu/rtd/16493

This Thesis is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Retrospective Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.



THE INCIDENCE OF IOWA'S CONSUMPTION TAXES: RETROSPECT AND PROSPECT

ру

John Michael Leyes

A Thesis Submitted to the

Graduate Faculty in Partial Fulfillment of

The Requirements for the Degree of

MASTER OF SCIENCE

Major Subject: Economics

Approved:		

Signatures have been redacted for privacy

Iowa State University
Of Science and Technology
Ames, Iowa

1132-9 11 HJ5715 L504; TABLE OF CONTENTS c.2 Page ACKNOWLEDGMENTS..... iv INTRODUCTION, METHODOLOGY, AND DATA DISCUSSION FOR THE CONSUMPTION TAXES COLLECTED IN IOWA IN THE FISCAL YEAR ENDING JUNE 30, 1965..... 1 Introduction..... 12 Methodology.... Who Pays Iowa's Consumption Taxes?..... 21 BROADENING THE RETAIL SALES TAX BASE TO II. 33 INCLUDE SERVICES..... The Retail Sales Taxation of Services 33 A. The Extension of the Tax Base to Include B. 40 Selected Services..... Extension of the Tax Base to Include Medical and Legal Services..... 46 D. Extending the Tax Base to Gross Gasoline Sales..... 50 The Exemption of Food Consumed Off E. 54 the Premises..... Concluding Remarks..... 57 III. ALTERNATE ESTIMATIONS OF TAX REVENUES AND TAX INCIDENCE PATTERNS..... 61 An Alternate Method of Tax Revenue Α. 61 Estimation..... Varying the Income Measure Produces Alternate Incidence Patterns..... 63 67 IV. SUMMARY AND CONCLUSIONS..... 67 Summary...... Conclusions..... 68 V. BIBLIOGRAPHY..... 70 APPENDIX A - SAMPLE CONSUMER BUDGET..... VI. 73 APPENDIX B - THE ALLOCATION OF THE CONSUMPTION VII. TAXES (COLLECTED IN THE FISCAL YEAR ENDING JUNE 30, 1965) TO SPECIFIC BUDGET ITEMS...... 74

UNITS THROUGHOUT THE OCCUPATION/INCOME TABLE ...

75

APPENDIX C - DISTRIBUTION OF IOWA'S CONSUMING

VIII.

		Page
IX.	APPENDIX D - THE TAX INCIDENCE OF SELECTED BUDGET ITEMS CURRENTLY TAXED	76
х.	APPENDIX E - A DESCRIPTION OF THE SERVICES THAT ARE PROPOSED AS AN EXTENSION OF THE RETAIL SALES TAX BASE	85
XI.	APPENDIX F - THE METHOD OF ESTIMATING THE RETAIL SALES TAX REVENUE FROM MEDICAL AND LEGAL SERVICES	93
	A. Medical Services B. Legal Services	93 94

ACKNOWLEDGMENTS

The author wishes to express his appreciation and thanks to the many individuals who assisted in the planning, execution, and completion of this study.

Dr. Robert W. Thomas, Jr., the chairman of the author's graduate committee, provided valuable assistance throughout, and made many contributions, above and beyond the call of duty, to stimulate the author, and to ensure that the study did not become misdirected in order to achieve a speedy and successful completion.

Additional assistance was obtained from Dr. Wilbur R. Maki, Dr. Ronald C. Powers, and Dr. James R. Prescott, members of the graduate committee.

A final word of thanks must be given the members of the Public Finance Workshop, Department of Economics, Iowa State University, and especially to Dr. Charles W. Meyer and Dr. Arnold A. Paulsen. Under the tutelage of Dr. Meyer, the author acquired an interest in the area of public finance. Dr. Paulsen was most helpful in the formative stages when he assisted in the planning and launching of this study, and then made himself readily accessible and provided ideas and stimulation when problems appeared.

I. INTRODUCTION, METHODOLOGY, AND DATA DISCUSSION FOR THE CONSUMPTION TAXES COLLECTED IN IOWA IN THE FISCAL YEAR ENDING JUNE 30, 1965

A. Introduction

1. The history of consumer taxes

Consumer taxes are of ancient origin, and have normally taken the form of various sales taxes.²

In the early days of Athens, taxes were levied on the sales of commodities at markets. Historians record that the ancient states of Egypt, China and India collected sales taxes. The most widely known sales tax was that levied by Augustus Caesar. This tax was a one percent tax upon all articles sold at public auction.

In the fourteenth century, both Spain and France levied sales taxes. The Spanish tax was initially levied at the rate of one percent. The rate was gradually increased to ten percent in later years in order to balance the budget. The Spanish monarchs encountered opposition, but were able to

Buehler (2, pp. 1-5). Buehler was the main source used for the information on the history of consumption taxes. Seligman (22, pp. 126-128) is an excellent secondary source.

²In general, consumption taxes are considered to be levied at the time of sale. To the extent that the tax applies to final purchases, it would therefore seem to indicate that the burden of the tax should be borne by the one who pays the tax.

At the time of Augustus Caesar most goods were sold at public auction.

raise the tax in spite of the opposition. Such was not the case in France where there were many attempts to institute sales taxes. On every occasion popular opinion prevailed, and the taxes were abolished. Buehler notes that "when the French Revolution broke out the first thing the Convention did was to abolish all sales taxes" (2, p. 4).

Throughout history, the sales tax has been subject to at least one major objection, that it was "unjust", both in collection and burden (2, p. 5). This objection arose because of its extreme burden, a burden which manifested itself in its unpopularity with those who bore the burden of the tax. It would therefore seem that this form of taxation could be described as one that violated certain standards of equity and thereby made it worthy of study on the basis of ethical grounds. 2

2. The history of Iowa's consumer taxes

West Virginia, the first state to use the sales tax, imposed a two percent levy in 1921. During the 1920's several

In earlier times the sales tax was used by the few to obtain revenues from the many. The tax would be levied on necessities (e.g., salt) with a price inelasticity of demand.

²Current studies of the incidence of consumer taxes that question the regressive structure of the tax base would seem to be reflecting a concern for ethical objectives as well.

³ Iowa Legislative Research Bureau (12, pp. 43-61). This research report was the main source of information on the historical background of Iowa's consumption taxes.

states followed West Virginia with a temporary sales tax. They were as follows: North Carolina, North Dakota, Oklahoma, and Georgia. All but North Dakota and Georgia made the sales tax permanent. With the advent of the depression in the 1930's, state tax revenues declined, and new sources of tax revenues were needed. Consequently, in the period from 1933 to 1937. Iowa and twenty-eight other states instituted sales taxes (5, pp. 291-292). The Iowa sales tax legislation was passed in 1933 and became effective April 1, 1934. The two percent retail sales tax was applied to the purchases of tangible personal property with some specific exemptions. In 1937 the Iowa retail sales tax was supplemented by the use tax, a tax that applies to goods purchased outside of the state, but used within the state.

Except for the years 1956 and 1957 (during these years the tax was temporarily increased to two and one-half percent) the Iowa retail sales and use tax rates have remained at two percent (12, p. 45, footnote 4). The revenue from Iowa's sales and use taxes are allocated to two funds. Ninety percent goes into the General Fund, and the remaining ten percent goes to the Road Use Fund for highway construction (12, p. 46).

The following statement from the <u>Code of Iowa</u> (8, p. 1498) defines a retail sale and how it should be applied:

"Retail sale" or "sale at retail" means the sale to a consumer or to any person for any purpose, other than for processing or for resale of tangible personal property and the sale of gas, electricity, water and communications services to retail consumers or users, but does not include commercial fertilizer or agricultural limestone or materials, but not tools or equipment which are to be used in disease control, weed control, insect control, a health promotion of plants or livestock produced as part of agricultural production for market, or electricity or steam when purchased and used in the processing of tangible personal property intended to be sold ultimately at retail.

3. The Iowa consumption taxes considered in this report

Consumption taxes are generally levied at the time of a sale. In the following discussion the concept of a sale will be interpreted more broadly. This interpretation permits the consideration of a number of indirect taxes in addition to Iowa's retail sales and use taxes, and includes the following: the cigarette tax, the beer tax, the profit of Iowa's liquor monopoly, the motor vehicle fuel tax, the motor vehicle license fees, the insurance tax, and several other taxes which are listed in Section B of this chapter.

4. The purpose of this study

Chapters I and II estimate the distribution, burden, or what will be called the incidence of the consumption taxes among Iowans by occupation and income.

Chapter I begins with a general introduction, and proceeds to the underlying methodology of the research. The final section of Chapter I contains a discussion of the consumption taxes collected in Iowa for the fiscal year ending

June 30, 1965, and a discussion of the consumption tax incidence among Iowans.

Chapter II begins with an estimation of the increased Iowa tax revenues arising from an expanded tax base and the incidence values associated with an expanded tax base. The final two sections of Chapter II are devoted to the exemption of off-premise food consumption, and a summary of the incidence values that are presented in Chapters I and II.

The third chapter is devoted to an alternate method of estimating the total tax revenue from a broadened retail sales tax base, and an illustration of the importance of the income measure in determining consumption tax incidence.

The last chapter summarizes the thesis, reviews the highlights, and includes several conclusions.

5. The definition and method of determination of tax incidence used in this study

The Iowa consumption taxes were first distributed among average Iowans who were grouped by occupation and income.

The percentage distribution of the taxes, or the tax incidence, among Iowans, was defined in the following manner:

$$te_{ij} = \frac{T_{ij}}{PDY_{ij}} (100)$$

where: $i = 1, 2, 3, \dots, 8$ occupation rows;

 $j = 1, 2, 3, \dots, 7$ income columns;

te_{ij} = the tax incidence (burden or percentage distribution of the consumption taxes)

of the persons in the 'ith' occupation row and the 'jth' income column. (This might also be called the effective tax rate);

- PDY_{ij} = the average personal disposable income, or the average money income after taxes, of persons in the 'ith' occupation row, and the 'jth' income column;
 - T_{ij} = the average total tax distributed to the persons in the 'ith' occupation and the 'jth' income cell.

This definition of incidence requires some amplification. In the first place, this definition of incidence <u>might</u> be called the impact incidence; however, since it is assumed, for the purposes of this study, that businesses and firms shift part of their consumption tax payments to consumers through higher prices and/or lower wages, this incidence measure is not a reflection of impact incidence.

The income measure in the denominator was used for two reasons. First, the consumer budgets used to distribute the taxes were grouped according to money income after taxes; hence, this income measure was used. A second reason for using this income measure is that, in general, consumers do not spend that part of their income devoted to federal, state, and local taxes; hence, the use of money income after taxes

would seem to be a reasonable measure of the average Iowan's ability to pay consumption taxes.

6. Patterns of consumption tax incidence

The notion of tax incidence patterns appears in the subsequent discussions presenting the empirical estimates and findings. The patterns to which reference is made will pertain to changes in the estimated incidence values (te_{ij}) as movement occurs across any occupation row.

The tax incidence for any occupation row can increase, decrease, or remain unchanged. If the tax incidence pattern increases across the occupation row, it is described as being progressive. If the tax incidence pattern decreases, it is described as being regressive. If no change occurs in the tax incidence pattern, it is described as proportional.

7. Theoretical evaluation of the incidence patterns of the consumption taxes

The following comments describe how the consumption taxes were allocated to Iowa consumers in this study.

The Iowa consumption taxes were first distributed <u>pro-portionally</u> among Iowa consumers according to the expenditures on consumer budget items. For example, if the expenditures of a particular occupation/income group on "Food Consumed Away from Home" was five percent of the total expenditures on "Food Consumed Away from Home", then, this occupation/income group was considered to have paid five percent of the total

consumption tax allocated to this budget item. The five percent was then distributed equally among those persons in that occupation/income cell.

If the consumers in a low income group spent a proportionately small percentage of their income on "Other Shelter", while consumers in a higher income group spent a proportionately large amount on this budget item, and if the proportion of expenditures on "Other Shelter" increased as the level of income increased, then, the consumption taxes allocated to this budget item would be based on these proportions, and would be found to yield a progressive incidence pattern.

In other words, because the tax incidence patterns of this study are based on consumer survey budgets developed by two branches of the United States federal government, the tax incidence values are dependent variables: they are dependent on the budgets; hence, if the aggregate proportional expenditure pattern increases across any occupation row when the level of disposable income is increased, the resulting consumption tax incidence pattern is progressive.

The incidence values (te_{ij}) are based on the consumption taxes allocated to the twenty budget items used in this study. To the extent that the tax allocations can be varied among the twenty budget items is the extent to which the incidence values can be varied. For example, if the budget item "Other Shelter" has an increasing proportional expenditure pattern, and if <u>all</u> of the consumption taxes were allocated to this

budget item, the final tax incidence pattern would be progressive. On the other hand, the tax incidence pattern would be
regressive if all of the consumption taxes were allocated to
the budget item, "Food Consumed at Home", since this budget
item has a decreasing proportional expenditure pattern.

In summary then, the tax incidence values are based on

(a) the budgets, and (b) the allocation of the gross consumption tax revenues to the specific budget items.

8. The budgets of Iowa consumers

der

The consumer budgets used to distribute the consumption taxes to the cells in this study were prepared by two federal agencies: the Bureau of Labor Statistics and the United States Department of Agriculture.

The Bureau of Labor Statistics (BLS) carried out a survey of households living in urban places (places with a population of 2500 persons or more) in the years 1960-1961 (32, pp. 40-49).

The United States Department of Agriculture (USDA) carried out a similar survey among the rural farm population in 1961 (29, p. 14).

The BLS and the USDA then cooperated to obtain sample budgets for the rural non-farm population in 1961 (persons living in places smaller than 2500, but not living on farms) (33, pp. 2-15).

The consumption taxes collected from Iowans were allocated to the various budget items, and were then distributed among average Iowa consumers by using these consumer budgets on the assumption that these budgets were representative of average Iowa consumers.

9. Some terms and explanations

Consumption: At the outset consumption will refer to "tangible, personal property", but later this meaning will be extended to include consumption items which are of an intangible nature. Examples of intangibles are best illustrated under the broad heading of "services". Thus, consumption means the purchase of tangible goods and services by both private household and commercial consumers in the fiscal year ending June 30, 1965.

Equity: Equity will always be referred to in the context of incidence. When references are made to equity, the implication will be that taxes that are progressive are more equitable than taxes that are regressive. This implies that persons who are "better off" (higher incomes and/or wealth) are able to pay higher tax rates than persons who are not so well off.

Without reading further, it could be concluded that Iowa's consumption taxes are regressive since low income groups spend a larger part of their income on items subject to the various consumption taxes than do the higher income

groups. That is, the higher income groups can save more and purchase more services, both of which are not included in the current Iowa consumption tax base.

However, neither the consumption tax pattern in Iowa, nor the policy problems related to this pattern can be handled this simply; hence, Chapter II is devoted to a broadened tax base that includes services in an effort to alter the distributional burden of Iowa's consumption taxes, or to improve the equity of tax burden among Iowans. The expansion of the Iowa consumption tax base, as done in Chapter II, implies that equity requires that those persons with the higher incomes and/or spending power should bear a proportionately larger part of the consumption tax burden. This principle of taxation is frequently called the ability-to-pay principle of taxation, and is closely related to the idea of equity.

Cost of Administration of Consumption Taxes: The expansion of the tax base does not necessarily improve the ease of administering the various consumption taxes. However, it is believed that certain commercial retailers would be assisted by the broadened tax base since they would maintain tax records of all sales, and not just part of their sales.

Some sales are very difficult to tax and would probably provide a yield that would be considerably less than the cost of administration (e.g., the services of baby-sitters). Thus, an important factor that must be considered in the expansion

of the tax base is the ease with which administrators can collect and enforce the tax. Taxes that are estimated to be difficult to administer will not be included in Chapter II.

Benefits Received: It is easy to argue that the final estimation of incidence can only be determined after close scrutiny of the tax incidence for consumers in relation to the public benefits (both public goods and services) accruing to the same consumers. This study will not attempt to estimate the final incidence in this sense since no attempt has been made to estimate the public benefits accruing to each consumer.

B. Methodology

The discussion in this section will be confined to a general description of the occupation/income table, the consuming units, the budgets, and the tabulation of the Iowa consumption taxes and their subsequent allocation to the budget items.

1. The occupation/income table

The occupation/income table contains nine rows and seven columns. The first eight rows present different occupational categories. The ninth row consists of a weighted average of the eight occupations which precede it. The seven columns present the income divisions considered in this study.

With the above format it is easy to compare the incidence values between the various cells. By reading across any row of the table, one can note the pattern of incidence within a particular occupation as the level of personal disposable income rises. By reading down a column, one can observe the variability of incidence for a given income between different occupations for the same level of personal disposable income.

2. The tabulation of the consuming units in each cell

Since the consumer budgets were presented for consuming units. it was endeavored to estimate the number of consuming units within each cell of the occupation/income table. The most detailed and most readily available information was found to be the Bureau of the Census' 1960 tabulation of the Iowa population (24, pp. 481-482, 488-490, 498-500). Since this agency does not report consuming units per se, the problem was to use Census information to estimate the number of consuming units in each cell. The Bureau of the Census does report families (i.e., consuming units) by occupation of the head and income of the total family unit. However, not all persons are living in family units. There are many persons classified as unrelated individuals. Moreover, the unrelated individuals are further classified as being primary or secondary. A primary unrelated individual is one who lives alone (e.g., in a rooming house) or who lives with one or more additional unrelated individual(s) (the others are

then classified as being secondary). The primary individuals are not classified according to occupation or according to total income of the consuming unit.

For the purposes of this study it was assumed that primary unrelated individuals were distributed among the various occupation and income cells in the same way as family heads.

The last occupational classification is listed under the heading "Other". This classification is somewhat obscure and requires further explanation. The largest portion of it, by far, is comprised of the Census title, "Head Not in Civilian Labor Force". This cell population was supplemented by the distribution of the primary unrelated individuals and the persons in Iowa with "Head in the Armed Forces". In general, this category is a miscellaneous occupational classification that was judged to be primarily a reflection of those persons in Iowa who are retired.

3. The cell budgets

A budget is associated with each cell of the occupation/ income table. (A sample budget is contained in Appendix A).

The budgets were compiled by the BLS and the USDA on a regional basis. For this study, the budgets for the twelve state North Central Region were used and Iowa was assumed to be homogeneous with the sample units drawn from the various locations throughout this region.

The budgets for these sample units were reported for the following residential locations in the North Central Region:

- a. Urban: persons living in urban areas or places having 2500 or more inhabitants;
- b. Rural: all persons living on farms; and
- c. Rural Non-Farm: all other persons.

The urban and rural non-farm budgets were pooled for the various occupational classifications other than rural.

Occasionally a budget was missing or was obviously incorrect for a given occupation/income cell. When this occurred a general budget for the North Central Region was used.

The tabulation of the consumption taxes for the state of Iowa

The cord consuming unit population estimates and the cord budgets were based on 1960-1 information. At this point it was assumed that Iowa consumers had not altered their consumption habits in the last five years, and that there was not an appreciable change in the distribution of the population among the cells. On the basis of these assumptions, the most recent consumption tax information was used.

Initially it would appear that all of the consumption tax revenues for Iowa could be used directly; however, this is not the case. First, all of these taxes are not paid by Iowans. Secondly, a substantial part of the taxes are paid by Iowa businesses.

It is necessary to distinguish between Iowans and nonIowans since this study is concerned with the incidence of the
consumption taxes as they are borne by Iowans. If the consumption taxes that are paid by non-Iowans are included, the
incidence values for Iowans are over-stated.

If all of the taxable purchases by Iowa businesses and firms were sold within the state, and if these consumption taxes were passed on to consumers in slightly higher prices, then all of the consumption tax revenues could be distributed among the various Iowa consuming units. But some businesses, due to competition, cannot raise their prices and must bear the burden of the tax.

Moreover, many businesses and firms sell at least part of their final product in export markets (i.e., non-Iowan markets, be they to other states or to other countries). Consequently, at least part of the tax paid by these businesses and firms is shifted to non-Iowans.

The concept of business taxation is one which complicates the issue of consumption taxation. It is quite clear that businesses are engaged in the consumption of items such as trucks, typewriters, and paper; but, in addition, the consumption taxes paid by businesses can be shifted to consumers; consequently, there is the new question of tax pyramiding

¹The author is indebted to Dr. Charles W. Meyer, Iowa State University, and Mr. L. P. Apedaile, graduate student at Iowa State University, for their assistance in clarifying the author's thoughts on this distinction.

that is raised. Should a mattress manufacturer pay a two percent sales tax on the materials which he uses to manufacture a mattress? The <u>Code of Iowa</u> clearly exempts this item, yet the consumption taxes paid on other items become part of the final cost; hence, it becomes difficult to evaluate the rationale upon which part is taxed and part is not. 2

The complete elimination of some consumption taxes on businesses would have several effects. First, tax revenue would fall considerably. Secondly, the problems of administration would be made much more difficult and probably result in a further decline in revenue (i.e., evasion would be facilitated).

The question of imposing sales taxes on various commercial activities is also complicated by elements of discrimination. This problem is described by Morgan in the following manner (17, p. 14):

Hit with relative severity are the contractor or builder, the farmer, the capital-intensive firm,

An example will clearly reflect the precision, or arbitrariness, of the interpretations of what constitutes a "component part" and what does not. A carton used to ship finished goods is considered to be a component part of the final product; however, the shipping label is not considered to be part of the final product, and therefore it is subject to the sales tax.

²Morgan (17, pp. 13-36) discusses the question of the taxation of businesses in a more detailed manner.

Morgan (17, p. 27) notes that states with a "component parts law" (of which Iowa is an example) receive between fifteen and twenty-five percent of the total retail sales tax yield from businesses.

and the firm which uses large quantities of fuel. Lightly hit are service enterprises, labor-intensive industry, and distributional services.

Ideally, it would seem judicious to eliminate the undesirable aspects of the various consumption taxes when they raise final prices in a pyramidic form. But to eliminate the unsatisfactory parts of taxing the purchases of businesses raises many significant administrative and legal complications. These complications may make the present structure of Iowa's consumption taxes more acceptable.

At best, the information available for estimating the consumption taxes paid by producers and/or businesses is very crude. The total consumption tax revenues in this study were adjusted downward in the following ways. First, it was assumed that fifty percent of the Use Tax was either passed on to out-of-state consumers, or was absorbed by Iowa businesses. Secondly, it was assumed that all of the retail sales tax, cigarette tax, beer tax, liquor profit, insurance tax, and miscellaneous fees were borne by Iowa consumers. Thirdly, all motor vehicle license fees paid by trucks were considered to rest half on Iowans and half on non-Iowans. Finally, in the case of the motor vehicle fuel tax, half of the fuel consumed by commercial users was assumed to have been paid by Iowans and half to have been paid by non-Iowans. Table 4 A outlines the total consumption tax revenues and the adjusted tax revenues for the fiscal year ending June 30, 1965. adjusted tax revenue was the amount considered to have been paid by Iowans.

Table A. Tabulated consumption taxes collected for the fiscal year ending June 30, 1965

8,878,932 7,967,312 5,103,351	75,878,150 6,590,949 3,983,656 5,103,351 39,096,415
7,824,239 5,393,111 5,208,979 3,442,128 5,792,244 0,274,582 37,081 114,762	54,494,428 15,208,979 3,442,128 15,792,244 10,274,582 37,081 114,762
	3,442,128 5,792,244 0,274,582 37,081

The Iowa State Tax Commission (13) is the source of the tax revenue information for the retail sales tax, and the use tax for the year April 1, 1964 to March 31, 1965. The remainder of the taxes are from a statement prepared by the Treasurer of the State of Iowa (14) for the period July 1, 1964 to June 30, 1965.

Table 1 indicates that approximately ninety percent of the current consumption tax revenues were paid by Iowans.

After reducing the gross consumption tax revenues as noted above, the remaining taxes were allocated to specific budget items. For example, the taxes collected from individuals for the operation of automobiles were tabulated, and the tax revenues were allocated to the budget item, "Automobiles". The same process was carried out for the other budget items. Some complications in this process arose since

there are many taxes which could not be clearly allocated to a particular budget item. Department store sales illustrate this problem. It was not possible to determine which part of these sales were hardware, electrical appliances, furniture, clothing, etc.; hence, the sales taxes collected by department stores were allocated to the general budget item, "Expenditures for Current Consumption". This process was repeated many times, especially when it seemed that the tax revenue was primarily obtained from businesses. Appendix B contains a list of the consumption tax revenues that were allocated to the specific budget items.

Distributing the taxes throughout the occupation/income table



The calculation of the tax incidence for the 56 cells of the occupation/income table was accomplished by multiplying the number of consuming units in each cell by each budget expenditure item for which a consumption tax was collected. Then the tax was distributed proportionally throughout the 56 cells. The total tax allocated to each cell was then obtained. This figure was divided by the number of consuming units within each cell to give the average consumption tax paid by each consuming unit within each cell. By dividing this last figure by the average personal disposable income for each cell, the cell tax incidence was obtained.

C. Who Pays Iowa's Consumption Taxes?

The discussion to this point has been definitional, explanatory, and descriptive. With this completed, it is now possible to look at the results of the various computations. But before beginning, there are two comments to be made regarding the budgets and the data itself:

- a. The budgets for the two extreme income categories are based on rather small samples; consequently these patterns of incidence can be expected to have a greater variance and are not as significant as the incidence values for the income brackets between \$1000 and \$14,999.
- b. Incidence values for the occupational category, "Farmers and Farm Managers", earning less than \$1000 are not included since this occupation/income group had a negative personal disposable income of \$-565.

1. The incidence of Iowa's consumption taxes by income and occupation for the fiscal year ending June 30, 1965

Table 2 lists eight occupations and an average group which was derived by pooling the urban, rural non-farm, and rural farm consumer budgets. Moreover, each cell of Table 2 has two numbers. The top number gives the incidence of the consumption taxes collected in Iowa for the 1964-1965 fiscal year. The second number gives, in thousands of dollars, the amount of consumption taxes collected from each cell.

Table 2. Incidence of the consumption taxes as distributed among Iowans for the fiscal year ending June 30, 1965
Legend: 1. Incidence for each cell in percent
2. Taxes paid by each cell in thousands of dollars

	Income							
Occupation	Under	\$1000 -	\$3000 -	\$5000 -	\$7000 -	\$10,000	0ver	
	\$1000	2999	4999	6999	9999	14,999	\$15,000	
Self employed	13.55	7.31	6.44	4.84	4.49	4.10	2.50	
	467	1,386	4,270	5,390	5,736	4,608	6,051	
Salaried and professional	6.37	6.16	5.96	4.85	5.08	4.93	3.94	
	55	450	3,205	7,051	10,544	7,308	4,953	
Sales and clerical	6.37	4.85	5.24	4.83	5.10	5.27	3.55	
	479	1,548	4,345	6,413	6,566	4,324	1,969	
Skilled labor	6.37	6.45	6.20	5.64	5.13	5.21	4.23	
	127	1,162	6,045	10,744	9,696	4,192	962	
Semi-skilled	6.37	5.51	6.06	5.43	5.49	4.76	3.46	
labor	285	2,190	8,121	11,092	9,831	3,474	1,076	
Unskilled labor	6.37	5.28	5.44	5.40	6.11	5.45	3•55	
	238	1,470	4,262	4,603	3,821	1,408	227	
Farmers and farm managers	4,393	9.22 8,528	6.88	5.08 6,031	4.19 4,087	3.12 2,330	2.32 1,137	
Other (i.e., Head not in civilian labor force)	5.60 1,351	4.47 5,563	5.22 5,374	5.16 3,819	4.42 2,416	4.24 1,353	3.49 735	
Average for	13.33	5.58	5.87	5.40	5.16	4.90	3.46	
the state	5,671	20,228	44,306	57,099	54,326	30,457	17,928	

The occupational classification with the greatest degree of regressivity is that of "Farmers and Farm Managers". This can be largely attributed to one factor, that is, the sales taxes the rural sector must pay on construction materials, and manufactured farm implements and tractors.

This condition might be described as a mixed blessing. On the one hand, as a result of farm purchases of these items, farmers make a large contribution to state revenues (about four percent of consumption tax revenue). On the other hand, farmers are selling in farm produce markets that approximate the perfectly competitive economic model and they are not able to pass consumption taxes on in the form of higher prices to the same degree as other business enterprises.1

The classification, "Average for the State", indicates that Iowa's consumption taxes are generally regressive throughout, except for the move from the \$1000-2999 income group to the \$3000-4999 income group where there is an incication of slight progressivity.

The incidence values may exaggerate the absolute tax burden borne by any one cell. For example, the effective tax rate for the self-employed who earn less than \$1000 is recorded as 13.55 percent, while the persons within the cell

Appendix D contains eight tables which record the incidence factors for eight selected budget items (i.e., personal insurance, total food expenditures, tobacco, beer, liquor, medical care, and automobiles).

pay only two tenths of one percent of the total consumption taxes. Thus, it may not be too meaningful to attempt to ease the tax burdens by income or by occupation. With this notion in mind, Table 3 has been included. The most meaningful information is recorded in the last row of the table, "Average for the state".

2. The incidence of the consumption taxes for selected budget items using the budgets for the average Iowan

In the remaining paragraphs of Chapter I the reader's attention will be directed to the incidence factors of the selected budget items of Table 4. The references to incidence patterns will apply to the income groups between \$1000 and \$14,999.

a. Personal insurance This budget item indicates an incidence pattern that is progressive from \$1000 to \$10,000. Thereafter, it is regressive.

This incidence pattern would indicate that if selective increases in tax rates were desirable in an effort to reduce the regressivity of the current tax base, then an increase in the insurance premium tax would tend to reduce regressivity.

b. Total food Traditionally, and intuitively, one would expect that the taxation of food as a consumption item would be regressive (5, pp. 376-377; 7, pp. 1-13; 20, pp. 123-124; 23, pp. 31-49). The incidence pattern of Table 5 confirms these expectations.

Table 3. Intra-cell comparison of incidence, consuming units, and absolute tax payments for the fiscal year ending June 30, 1965
Legend: 1. Incidence for taxes collected

Percentage of consuming units within the "ij"th cell
 Percentage of total tax payments by the "ij"th cell

				Income	·		
Occupation	Under	\$1000-	\$3000 -	\$5000 -	\$7000 -	\$10,000-	0ver
	\$1000	2999	4999	6999	9999	14,999	\$15,000
Self employed	13.55	7.31	6.44	4.84	4.49	4.10	2.50
	.58	1.08	1.93	2.20	1.79	1.14	1.04
	.20	.60	1.86	2.34	2.49	2.00	1.63
Salaried and professional	6.37	6.16	5.96	4.85	5.08	4.93	3.94
	.15	.43	1.51	2.80	2.92	1.52	.71
	.02	.20	1.39	3.07	4.58	3.18	2.15
Sales and clerical	6.37	4.85	5.24	4.83	5.10	5.27	3.55
	1.31	1.87	2.39	2.64	1.87	.84	.30
	.21	.67	1.89	2.79	2.85	1.88	.86
Skilled labor	6.37	6.45	6.20	5.64	5.13	5.21	4.23
	•35	1.07	2.81	3.67	2.65	.83	.14
	.06	.51	2.63	4.67	4.22	1.82	.42
Semi-skilled labor	6.37 .78 .12	5•51 2•33 •95	6.06 3.87 3.53	5.43 4.07 4.83	5.49 2.48 4.27	4.76 .77 1.51	3.46 .16 .47
Unskilled labor	6.37	5.28	5.44	5.40	6.11	5.45	3.55
	.65	1.57	2.38	1.68	.90	.28	.03
	.10	.64	1.85	2.00	1.66	.61	.10
Farmers and farm managers	2.81	9•22 5•43 3•71	6.88 4.70 4.68	5.08 2.34 2.62	4.19 1.38 1.78	3.12 .75 1.01	2.32 .32 .49
Other (i.e., Head	5.60	4.47	5.22	5.16	4.42	4.24	3.49
not in civilian	4.17	7.82	3.07	1.47	•77	.34	.11
labor force)	•59	2.42	2.34	1.66	1.05	.59	.32
Average for the state	13.33 10.80 2.47	5.58 21.60 8.79	5.87 22.60 19.26	5.40 20.88 24.83	5.10 14.77 23.62	4.90 6.47 13.24	3.46 2.82 7.79

Table 4. Incidence of the consumption taxes for selected budget items of the average Iowan (numerical values are in percentages), fiscal year ending June 30, 1965

				Income		V	
Budget item	Under \$1000	\$1000 <u>-</u> 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999		0ver \$15,000
Personal insurance	•31	.13	.21	.25	•26	.25	•23
Total food	1.81	.65	•52	•45	•40	•36	•23
Tobacco	.83	•50	•45	•38	•32	•24	.14
Beer	.20	.16	•15	•13	.14	.07	.03
Liquor	.14	.19	-31	•35	.38	•56	•43
Alcoholic beverages	•34	•35	.46	•48	•52	.63	.46
Total housing expenditures	1.94	.65	•49	•45	•39	•36	•27
Clothing, clothing materials, services	•20	.09	.09	•09	.10	•11	•09
Medical care	•32	.10	.07	.06	.06	•05	.04
Recreation	.12	.05	.06	.07	•07	.07	.05
Automobile	2.67	1.38	2.09	1.89	1.87	1.77	1.17
Totala	13.33	5.58	5.87	5.40	5.19	4.90	3.46

This total is not a sum of the selected items, rather it is the weighted average for all budget items as recorded in the row classification, "Average for the State", in Table 3.

With the knowledge that food is a necessity, a number of states have exempted "Food Consumed Off the Premises". An exemption of this type reduces the regressivity of the overall tax base (7, pp. 8-9). Up to July, 1963, ten states had passed laws exempting off-premise food consumption.

If a goal of public policy in Iowa is to reduce the regressivity of the consumption taxes in the State of Iowa, there would seem to be three alternatives: 1) food consumed off the premises could be tax exempt; 2) selective changes could be made in the tax rates with the budget items having a progressive incidence factor (i.e., an increasing proportional expenditure pattern) being taxed at higher rates than at the present time; or 3) a system of tax credits could be introduced. The second method would tend to reduce regressivity without causing undue downward pressure on gross tax revenues.

c. Tobacco The consumption taxes on this budget item are regressive.

The taxes imposed on tobacco, and alcoholic beverages are frequently referred to as <u>sin taxes</u>. As such there is usually little anxiety generated when tax rate increases are enacted on these items.

Morgan (17, pp. 144-145). The states were California, Connecticut, Florida, Maine, Maryland, Ohio, Pennsylvania, Rhode Island, Texas, and Wisconsin.

²Morton (18, pp. 160-166). Morton discusses the use of tax credits and concludes that they add a degree of progressivity to the structure of the retail sales tax.

d. Beer and liquor The consumption taxes on beer (both the barrel tax and the retail sales tax) result in a regressive tax, while the taxes on liquor are progressive.

A more realistic approach to these two taxes can be obtained by pooling the two budget items under the more general budget item, "Alcoholic Beverages". The incidence of alcoholic beverages is progressive from less than \$1000 to \$14,999. Pursuing the current logic, this would imply that the category of alcoholic beverages would be a likely area for selective tax increases, and to the extent that the progressivity in this case is a function of the liquor tax, then, increases in the liquor taxes would seem more worthy of attention (i.e., an increase in the rate of liquor profit and/or an increase in the sales tax rate).

e. Total housing expenditures Total housing is another item that is regressive in its incidence. It can be noted by comparing the tax incidence for housing to the incidence of all other budget items in each column of Table 4 that it claims a rather large part of the consumer's dollar in consumption taxes (the largest is automobile taxes). Thus, any proposals for extending the consumption tax base on housing should be carefully appraised in this context.²

¹Total housing expenditures include all housing expenditures (i.e., total housing through to house furnishings and equipment). The total tax revenue applied to this budget item is \$19,389,546.

²The Bureau of Municipal Research of Des Moines, Iowa (4) suggested in January, 1965 that the (continued on next page)

Housing is similar to food in many ways; hence, it may be that housing could receive certain exemptions (e.g., fuel, light, refrigeration, and water which account for approximately fifty percent of the current revenue from the classification total housing expenditures), or else, selective increases in the tax base could be considered without any changes in the tax rate of items related to housing.

f. Clothing, clothing materials, services A very brief perusal of this item in Table 4 reveals an incidence pattern which is proportional. In addition, the taxation of this item takes a relatively small amount of the consumer's dollar (about one tenth of one cent of each dollar of disposable income).

g. Medical care Medical care is also regressive, but to the extent that the taxes imposed on it take a rather small portion of each dollar expended, it demands little attention.

h. Recreation This item indicates a slight tendency towards progressivity; hence, it would be a likely candidate for selective tax rate increases in order to improve the equity of the consumption taxes.

⁽continued from previous page) current tax base be extended to include rents. In view of the budgets used in this report, such an extension of the tax base would make the consumption taxes of housing considerably more regressive than they are at present. The proposals of this agency are discussed at greater length in Chapter II, Part A of this thesis.

<u>i. Automobile</u> The consumption taxes imposed on automobiles appear to be progressive from \$1000 to \$5000, at which point they become regressive.

Moreover, this budget item is the largest single source of consumption tax revenue (about 34 percent of the total tax revenue). Since this source of revenue is so large, it would seem reasonable to conclude that this source of tax revenue would have the greatest influence on the total incidence pattern for the average Iowan. This probably explains why the total incidence pattern is progressive from \$1000 to \$5000 and regressive thereafter.

3. The incidence among Iowans who earn less than \$1000

Although this topic has been evaded thus far, it would seem desirable to briefly consider the reason(s) why the total incidence for persons earning less than \$1000 is so high relative to the other income groups. Why do these people pay 13 cents out of every dollar expended on various consumption taxes? First, these persons are net dissavers. This permits the effective tax rate to be relatively higher than if there were no dissaving.

There is a second and somewhat similar reason. It has been hypothesized that some persons in the low income brackets are only temporarily located there for varying reasons and that their abnormally high expenditures relative to income can be explained by their anticipated level of income and wealth

over longer periods of time. A prosperous farmer may encounter some misfortune during a given year that lowers his income well below his average income; nevertheless, he may continue to maintain the standard of living and level of expenditures to which he is accustomed since he does not anticipate his misfortune to continue. Another example is that of retired persons. At the time of retirement their incomes fall considerably, but with the various assets which they have acquired in anticipation of this day, they spend considerably more than they earn and have a rather large tax incidence relative to their income.

On the basis of the foregoing observations, the reader should have a better appreciation and at least a partial explanation for the high incidence values of persons having an after tax income that is less than \$1000.

Friedman (6, Chapter II); Patinkin (21, pp. 205-213). Although Friedman and Patinkin have different approaches to the question of expenditures, there is an underlying similarity which would seem to apply to the situation outlined above, namely, that consumer expenditures are not solely a function of current income. Friedman outlines a theory of permanent income in which he notes that consumption can be considered to be related to the level of past income, present income, and expected future income plus the value of human and non-human wealth. Patinkin has a somewhat different approach in which he considers the level of current expenditures to be related to the level of real balances (i.e., non-human wealth) and current income. The two approaches differ, but nevertheless, both permit expenditures to exceed current income.

4. Concluding comments on the incidence of the consumption taxes

The preceding discussion has been directed towards the evaluation of the tax incidence between various Iowa consumers. In most cases, the emphasis has been on regressivity; however, the final appraisal of the incidence on the basis of the pooled budgets for the total incidence indicates that the consumption taxes may not be too regressive. On the basis of this result, it becomes somewhat more obvious why the concept of selective tax increases has been introduced in the foregoing commentary on incidence patterns. Having acquired an appreciation of these tendencies, the next step is to explore the impact of a broadened tax base on the overall incidence patterns.

Chapter II will reveal that the extension of the tax base to include services will <u>not</u> produce a windfall for the State Treasury, but merely raise the gross consumption tax revenues by an estimated three to seven percent.

II. BROADENING THE RETAIL SALES TAX BASE TO INCLUDE SERVICES

A. The Retail Sales Taxation of Services

During recent years, the sales taxation of services has received popular attention. The following three considerations are outlined to indicate some of the reasons for this interest.

First, it can be argued that the very poor spend most of their income on necessities such as food, housing, and clothing, while the very rich spend proportionately less of their income on necessities, and proportionately more of their income on various services. The conclusion is that the extension of the tax base to services makes the sales tax either less regressive, neutral, or progressive in its incidence between income groups.

A second reason for the consideration of services can be attributed to the trend towards the higher consumption of services in the United States. For example, the following citation from The Survey of Current Business seems to illustrate the structural change towards an increased orientation towards services during the period 1950-1960 (30, p. 25):

... expenditures for goods rose at a rate of 2.8 percent a year and services at 3.8 percent. Real disposable income over this period rose 3.2 percent per annum.

The above indicates that expenditures on services in the United States rose faster than the increase in income, while

expenditures on goods rose at a slower rate than the increase in income during the period in question. Thus, it could be argued that the extension of the tax base to services would permit the tax base to adapt to the changing structure of consumer demands.

Thirdly, it can be further argued that if tax revenues are to maintain the same growth rate as the demand for government services, then the tax base must be extended to keep pace with the changing structure of consumer demands in respect to government services. Unless the tax base is extended to include services, the degree of regressivity will be worsened by increasing current consumption tax rates in order to obtain the higher levels of state revenue which will be required to finance the increased demand for government services.

The remainder of Chapter II discusses some ideas re the taxation of services which have been considered to be logical extensions of the current retail sales and use tax bases in this study. Subsequently, the inclusion of various legal and medical services will be examined. Attention will then be directed to the current gasoline tax, and the possibility of using this commodity as a further source of state revenue. In the two concluding sections, the effect of an off-premise food exemption is discussed, and then the incidence values in Chapters I and II are summarized.

No

1. Some difficulties associated with the sales taxation of services

Three reasons have been given for the extension of the tax base to include services. It is quite logical to present reasons such as these, but it is quite another to enact laws which will extend the tax base to include services.

Transient lodging services, hotels and motels, were added to the tax base during Iowa's 61st General Assembly in 1965. However, as the tax base is enlarged, one must consider the inclusion of a wide variety of services which are labor-oriented. Since services are usually labor-intensive, the sales taxation of these services at retail can be interpreted as being the taxation of labor. In spite of this interpretation a closer scrutiny seems to indicate that a slight modification could be made.

For example, let us consider the sales taxation of bread versus the sales taxation of a barber's services. The taxation of bread appears as the taxation of an item that is not labor-oriented, while the taxation of a barber's services appears as a tax on labor. Nevertheless, the taxation of bread is also a tax on labor. There is the labor of the farmers who produce the wheat, the labor of the persons involved in moving the wheat to flour mills, the labor of the millers, the labor involved in moving the flour to bakeries, and the various labor activities required to bake the bread, and distribute the bread to retailers who then provide a

labor service in selling the bread to consumers. It would seem that the production of bread is also an activity that requires a considerable amount of labor, and is not too different from the taxation of the labor services of a barber.

Proposals to extend the tax base to services in Iowa run into a legal obstacle. The state law does not permit the taxation of services.

At the present time some retail services are included in the Iowa consumption tax base. The 61st Iowa General Assembly in 1965 approved the taxation of transient lodging which is a service-oriented industry. Moreover, such items as electricity and telephones are classed as services and are currently included in the retail sales tax base. The inclusion of services in the retail sales tax base does not set a precedent. The extension of the current Iowa tax base is a refinement of present legislation.

2. The evaluation of two revenue estimates when services are included in the consumption tax base

Numerous groups propose the inclusion of services in the base of the retail sales tax. The examination of two of these proposals demonstrates the meager increases in Iowa's state revenue that this study will suggest as being possible with the extension of the tax base to include services.

No

lowa (8, pp. 1499-1500). Transportation services and fairs are specifically exempted by the lowa law.

In 1963 the Iowa Legislative Advisory Committee on the Study of State Revenue published a Report in which they discussed the taxation of services. The Committee reported as follows (11, p. 4):

National figures show that personal consumption expenditures for services is approximately 40% of the total personal consumption expenditures. In other words, if 60 cents of each dollar is spent for goods and 40 cents for services, amount of revenue from the sales tax on services would equal two-thirds of the amount of revenue obtained from the sales tax. Assuming the Iowa 2% sales tax returns \$70,000,000.00, the 2% service tax would then equal about \$46,000,000.00. This figure is an extreme estimate and should be considered with reservations.

The most important word in the above reference is the last word -- "reservations". One of the most important services is that of government. A second important service is that of education. In all probability a substantial increase in Iowa's tax revenues could be achieved if these services were taxed. For example, Iowa State University might be required to pay a 2 percent service tax on the salaries which it pays to its employees. The University buys the services and a tax would seem reasonable. On the other hand, it could be said that the students really consume the services of the University and that they should pay the tax. However, the student must also pay tuition fees that are imposed by the Board of Regents, a committee appointed by the state. If the state is in need of higher revenues, then it can raise the fees as easily as it can impose a sales tax, and in all probability, the former has much lower administrative costs.

Similar arguments can be formulated that would indicate the necessity of excluding a very substantial part of the services base in respect to government and education, thus incicating that the increase in revenue would be much less than \$46,000,000.00.

In January, 1965 the Bureau of Municipal Research of Des Moines prepared an estimate of the revenue that could be expected by taxing selected services at the rate of 2 percent (4). It would seem that the Bureau's estimate would confirm the general estimate of the Iowa Legislative Advisory Committee since the Bureau estimated the revenue increase to be \$43,919,400.00.

The Bureau included household utilities, telephone and telegraph, funeral and burial services, admissions to theaters, and commercial amusements. All of these items were partially or fully included in the tax base for the fiscal year ending June 30, 1965. By removing these estimates from the calculations, the estimated revenue falls to \$38,163,700.

The Bureau applied the 2 percent sales tax to rents. In other words, they suggest the sales taxation of renters, but not home owners. It might be argued that renters do not directly pay property tax; therefore, renters should pay sales tax on their rents. However, if one assumes any property tax

Funeral and burial expenses are not fully taxed, rather, only the value of caskets, vaults, and other personalty are subject to the retail sales tax (9, p. 203).

shifting, then, rents are higher than would be expected in the absence of property taxes. Moreover, the sales taxation of rents appears to be highly questionable if regressivity is to be avoided. The consumption taxes on housing are regressive. The taxation of rents would tend to make the consumption tax system more regressive since low income groups pay a large part of their income in rents, while high income groups pay a very small part of their income in rents. Excluding rents from the proposed tax base reduces the revenue to \$24.776.900.

The Bureau also proposed the inclusion of pari-mutuel betting; however, this is a service which is illegal in the state of Iowa (revenue then falls to \$24,601,300). Religious and welfare activities, foreign travel, and interest on personal debt were also included in the proposed tax base. Many political and administrative objections would seem to indicate the probable exclusion of these items from the consumption tax base. The proposed revenue increase declines to \$20.319,100.

The Bureau of Municipal Research also includes the services of physicians, lawyers, and dentists. If these three

Persons earning between \$1000 and \$3000 pay 10.47 percent of their after tax income in rents, while persons earning between \$10,000 and \$15,000 pay 1.88 percent of their after tax income in rents. A tax on rent is regressive since the proportional expenditure pattern is decreasing.

items are excluded because of the difficulty in extending the tax base to include them, the revenue declines to \$17,341,300.

B. The Extension of the Tax Base to Include Selected Services

The discussion of the previous section reflects the difficulty and the small increase in tax revenues that result from proposals to extend Iowa's consumption tax base to services. With these observations in mind the discussion proceeds.

The Census of Business, a division of the United States Bureau of the Census, prepared a set of data on Iowa for the year 1963 which was entitled <u>Selected Services</u> (27, pp. 17-6 and 17-7; 28, pp. 1-38). This publication was the primary source of information on services in Iowa. This agency published two additional sets of data on <u>Retail Trade</u> (25, 17-6 and 17-7) and <u>Public Warehousing</u> (24, p. 9). The last source of statistical information used for the estimates in this thesis was <u>The Survey of Current Business</u> (31, pp. 13-14, 16).

Table 5 presents the broad classifications and the expected revenue which the state could anticipate from each of them. 1 To conform with the earlier comments regarding

The table merely indicates broad classifications; however, the reader can turn to Appendix E if he wishes to investigate the specific services which are included in each of the broad headings.

Table 5. Estimated sales tax revenue by extending the tax base to include selected services: 1965

Kind of service	Total revenue	Taxes paid by Iowans
Hotels, motels, and tourist courts Personal business services Personal services Miscellaneous business services Auto repairs, auto services, etc. Miscellaneous repair services Amusement, recreation services (excluding motion pictures) Farm equipment repair services Taxi services	\$ 951,440 682,270 1,986,380 540,880 2,150,800 790,090 208,180 573,330 188,010	\$ 475.720 682,270 1,986,380 540,880 2,150,800 790,090 208,180 573,330 188,010
Total revenue	\$8,071,380	\$7,595,660

The statistics used to estimate the above tax revenues were based on 1963 observations. Since the current taxes were for the fiscal year ending June 30, 1965, it seemed appropriate to present the services estimates as estimates of 1964/65 revenues. The April, 1964 issue of The Survey of Current Business (31, p. 14) indicated that personal income in Iowa increased by approximately four percent per year over the period 1948-1963. Thus, the initial estimates were increased by eight percent in order to estimate the level of revenues for the fiscal year ending June 30, 1965 in Iowa.

bThis group of selected services is now included in the Retail Sales Tax base in the State of Iowa. The 61st Iowa General Assembly in 1965 extended the tax base to include these items.

the impact of the tax burden, the estimates have been adjusted, where feasible, so that the taxes that can be defined as falling on non-lowans are deleted from the expected revenues for purposes of determining the incidence values for lowans.

\$92.7 million for the twelve month period ending March 31, 1965. Therefore, the addition of the selected services has increased this source of state revenue by \$8.1 million, or a 3.2 percent increase in the consumption tax revenue. This increase is considerably lower than the estimates previously discussed. 1

There are additional considerations which indicate that the above estimate is somewhat conservative. A number of services are not included since it is virtually impossible to estimate the amount of revenue that they would yield. An example will illustrate the dilemma: Many retail stores provide services, especially in the form of repairs. Retail stores are classified under Retail Trade (26) by the Census of Business. And since there is no basis upon which to determine the portion of retail trade gross receipts that are attributable to services, it would be extremely difficult to venture an estimate of what the increase in the consumption tax revenues would be if the services of retail services were included in the tax base. The inclusion of the services which they provide would clearly increase state revenue and at relatively little cost since these businesses already collect

This reference is to the <u>Report</u> of the Iowa Legislative Advisory Committee on the Study of State Revenue (11), and the revenue estimates of the Bureau of Municipal Research in Des Moines (4).

the Iowa retail sales tax. Moreover, the taxation of their services might facilitate bookkeeping for these businesses since all of their sales (both goods and services) would be taxable. It is unlikely that the total tax revenue would be increased substantially by the inclusion of these services, however. Table 6 lists several retail trade businesses that provide at least some services to consumers. I

The list shown in Table 6 is comprised of some retail businesses that also provide services that would increase consumption tax revenues. Since there is no apparent basis upon which to estimate the revenue from these sources, no attempt has been made to do this since it would be a guess at best.

The next step in the analysis was to assign the various taxes to specific budget items in the same way as the taxes collected from the items included in the consumption tax base for the 1964-1965 fiscal year. The incidence of the tax on services was then determined in two ways:

- a. The incidence of selected services alone.
- b. The incidence of the consumption tax collections for the 1964-1965 fiscal year <u>plus</u> the estimated revenue from the tax on selected services.

There is an alternate method that can be used to estimate the gross tax revenues for the state of Iowa if all of retail trade, public warehousing, selected services, legal and medical services, private business services, and taxi services are included. The method is to apply a two percent tax to the gross receipts of these categories. In fact, this was done and a discussion with the statistical results can be found in Chapter III.

Table 6. Gross receipts of retail trade businesses in Iowa that provide some services to consumers: 1963

Retail trade classification	Gross receipts
Department stores Painting, plumbing and equipment dealers Paint, glass and wallpaper stores Electrical supply stores Hardware stores Radio and TV stores Household appliance stores Sporting goods stores and bicycle shops Jewelry stores Typewriter stores	\$227,300,000 9,564,000 16,219,000 3,078,000 64,557,000 13,161,000 34,190,000 8,626,000 19,229,000 1,683,000

a(26, pp. 17-6 and 17-7). Some of the above businesses provide warranties with the goods they sell. Thus, they provide after-sale services, and these services are taxed since the services are included in the price when purchased. The inclusion of post-warranty services would then seem to be a logical extension of the tax base.

In the following table (Table 7) the upper figure in each cell is the incidence value for the selected services of the foregoing discussion. The middle figure is the incidence of the services plus the incidence for the items in the 1964-1965 fiscal year tax base. The bottom figure is the incidence of the 1964-1965 tax revenues and is transcribed from Table 2. Since each consumer must pay more taxes than he did before, the second incidence value is higher than the third. The incidence value of selected services for the category, "Average for the state", indicates that the incidence of the

Table 7. Tax incidence when selected services are added to the tax base Legend: 1. Incidence for selected services only

- 2. Incidence for selected services <u>plus</u> current collections
- 3. Incidence for taxes collected in the fiscal year ending June 30, 1965

WHEN THE POWER CONTRACTOR AND THE POWER CONTRA				T			
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000- 6999	\$7000 - 9999	\$10,000- 14,999	0ver \$15,000
Self employed	1.07 14.61 13.55	7.55	.20 6.63 6.44	.16 5.00 4.84	•16 4•65 4•49	•14 4•24 4•10	
Salaried and professional	.22 6.60 6.37	6.33	•19 6•15 5•96	.16 5.00 4.85	.17 5.25 5.08	.16 5.10 4.93	4.09
Sales and clerical	•23 6.61 6.37	5.01	.16 5.40 5.24	•15 4•98 4•83	.16 5.26 5.10	•17 5•44 5•27	.14 3.69 3.55
Skilled labor	•23 6.60 6.37	6.66	.18 6.38 6.20	.17 5.81 5.64	.16 5.29 5.13		•17 4•40 4•23
Semi-skilled labor	•23 6.60 6.37	5.67	•17 6•23 6•06	.16 5.59 5.43	.17 5.66 5.49	.16 4.92 4.76	•13 3•59 3•46
Unskilled labor	•23 6.60 6.37	-	.16 5.60 5.44	.16 5.56 5.40	.18 6.29 6.11	•17 5•63 5•45	3.68 3.55
Farmers and farm managers		9.66 9.22	•31 7•18 6•88	•21. 5•29 5•08	.18 4.37 4.19	.13 3.26 3.12	.10 2.42 2.32
Other (i.e., Head not in civilian labor force)	•18 5•77 5•60	•17 4•64 4•47	•17 5•39 5•22	•15 5•31 5•16	.14 4.56 4.42	.15 4.39 4.24	.14 3.63 3.49
Average for the state	•54 13.87 13.33	.20 5.78 5.58	•19 6•06 5•87	•18 5•58 5•40	•17 5•36 5•19	.17 5.07 4.90	.14 3.60 3.46

services themselves is regressive (i.e., varying from 0.20 percent to 0.14 percent).

Extending the tax base to services had two purposes:

(a) to improve the equity of the consumption tax base; and

(b) to increase revenue. The latter was achieved, while the former was affected very little, if any. Let us then proceed to the next extension of the tax base.

A.B. Extension of the Tax Base to Include Medical and Legal Services

1. Legal services

There seems to be little doubt that lawyers perform a service to consumers. Moreover, it is to be expected that, in general, those persons with relatively large amounts of wealth (i.e., income plus assets) would tend to utilize legal services more than persons with relatively low levels of wealth. Hence, it would seem reasonable to assume that the tax incidence of legal services would tend to be progressive.

The estimated sales tax revenue was \$962,180. Since all legal services are not performed for personal consumption, it was estimated that \$663,900 was paid by consumers and \$298,280 was paid by various businesses. Since the latter

As indicated before, the incidence values between \$1000 and \$14,000 are more reliable than the extreme income groups.

²A detailed discussion of this value and its subsequent division are located in Appendix F.

revenue estimate was assumed to be shifted onto consumers, it was assigned to the budget item, "Expenditures for Current Consumption", while the former was assigned to the budget item, "Increase in Assets".

2. Medical services

There is little doubt that medical services merit consideration if the tax base is to be extended to services. It is most likely that the Legislative Advisory Committee implicitly included medical services in its tax revenue increase of \$46 million (ll, p. 4).

The estimated increase in the tax revenue to the state treasury would be \$4,455.360.

3. Tax incidence when legal and medical services are included

The following table (Table) presents three sets of incidence statistics. The first set of incidence values is based on the estimated tax revenues from medical and legal services. The second set of incidence values includes the incidence for the consumption taxes collected in the 1964-1965 fiscal year, plus the incidence for the estimated revenues from selected services, plus the incidence for legal and medical services. The third set of incidence values is the incidence pattern for the consumption taxes collected in the fiscal year ending June 30, 1965.

¹The composition of this value is discussed in Appendix F.

Table 8. Tax incidence factors when legal and medical services are added to those previously considered

Legend: 1. Incidence for the taxes on legal and medical services

2. Incidence for the taxes collected in the 1964-1965 fiscal year plus the taxes proposed on selected services plus the taxes on legal and medical services

3. Incidence for taxes collected in the fiscal year ending June 30, 1965

	Income							
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999		0ver \$15,000	
Self employed	•39 15•01 13•55	.18 7.72 7.31	.16 6.79 6.44	.11 5.11 4.84	.11 4.76 4.49	.10 4.34 4.10	.06 2.66 2.50	
Salaried and professional	•34 6•94 6•37	•22 6•56 6•16	.14 6.28 5.96	.12 5.12 4.85	.12 5.37 5.08	.10 5.19 4.93	•09 4.18 3.94	
Sales and clerical	•35 6.96 6.37	•15 5•17 4•85	.12 5.52 5.24	.12 5.10 4.83	.11 5.37 5.10	.08 5.52 5.27	•07 3•76 3•55	
Skilled labor	•34 6•94 6•37	•17 6.83 6.45	.14 6.52 6.20	.12 5.93 5.64	.11 5.40 5.13	.10 5.48 5.21	•11 4•51 4•23	
Semi-skilled labor	•35 6•95 6•37	.16 5.82 5.51	.10 6.33 6.06	5.70 5.43	.09 5.75 5.49	•07 4•99 4•76	.06 3.65 3.46	
Unskilled labor	6.94 6.37	.15 5.59 5.28	.13 5.73 5.44	5.66 5.40	.10 6.39 6.11	.07 5.70 5.45	.07 3.75 3.55	
Farmers and farm managers		•29 9•95 9•22	.19 7.38 6.88	•13 5•42 5•08	.11 4.48 4.19	.09 3.35 3.12	.05 2.47 2.32	
Other (i.e., Head not in civilian labor force)	•38 6•15 5•00	•24 4•88 4•47	•16 5•55 5•22	.12 5.43 5.16	•17 4•73 4•42	•12 4•51 4•24	.06 3.69 3.49	
Average for the state	.63 14.50 13.33	•20 5•98 5•58	.15 6.21 5.87	.12 5.70 5.40	•12 5•48 5•19	.09 5.16 4.90	.07 3.67 3.46	

4. Discussion of the new incidence patterns

For the sake of ease and simplicity, the following remarks are confined to a brief discussion of the incidence for the classification, "Average for the state". As would be expected, the incidence is higher absolutely since the tax base has been extended to include new items with the result that more taxes are paid out of disposable income than before the tax base extension. The absolute increase is illustrated below by tabulating the incidence of the selected services, and the incidence of the taxes on legal and medical services (Table 2).

Table 9. Incidence factors of selected services, and medical and legal incidence factors for the average Iowan

	\$1,000- 2,999	\$3,000- 4,999	\$5,000 - 6,999	\$7,000 - 9,999	\$10,000- 14,999
Selected services	0.20%	0.19%	0.18%	0.17%	0.17%
Medical and legal services Selected services	0.20	0.15	0.12	0.12	0.09
PLUS legal and medical services	0.40	0.34	0.30	0.29	0.26

The above table reveals that the introduction of medical and legal services has produced an incidence pattern which is regressive.

This result would seem to reject the theory presented in the second paragraph of Chapter II. This may seem rather surprising; however, it would be more surprising if the inclusion of services produced (continued on next page)

D. Extending the Tax Base to Gross Gasoline Sales

The suggestion that gross gasoline sales be included in an expanded tax base could be subjected to criticism since the budget item, "Automobiles", is the largest single source of consumption tax revenue.

It can also be argued that gasoline is already heavily taxed. Between the tax imposed by the state of Iowa, and that imposed by the federal government, Iowans already pay 11 cents tax when a gallon of gasoline is purchased. If one assumes that the average gasoline user pays 30 cents per gallon when he purchases a gallon of gasoline, the price consists of taxes to the extent of 36 1/2 percent. In other words, for every one dollar spent on gasoline, 36 1/2 cents is tax.

The application of a sales tax to gasoline sales does not set a precedent. The average consumer already pays a sales tax on many items that are already taxed. The federal government taxes liquor, the state government has a large

⁽continued from previous page) anything other than a regressive incidence pattern. It was previously indicated in Chapter I that the incidence values (teij) are dependent variables. Since the budgets are not subdivided into services and all other goods, the taxes from services were applied to the same budgets as the consumption taxes collected in the fiscal year ending June 30, 1965. Therefore, if the latter taxes have a regressive incidence pattern, then the proposed taxes on services can be expected to have a regressive pattern since they are distributed among the occupation/income cells on the basis of the same budgets.

mark-up which can be viewed as a tax (1.e., government is normally expected to provide services at cost, and not to make a profit), and then the consumer is confronted with the retail sales tax when he makes his purchase. Both cigarettes and beer are similarly confronted with taxation before the sales tax. There are other items that include various excise taxes imposed by the federal government, items which are subsequently sold in Iowa, and items that require the payment of the retail sales tax. Close scrutiny makes it apparent that the application of the sales tax to gasoline purchases is not a unique idea.

The inclusion of gasoline in the retail sales tax base provides a rather substantial increase in tax revenue relative to the services which have been noted previously. This tax would provide an additional \$6,539,310 in revenue. Compared to the revenues produced by the extension of the tax base to the various services discussed in Chapter II (B), this addition is substantial (i.e., \$13.4 million compared to \$6.5 million).

It was noted that 36.5 percent of the Iowa consumer's gasoline dollar is attributable to taxes. The inclusion of gasoline in the retail sales tax base would increase this figure to 38.5 percent. This would not appear to be a very

The value \$13.4 million includes selected services, legal services and medical services.

substantial increase in the price, while the revenue is rather substantial.

There is an additional point regarding the sales taxation of gasoline that is worthy of consideration: farm gasoline use versus other uses. At the present time Iowa farmers are refunded the seven cents a gallon on the gasoline used on their farms. However, they do pay the 2 percent retail sales tax in lieu of the seven cents per gallon tax. If the non-farm gasoline users were required to pay a 2 percent retail sales tax on their gasoline purchases, then it might be necessary to revise the current refund policy and that farmers be required to pay at least part of the seven cents tax.

Of course, farmers do not operate their farm equipment on the highways, and if gasoline taxes are for roads only, then the rebate to farmers appears to be logical. However, some would argue that today's farmer needs the modern roads that are mainly paid for by gasoline taxes and that the farm industry's gasoline tax payments could be increased.

Table 10 tabulates three statistics in each cell. The upper percentage in each cell gives the incidence of the retail sales tax on gasoline sales (no changes in refund policy are included). The second set of values includes the consumption taxes collected in the 1964-1965 fiscal year.

¹ Crockett (3, pp. 29-33) discusses gasoline exemptions and gasoline refunds for farmers in a much more detailed manner than has been the case in the preceding paragraphs.

Table 10. Tax incidence factors when gasoline is included in the retail sales tax base

Legend: 1. Incidence for sales tax collections on gasoline
2. Incidence for taxes collected in the 1964-1965
fiscal year plus the taxes proposed on selected
services plus the taxes proposed on gasoline sales

3. Incidence for taxes collected in the fiscal year ending June 30, 1965

	Income							
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999		0ver \$15,000	
Self employed	.21 14.82 13.55	.20 7.74 7.31	.16 6.80 6.44	.10 5.11 4.84	.10 4.75 4.49	4.33		
Salaried and professional	.10 6.69 6.37	6.45 6.16	•17 6•32 5•96	•12 5•12 4•85	•13 5•38 5•08	5.22	4.20	
Sales and clerical	.10 6.70 6.37	.08 5.09 4.85	•13 5•53 5•24	.10 5.08 4.83	.11 5.38 5.10	.14 5.58 5.27		
Skilled labor	.10 6.70 6.37	6.80 6.45	•16 6•54 6•20	.15 5.96 5.64	•13 5•42 5•13	.14 5.52 5.21		
Semi-skilled labor	.10 6.70 6.37	.10 5.76 5.51	.15 6.38 6.06	•14 5•73 5•43	•15 5•80 5•49	•13 5•04 4•76	.08 3.67 3.46	
Unskilled labor	.10 6.70 6.37	•12 5•56 5•28	•13 5•73 5•44	.13 5.69 5.40	•17 6.46 6.11	•17 5•79 5•45	.08 3.77 3.55	
Farmers and farm managers		•17 9•83 9•22	.14 7.32 6.88	.12 5.41 5.08	.10 4.46 4.19	.07 3.33 3.12	.06 2.48 2.32	
Other (i.e., Head not in civilian labor force)	.08 5.85 5.60	.08 4.72 4.47	.14 5.53 5.22	•13 5•44 5•16	.12 4.68 4.42	•10 4•50 4•24	.08 3.71 3.49	
Average for the state	•23 14•11 13•33	5.89 5.58	.14 6.20 5.87	•13 5•71 5•40	•13 5•49 5•19	•12 5•19 4•90	.08 3.68 3.46	

plus the estimated revenues from the taxation of selected services plus the estimated revenue from the sales taxation of gasoline sales. The third set gives the incidence of the taxes collected in the fiscal year ending June 30, 1965.

The incidence values for the category, "Average for the state", indicate that the additions to the tax base, which have been presented in Chapter II, have a slight tendency towards proportionality from \$1000 to \$5,000. Thereafter, the new taxes appear to be slightly regressive.

The level of revenues has been increased, while the regressivity has not been affected to any appreciable degree.

E. The Exemption of Food Consumed Off the Premises

The following paragraphs consider the exemption of offpremise food consumption, and the incidence patterns that would result for Iowa consumers.

One of the arguments advanced for a widened tax base was that it would facilitate administration at the retail level since it is easier for a retailer to collect the same tax on all items, than to tax some and not others. Thus, the exemption of food consumed off the premises would mean that food stores would tax some items but not all. Consequently, food stores would have to note certain items as taxable and others as non-taxable. Moreover, they would have to tabulate their receipts in a new manner to distinguish between the two kinds

of goods. Clearly, this would seem to require some change in their current accounting procedures.

A second problem relates to prepared foods. If food consumed off the premises is tax-exempt, two difficulties present themselves. An implicit assumption in this exemption is that persons who eat in restaurants and cafeterias are more able to pay the tax than those who eat at home or off the premises. This assumption probably has relevance in a rural society, but in one which is becoming increasingly urban, the assumption would seem to be somewhat tenuous since many persons are forced by their lot in the urban society to eat in restaurants.

A further difficulty relates to the particular kinds of off-premise food consumption items that should be exempt. For example, would one require a "Pizza Palace" to collect a sales tax if the pizza is eaten on the premises, but sell the pizza tax-exempt if delivered to a home for off-premise consumption? And how would drive-in restaurants be treated? The customers of drive-in restaurants are not required to consume their purchases on the premises. And if drive-in restaurants are required to collect a sales tax, then it becomes difficult to justify the exemption of prepared food that is delivered to the homes of its consumers.

The preceding problems have been of an administrative nature. There is a third problem: the exemption of food for off-premise consumption would reduce the tax base and Iowa's consumption tax revenues would decline.

From the consumer budgets it was possible to estimate the total expenditures on food, the total expenditures on food consumed at home, and the total expenditures on food consumed away from home. The estimates are as follows:

Total food \$940,389,160 Food consumed at home \$750,926,180 Food consumed away from home \$189,462,820

Thus, the consuming units spend about 80 percent of their total food expenditures for off-premise food consumption.

This implies that the tax revenues would decline to \$3,885,016 from \$19,425,080. Table 1 previously noted that the gross revenue from consumption taxes amounted to \$255,914,871. With this information as the starting point, Table 11 can be examined.

Table 1.1.4 Gross revenue when food consumed off the premises is exempt while the various services and gasoline are taxed

Gross tax revenue collected in the fiscal year ending June 30, 1965 \$255,914,871 Less food consumed at home 15,540,064 \$240,374,807 Revised total revenue Plus the proposed tax revenues from: Selected services 8,071,380 5,417,540 6,539,310 Medical and legal services Gasoline sales Revenue from services and gasoline \$ 20,028,230 Gross revenues after the additions and food exemption \$260,403.037 Table 11 summarizes all of tax changes and reveals that the consumption tax revenues have increased by \$5.03 million. If one would argue that medical services should be exempt. the increase in revenue would decline to \$572,870.

Table 12 tabulates the new incidence factors that result from an off-premise food exemption.

The upper incidence value in each cell of Table 12 reveals the regressivity of food consumed off the premises. Since the incidence pattern indicates regressivity, and since it is being removed from the consumption tax base, it can be concluded that the food exemption reduces regressivity.

F. Concluding Remarks

Chapter II has been devoted to the estimation of incidence values for an extended consumption tax base in Iowa.

Table 13 summarizes the results into three major sets of incidence values. The upper incidence value might be considered the upper incidence limit and the lower incidence value might be considered the lower limit. By exempting food consumed off-premises from the 1964-1965 fiscal revenues and by adding the proposed services and gasoline, a new set of incidence factors are obtained that lie between the two limits.

From a theoretical view, it would seem that the exemption of off-premise food would result in an incidence pattern that would lower the second incidence value close to the lower limit for the lower income groups. Then, as the level of

Table 12. The incidence of the consumption taxes collected in the fiscal year ending June 30, 1965 when food consumed off the premises is tax exempt

is tax exempt
Legend: 1. Incidence of food consumed off the premises

2. Incidence of total tax minus food consumed off the premises

3. Incidence for taxes collected in the fiscal year ending June 30, 1965

	Income								
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000	0ver \$15,000		
Self employed	1.04 12.51 13.55	•57 6•74 7•31	.48 5.95 6.44	•39 4•46 4•84	•31 4•17 4•49	•25 3•86 4•10	.11 2.39 2.50		
Salaried and professional	.90 5.48 6.37	.60 5.56 6.16	.40 5.56 5.96	•36 4•49 4•85	•32 4.76 5.08	•28 4•65 4•93	•17 3•77 3•94		
Sales and clerical	•90 5•48 6•37	.48 4.37 4.85	•38 4.86 5•24	•38 4•46 4•83	•34 4•77 5•10	.26 5.01 5.27	.16 3.39 3.55		
Skilled labor	.90 5.48 6.37	•53 5•92 6•45	5.75 6.20	•39 5•25 5•64	•33 4.80 5.13	•29 4•92 5•21	.28 3.95 4.23		
Semi-skilled labor	.90 5.48 6.37	•53 4•98 5•51	.45 5.61 6.06	.40 5.04 5.43	•33 5•16 5•49	•29 4•47 4•76	•15 3•31 3•46		
Unskilled labor	•90 5•48 6•37	•51 4•77 5•28	.45 4.99 5.44	5.00 5.40	•32 5•79 6•11	5.21 5.45	.16 3.39 3.55		
Farmers and farm managers		•59 8•63 9•22	•36 6•52 6•88	•30 4•78 5•08	.24 3.95 4.19	2.95 3.12	.13 2.19 2.32		
Other (i.e., Head not in civilian labor force)	•91 4.69 5.60	3.89 4.47	4.81 5.22	.36 4.80 5.16	•31 4•11 4•42	.27 3.98 4.24	3.34 3.49		
Average for the state	1.53 11.81 13.33	•55 5•04 5•58	5.44 5.87	5.02 5.40	•32 4.87 5.19	•27 4.63 4.90	.16 3.30 3.46		

Table 13. Changes in the incidence of the consumption taxes collected in the 1964-1965 fiscal year when all gasoline sales and the services are included in the tax base and food consumed off the premises is tax exempt.

Legend: 1. Incidence of the 1964-1965 fiscal year collections

plus all services plus gasoline

2. Incidence of the 1964-1965 fiscal year tax collections plus all services plus gasoline minus food consumed off the premises.

3. Incidence of the 1964-1965 fiscal year tax collec-

tions when food is taxed.

	0.10	ns when	1000 15	caxed.			
				Income			
4	Under	\$1000-	\$3000-	\$5000-	\$7000-		
Occupation	\$1000	2999	4999	6999	9999	14,999	\$15,000
Self employed	15.22	7.72	6.79	5.11	4.76	4.34	2.66
	14.18	7.35	6.48	4.83	4.55	4.18	2.60
	13.55	7.31	6.44	4.84	4.49	4.10	2.50
Salaried and	7.03	6.68	6.45	5.24	5.50	5.31	4.28
professional	6.13	6.08	6.05	4.89	5.18	5.04	4.11
	6.37	6.16	5.96	4.85	5.08	4.93	3.94
Sales and	7.05	5.24	5.65	5.20	5.48	5.66	3.84
clerical	6.16	4.76	5.27	4.83	5.15	5.40	3.68
	6.37	4.85	5.24	4.83	5.10	5.27	3.55
Skilled labor	7.04	6.96	6.68	6.08	5.53	5.62	4.63
	6.14	6.43	6.23	5.69	5.19	5.32	4.35
	6.37	6.45	6.20	5.64	5.13	5.21	4.23
Semi-skilled	7.04	5.92	6.48	5.84	5.89	5.12	3.73
labor	6.15	5.39	6.03	5.44	5.56	4.83	3.59
	6.37	5.51	6.06	5.43	5.49	4.76	3.46
Unskilled labor	7.04	5.71	5.86	5.79	6.56	5.86	3.83
	6.14	5.20	5.41	5.39	6.24	5.62	3.67
	6.37	5.28	5.44	5.40	6.11	5.45	3.55
Farmers and		10.12	7.52	5.54	4.57	3.42	2.53
farm managers		9.53	7.16	5.24	4.33	3.25	2.40
		9.22	6.88	5.08	4.19	3.12	2.32
Other (i.e., Head	6.23	4.96	5.69	5.56	4.84	4.62	3-77
not in civilian	5.32	4.37	5.28	5.20	4.54	4.35	3.62
labor force)	5.60	4.47	5.22	5.16	4.42	4.24	3.49
Average for	14.73	6.09	6.35	5.83	5.60	5.28	3.75
the state	13.21	5.54	5.92	5.45	5.28	5.01	3.59
	13.33	5.58	5.87	5.40	5.19	4.90	3.46

income is increased it would seem that the second would increase relatively and approach the upper limit for the higher income brackets.

IXI. ALTERNATE ESTIMATIONS OF TAX REVENUES AND TAX INCIDENCE PATTERNS

An Alternate Method of Tax Revenue Estimation Parts A & B were

Chapter II was devoted to tax estimation in respect to specific services that are not included in the retail sales tax base in the state of Iowa. It was observed that many retail outlets provide some services in addition to the sale of goods, but that it would be virtually impossible to estimate the value of the services provided by these outlets. Rather than leave the impression that some Oracle is required to obtain these estimates, it would seem appropriate to estimate the maximum consumption tax revenues that could be obtained if the two percent tax were extended to all services.

The immediate problem is to estimate the total consumption tax revenues from retail stores if all of their transactions were subject to the two percent retail sales tax. By using the 1963 statistics on retail trade (26) and projecting them to 1965, an estimate of the tax revenue from these services is obtained as a part of the total retail sales tax revenue from the gross retail sales in Iowa. Finally, if the value of the use tax is added to the estimated 1965 tax revenues, an immediate comparison can be made with the actual 1965 revenue when services were not included in the retail sales tax base. Table 14 summarizes the estimated Iowa consumption tax revenue for 1965.

Estimated tax revenue when all services are included in the retail sales tax base: 1965 Table 14.

	Tax revenue	
RETAIL TRADE Lumber, building materials, etc. General merchandise group stores Food stores Automotive dealers Gasoline service stations Apparel accessory stores Furniture, home furnishings, etc. Eating, drinking places Drug stores, proprietary stores Other retail stores Non-store retailers Total	\$10,551,210 7,896,070 17,009,200 14,553,300 7,006,260 3,655,480 3,121,960 4,830,710 2,457,650 11,495,410 1,394,890	
SELECTED SERVICES Hotels, motels, tourist courts Personal services Miscellaneous business services Auto repair, auto services, garages Miscellaneous repair services Motion pictures Amusement, recreation services	\$ 998,650 2,444,490 1,884,490 1,390,000 790,090 361,390 819,400	*
OTHER SERVICES Taxi services ^d Legal services ^e Medical services ^e Personal business services ^c Public warehousing ^f Total	\$ 188,010 962,180 4,455,360 685,270 175,020	
TOTAL ESTIMATED TAX REVENUE: 1965		\$99,163,810
To which can be added the Use Tax Col	lections	\$16,846,240
ESTIMATED MAXIMUM TAX REVENUE FROM TH ENLARGED TAX BASE: 1965 ACTUAL TAX REVENUE FROM THE RETAIL SA	E LES TAX	\$115,972,730
AND USE TAX: Year ending March 31,	1965	\$92,724,394

a(26, pp. 17-6, 17-7).
b(27, pp. 17-6, 17-7).
cAutomobile dealers are included under retail trade.
d(31, p. 16).
eSee Appendix F.
f(25, p. 9).

B. Varying the Income Measure Produces Alternate Incidence Patterns

Some discussion was previously directed towards the difficulty of estimating the tax incidence of services since the budgets do not separate consumer expenditures on services from consumer expenditures on all other goods. It was also noted that a further difficulty is associated with the use of an income measure for determining the tax incidence. These problems impose serious constraints on the validity of the numerical incidence values that have been presented up to this point. In each and every instance, these constraints tend to detract from realism; however, it would seem that the income problem is simpler to handle than that of the services problem.

One of the principal difficulties that arises when one considers an income measure is that there is <u>not</u> a single definition of income that applies to all occupational groups in the same way. The definition of income for wage and salary workers is <u>not</u> the same as the definition of income that applies to farmers and the self-employed. Hence, the choice of an income parameter is not to be treated summarily since it is a critical factor in an incidence study.

Milton Friedman (6, Chapter 2) suggests that a consumer does not base his level of expenditures on his income for a given income period. Friedman suggests that a consumer bases his expenditures on the level of accumulated wealth, past income, present income, and on the level of expected future

income. This would seem to partly explain the fact that many consumers in low income groups spend considerably more than their current incomes.

If the Friedman concept of "permanent income" is employed, then it would seem appropriate to use the budget item. "Expenditures for Current Consumption", as the best measure of income for a consumer.

Table 15 presents comparative tax incidence values for three different measures of income for the average Iowa consuming unit in the seven income groups used in this study. This table reveals that the tax incidence patterns were regressive when the before tax and after tax income measures were used; however, when the consumer expenditures were used, the incidence pattern appeared to be proportional.

Table 16 reveals that when the retail sales tax is imposed on selected services and "Expenditures for Current Consumption" are used as the best measure of income, the tax incidence pattern is not regressive, and indicates slight progressivity.

Table 17 summarizes the tax incidence values that are presented in Tables 15 and 16.

The various income measures have indicated some rather interesting results. Although it would seem to be more consistent with current tax incidence analysis to use either the before tax, or the after tax measures of income, nevertheless.

Table 15. Comparative tax incidence values for three different measures of income: selected 1964-1965 fiscal year tax collections only

V4 2,110	02101	00000 27					
	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000- 14,999	• Over \$15,000
Money income before taxes	7.40	3.30	2.84	2.51	2.31	2.15	1.43
Money income							
after taxes Expenditures	8.54	3.43	3.07	2.80	2.63	2.48	1.75
for current consumption	2.79	3.06	3.16	3.16	3.13	3.17	2.95

The tax incidence values are <u>not</u> based on all of the taxes previously discussed. These incidence values pertain to the retail sales tax, the use tax, the cigarette tax, the beer tax, and the liquor tax only.

Table 16. Comparative tax incidence values for three different measures of income: selected services only

	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000 14,999	0ver
Money income before taxes	•47	•19	.18	.16	.15	.14	.11
Money income after taxes	•54	•20	•19	.18	.17	•17	.14
Expenditures for current consumption	•18	•18	•20	•20	.21	.21	•23

Table 17. Comparative tax incidence values for three different income measures: selected 1964-1965 fiscal year tax collections plus selected services

	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000 14,999	- Over \$15,000
Money income							
before taxes	7.87	3.49	3.02	2.67	2.46	2.29	1.54
Money income			_				
after taxes	9.08	3.63	3.26	2.98	2.80	2.65	1.89
Expenditures					32 3 2 2		
for current							
consumption	2.97	3.24	3.36	3.36	3.34	3.38	3.18

it may be that consumption tax incidence analysis would produce more interesting and more meaningful results such as those in Table 17 when Friedman's hypothesis is assumed to hold and current consumption expenditures are used as a pseudo income measure.

IV. SUMMARY AND CONCLUSIONS

A. Summary

NO

The introductory part of Chapter I was devoted to an explanation of various concepts and definitions that were used in this study of consumption taxes in Iowa. The consumption taxes included in this study, and the distribution of these taxes among Iowa consumers was then explained. In the third section of Chapter I, the estimated incidence values for the consumption taxes collected in Iowa for the fiscal year ending June 30, 1965 were tabulated.

Chapter II was devoted to the estimation of the consumption tax revenues from a broad range of services that could be considered for inclusion in the retail sales tax base. Throughout Chapter II the tax incidence values of Chapter I were included for the purpose of comparison. This comparison indicated that the inclusion of services did not materially reduce the regressivity of the consumption taxes. In fact, the tax incidence values for services were approximately proportional to the tax incidence values obtained in Chapter I when services were not taxed.

Chapter III was devoted to a consideration of the estimated tax revenues for 1965 under an alternative estimating
procedure. In addition, this chapter indicated the variations that could be expected in the tax incidence patterns
when three different income measures were employed. The

before tax and after tax income measures generated regressive tax incidence patterns while the pseudo income measure, "Expenditures for Current Consumption", yielded a tax incidence pattern that approximated proportionality.

B. Conclusions

The results of this study indicated that the consumption taxes collected in Iowa in the fiscal year ending June 30, 1965 were regressive when after tax income was used as the income measure.

Operating on the hypothesis that higher income groups spend a proportionately larger part of their income on services than the lower income groups, the tax base was extended to a variety of services. If this hypothesis is correct, then it would be expected that when services are included in the consumption tax base, the enlarged tax base would alter the tax burden by reducing regressivity. The results failed to confirm this expectation. The results did confirm another expectation, namely, that the incidence pattern for the taxation of services would be generally proportional to the incidence of the consumption taxes discussed in Chapter I.

Off-premise food consumption was then exempted from the retail sales tax base. This exemption had several effects:

1) it narrowed the tax base; 2) it eroded the increased tax revenues resulting from the inclusion of services and gross

gasoline sales in the retail sales tax base; and 3) this exemption had relatively little influence on the regressivity of the consumption tax incidence pattern.

Since the addition of services and gasoline sales to the tax base did not reduce regressivity, the incidence patterns were evaluated using other measures of income than money income after taxes. The results revealed the importance of the income measure. If "Expenditures for Current Consumption" are used instead of money income before or after taxes, the incidence pattern tends to proportionality. From this result, it would seem that a conclusion of far ranging importance can be deduced, namely, that tax incidence can be greatly affected by the income measure.

If the conclusion in respect to the income measure is valid, then it would seem to be desirable to encourage the scholarly discussion of this topic in order to bring more attention to it and obtain a clearer and more definitive statement of the assumptions and implications associated with the income measure.

V. BIBLIOGRAPHY

- 1. American Hospital Association. Table 3. Hospitals No. 15, Part 2: 456-473. 1965.
- Buehler, Alfred D. General sales taxation: its history and development. Business Bourse, New York, New York. 1932.
- Crockett, Earl C. Colorado's tax structure. University of Colorado Press, Boulder, Colorado. 1950.
- 4. Des Moines, Iowa Bureau of Municipal Research. Estimated revenue from two percent tax on selected services:
 an unpublished set of estimates presented to the 61st
 Iowa General Assembly, Des Moines, Iowa, Jan. 1965.
 Multilithed. Author, Des Moines, Iowa. 1965.
- 5. Due, John F. Sales taxation. University of Illinois Press, Urbana, Illinois. 1957.
- 6. Friedman, Milton. A theory of the consumption function. Princeton University Press, Princeton, New Jersey. 1957.
- 7. Hanson, Reed R. An empirical analysis of the retail sales tax with policy recommendations. National Tax Journal 15: 1-13. 1962.
 - 8. Iowa. Code of Iowa 1962. Vol. 1, Section 422.42. 1962.
 - 9. Iowa. Iowa code annotated. Vol. 23, Section 422.43. 1940.
- 10. Iowa. Reports of cases at law in equity determined by the Supreme Court of the state of Iowa. Vol. 225. State of Iowa, Des Moines, Iowa. 1938.
- 11. Iowa General Assembly. State Revenue Advisory Committee. Report. Author, Des Moines, Iowa. 1963.
- 12. Iowa Legislative Research Bureau. Major sources of state revenue. Iowa Legislative Research Bureau Report 29. 1963.
- 13. Iowa State Tax Commission. Division of Research and Statistics. Retail sales and use tax. Quarterly Report for the Quarter ending June 30, 1964. July 31, 1964; September 30, 1964. October 31, 1964; December 31, 1965. January 31, 1965; and March 31, 1965. April 30, 1965.

- 14. Iowa State Treasurer. Collections of various taxes for fiscal year ended June 30, 1965. Multilithed. Treasurer of the State, Des Moines, Iowa. July 1965.
- 15. McCracken, Paul W., ed. Taxes and economic growth in Michigan. Edwards Bros., Ann Arbor, Michigan. 1960.
- 16. Miller, Donald C. Sales tax progressivity attributable to a food exemption. National Tax Journal 4: 148-159. 1951.
- 17. Morgan, Daniel C. Retail sales tax. University of Wisconsin Press, Madison, Wisconsin. 1964.
- 18. Morton, Walter A. A progressive consumption tax. National Tax Journal 4: 160-166. 1951.
 - 19. National Industrial Conference Board. General sales or turnover taxation. Author, New York, New York. 1929.
- 20. Oster, Clinton V. State retail sales taxation. Bureau of Business Research, College of Commerce and Business Administration, Ohio State University, Columbus, Ohio. 1957.
- 21. Patinkin, Don. Money, interest, and prices. Second edition. Harper and Row Publishers, New York, New York. 1965.
- 22. Seligman, E. R. A. Studies in public finance. The Macmillan Co., New York, New York. 1925.
- 23. Somers, Harold M. The sales tax. The Speaker of the Assembly, California Legislature, Sacramento, California. 1964.
- 24. U. S. Bureau of the Census. Census of population: 1960, detailed characteristics, Iowa. Final report PC (1)-17D. 1962.
- 25. U. S. Bureau of the Census. Census of business. Public warehousing: 1963. Report No. BC63-WS10. 1965.
- 26. U. S. Bureau of the Census. Census of business. Retail trade: Iowa, 1963. Report No. BC63-RA17. 1965.
- U. S. Bureau of the Census. Census of business. Selected services: Iowa, 1963. Report No. BC63-SA17. 1965.

- 28. U. S. Bureau of the Census. Census of business. Selected services: United States summary, 1963. Report No. BC63-SAL. 1965.
- 29. U. S. Department of Agriculture. Consumer expenditures and income: rural farm population, North Central Region, 1961. U.S.D.A. Consumer Expenditure Survey Report No. 2. 1965.
- 30. U. S. Department of Commerce. Office of Business Economics. Survey of Current Business 41, No. 5: 22-28. 1961.
- 31. U. S. Department of Commerce. Office of Business Economics. Survey of Current Business 44, No. 7: 16. 1964.
- 32. U. S. Department of Labor, Bureau of Labor Statistics. Consumer expenditures and income: urban places in the North Central Region, 1960-61. BLS Report No. 237-35. 1965.
- 33. U. S. Department of Labor and U. S. Department of Agriculture. Consumer expenditures and income: rural non-farm areas in the North Central Region, 1961. U. S. Department of Labor BLS Report No. 237-85. 1965.

VI. APPENDIX A - SAMPLE CONSUMER BUDGET

The following budget is the one used for the "Average for the state" in the income bracket, \$3000-4999:

Average money income before taxes Net change in assets and liabilities Increase in farm assets Increase in non-farm assets Money income after taxes Personal insurance Expenditures for current consumption Total food Food prepared at home Food away from home Tobacco Alcoholic beverages Beer Liquor Total housing Clothing, clothing materials and services Personal care Recreation Reading Education \$4337^a 40a 1936 1936 1936 1936 1937 1911 1911 1912 1912 1913 1913 1913 1913	Budget items	Budget expenditures
Transportation 624 Automobile 576 Other travel and transportation 48 Other expenditures 58	Net change in assets and liabilities Increase in farm assets Increase in non-farm assets Money income after taxes Personal insurance Expenditures for current consumption Total food Food prepared at home Food away from home Tobacco Alcoholic beverages Beer Liquor Total housing Clothing, clothing materials and services Personal care Medical care Recreation Reading Education Transportation Automobile Other travel and transportation	1936b 1936c 1938a 1991 3894 1896 1833 1798 1989 1989 1989 1989 1989 1989 1989

^aItems thus annotated did not have any tax revenues allocated to them.

bThe tax revenues paid by rural persons to purchase goods that could be called assets (e.g., farm buildings and farm equipment) were allocated to this budget item.

CAll consumers (rural included) were considered to have shared in the payment of taxes allocated to this budget item.

VII. APPENDIX B - THE ALLOCATION OF THE CONSUMPTION TAXES (COLLECTED IN THE FISCAL YEAR ENDING JUNE 30, 1965) TO SPECIFIC BUDGET ITEMS

Budget items (13, 14)	Gross taxes allocated
Increase in rural assets	\$ 9,210,478
Personal insurance	10,274,852
Expenditures for current consumption	43,290,585
Total food	19,425,080
Tobacco	15,208,979
Beer	5,239,695
Liquor	16,574,669
Total housing	19,389,547
Clothing, clothing materials and service	es 4,269,872
Personal care	186,982
Medical care	2,754,623
Recreation	2,851,210
Automobile	78,594,325
Other transportation	2,419,277
Other expenditures	326,551
Total	\$230,016,725

VIII. APPENDIX C - DISTRIBUTION OF ICWA'S CONSUMING UNITS THROUGHOUT THE OCCUPATION/INCOME TABLE

Table 18. Distribution of Iowa's consuming units throughout the occupation/income table (24, pp. 481-482, 488-490, 498-500)

				Income			in the same of the
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000-	Over \$15,000
Self employed	4,901	9,029	16,082	18,331	14,879	9,448	8,695
Salaried and professional	1,288	3,538	12,563	23,271	24,332	12,691	5,912
Sales and clerical	11,171	15,565	19,927	21,984	15,568	7,018	2,464
Skilled labor	2,968	8,868	23,348	30,577	22,084	6,923	1,137
Semi-skilled labor	6,641	19,364	32,234	33,878	20,612	6,387	1,346
Unskilled labor	5,544	13,072	19,790	14,000	7,530	2,300	284
Farmers and farm managers	23,874	45,183	39,079	19,483	11,469	6,245	2,674
Other (i.e., Head not in civilian labor force)	35,542	65,116	25,566	12,228	6,437	2,847	920
Column totals	91,929	179,735	188,589	173,752	122,911	53,859	23,432

IX. APPENDIX D - THE TAX INCIDENCE OF SELECTED BUDGET ITEMS CURRENTLY TAXED

The tables in this appendix contain numerical incidence values that are in percentage form. For example, a numerical value of .21 indicates that the incidence is about 1/5 of one percent.

Table 19. Incidence of Iowa's consumption taxes collected in the fiscal year ending June 30, 1965 on personal insurance (numerical values are in percentages)

				Income	à		
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000- 14,999	0ver \$15,000
Self employed	•14	•26	•26	•27	•31	.21	•19
Salaried and professional	•07	•14	•26	•29	.28	.28	.26
Sales and clerical	•07	•17	•26	•30	•26	•24	•24
Skilled labor	-07	•13	.21	-24	•25	•22	•16
Semi-skilled labor	•07	-15	•22	.24	•20	•23	.24
Unskilled labor	•07	•16	•23	.26	.27	.26	•24
Farmers and farm managers	***	•19	•17	•23	•22	.16	.12
Other (i.e., Head not in civilian labor force	•05	•06	.16	•22	•19	•22	•24
Average for the state	•31	•13	•21	•25	•26	•25	•23

Table 20. Incidence of Iowa's consumption taxes collected in the fiscal year ending June 30, 1965 on total food (numerical values are in percentages)

Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	Income \$5000- 6999	\$7000 - 9999	\$10,000- 14,999	Over \$15,000
Self employed	1.58	.80	.60	•49	.41	•33	.17
Salaried and professional	1.08	.70	•50	.43	.41	•37	•23
Sales and clerical	1.08	.61	•50	•46	•45	•36	•23
Skilled labor	1.08	•66	•53	.46	•40	•39	• 31.
Semi-skilled labor	1.08	.62	•54	•47	.42	•35	•22
Unskilled labor	1.08	.67	•55	.47	.46	• 34	•23
Farmers and farm managers		•66	.42	.36	•30	.21	.16
Other (i.e., Head not in civilian labor force)	1.05	.64	•50	-111	•37	•35	•22
Average for the state	1.81	.65	•52	•45	•40	•36	•23

Table 21. Incidence of Iowa's consumption taxes collected in the fiscal year ending June 30, 1965 on tobacco (numerical values are in percentages)

	Under	\$1000-	\$3000-	Income \$5000-		\$10,000	- Over
Occupation	\$1000	2999	4999	6999	9999	14,999	\$15,000
Self employed	1.05	.62	.48	.42	•27	.22	•15
Salaried and professional	.48	.67	•39	•29	•27	•23	•11
Sales and clerical	.48	•51	•39	•39	•35	•25	•15
Skilled labor	.48	•72	•52	.41	•37	•22	.14
Semi-skilled labor	.48	•72	.60	•43	•42	•31	.13
Unskilled labor	.48	•56	•51	.46	.40	•38	-15
Farmers and farm managers		•50	•36	•22	•24	•11	.08
Other (i.e., Head not in civilian labor force)	•41	•35	•31	•36	•26	•16	.14
Average for the state	.83	•50	•45	•38	•32	•24	.14

Table 22. Incidence of Iowa's consumption taxes collected in the fiscal year ending June 30, 1965 on beer (numerical values are in percentages)

				Income			
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000- 14,999	0ver \$15,000
Self employed	•78	.06	.18	•13	.10	.07	.02
Salaried and professional	.13	•24	•09	•11	•14	.08	.04
Sales and clerical	•13	•20	•15	.14	.19	.08	•03
Skilled labor	•13	•19	•22	•17	.16	.08	.04
Semi-skilled labor	•13	•22	-21	.16	-17	•05	•03
Unskilled labor	•13	.11	•15	.14	.16	.05	.03
Farmers and farm managers	-	.10	•08	.07	.04	.02	.01
Other (i.e., Head not in civilian labor force)	•11	.12	.12	-16	.08	•05	•03
Average for the state	•20	.16	•15	•13	.14	•07	.03

Table 23. Incidence of Iowa's consumption taxes collected in the fiscal year ending June 30, 1965 on liquor (numerical values are in percentages)

				Income			
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000	0ver \$15,000
Self employed	•37	•09	•38	•35	•29	•55	•31.
Salaried and professional	.06	•39	•19	•29	•38	.61	•52
Sales and clerical	•06	•33	•31	•38	•54	.60	•49
Skilled labor	•06	•32	.46	.46	.46	.61	•56
Semi-skilled labor	•06	•37	-1414	•1414	•49	.40	.48
Unskilled labor	•06	•17	•32	•37	•45	.36	.49
Farmers and farm managers		.14	.16	.19	.13	.11	.11
Other (i.e., Head not in civilian labor force)	•05	•20	.24	•43	.21	•39	•48
Average for the state	.14	.19	•31	•35	.38	•56	•43

Table 24. Incidence of Iowa's consumption taxes collected in the fiscal year ending June 30, 1965 on total housing (numerical values are in percentages)

				Income			
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000 - 14,999	
Self employed	1.85	.76	•57	-47	.44	•36	•24
Salaried and professional	1.28	.64	•55	•50	.45	•39	•30
Sales and clerical	1.28	.64	.49	•47	•40	•36	.28
Skilled labor	1.28	.66	.48	•14	•38	•33	•22
Semi-skilled labor	1.28	.67	•49	•43	•36	•33	.28
Unskilled labor	1.28	•57	•47	•49	.41	•35	•28
Farmers and farm managers	00.00	•58	•38	•33	•28	•23	.16
Other (i.e., Head not in civilian labor force)	1.21	•70	•51	•1424	•40	•46	.28
Average for the state	1.94	.65	•49	•45	•39	•36	.27

Table 25. Incidence of Iowa's consumption taxes collected in the fiscal year ending June 30, 1965 on medical care (numerical values are in percentages)

1 4 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1				Income			
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999	\$10,000- 14,999	0ver \$15,000
Self employed	•20	•09	•08	•05	.05	•05	.02
Salaried and professional	•19	.13	.07	.06	.06	.05	•05
Sales and clerical	•19	.08	•06	.06	.05	.04	•04
Skilled labor	.19	.09	•08	.06	.06	•05	•06
Semi-skilled labor	•19	•09	•05	•06	•04	.04	•03
Unskilled labor	•19	.08	•07	•05	•06	.04	•04
Farmers and farm managers		•12	.08	•06	•05	•05	•02
Other (i.e., Head not in civilian labor force)	•20	•11	.08	•06	•09	•07	.04
Average for the state	•32	.10	.07	•06	•06	•05	.04

Table 26. Incidence of Iowa's consumption taxes collected in the fiscal year ending June 30, 1965 on automobiles (numerical values are in percentages)

				Income			
Occupation	Under \$1000	\$1000 - 2999	\$3000 - 4999	\$5000 - 6999	\$7000 - 9999		0ver \$15,000
Self employed	1.90	2.84	2.37	1.40	1.47	1.20	.67
Salaried and professional	.83	1.58	2.53	1.70	1.88	1.78	1.48
Sales and clerical	.83	.83	1.81	1.43	1.59	2.16	1.17
Skilled labor	.83	1.81	2.40	2.18	1.92	2.08	1.84
Semi-skilled labor	.83	1.18	2.22	2.01	2.19	1.88	1.17
Unskilled labor	.83	1.54	1.87	1.89	2.62	2.59	1.17
Farmers and farm managers		2.36	2.11	1.72	1.40	1.06	•97
Other (i.e., Head not in civilian labor force)	•57	•92	2.04	1.86	1.71	1.49	1.17
Average for the state	2.67	1.38	2.09	1.89	1.87	1.77	1.17

X. APPENDIX E - A DESCRIPTION OF THE SERVICES THAT ARE PROPOSED AS AN EXTENSION OF THE RETAIL SALES TAX BASE

The following appendix is outlined in a standard format.

There is no description of the kinds of services that are included.

All of the statistical estimates in this appendix are based on information for 1963. In order to make the estimates for services consistent with the consumption taxes collected in the 1964-1965 fiscal year, the estimates for each service were adjusted upwards by a factor of eight percent (31, p. 16).

In some cases the two percent retail sales tax is applied directly to the gross receipts of the service, and in other cases this is not done. In those instances where the two percent tax is not applied directly there is an accompanying explanation.

For several services, the Census of Business failed to report any statistics for Iowa in order to avoid disclosure; however, these statistics were either available for the United States or for the North Central Region and the gross receipts for Iowa were estimated from the larger economic regions.

In addition, several services are included in this appendix that are not available from the report on <u>Selected Services</u> (27, 28). The gross receipts of taxi services and

personal business services were estimated from The Survey of Current Business, July 1964 (31, pp. 13-14, 16).

With this brief introduction completed, the list of services follows:

A. HOTELS AND MOTELS (27. p. 17-6)
(Now taxed following the 61st Iowa General Assembly in 1965)

Receipts in 1965	\$47,571,840
Number of establishments	947-
Sales tax revenue	951,4401

B. PERSONAL SERVICES (27, p. 17-6)

Various Laundries Receipts in 1965 Number of establishments Sales tax revenue	\$44,406,360 1,157 888,130
Beauty Shops Receipts in 1965 Number of establishments Sales tax revenue	\$24,285,960 2,760 485,720
Barber Shops Receipts in 1965 Number of establishments Sales tax revenue	\$14,531,400 2,760 290,630
Shoe Repair, Shoeshine, Hat Cleaning Shops Receipts in 1965 Number of establishments Sales tax revenue	\$2,842,560 303 28,430 ²

The sales tax revenue was not all assigned to Iowans since much of the revenue would be expected to be paid by non-Iowans. The author of this study was able to obtain untabulated survey data from an Iowa State University survey on the occupancy of hotels and motels. The data, when tabulated, revealed that Iowans pay approximately one-half of the total hotel and motel bills in the state.

²It was assumed that fifty percent of the gross receipts from this category are already subject to the sales tax; hence, a value of \$28,430 was used.

	Funeral Services and Crematories	
	Sales tax revenue	\$227,000 ¹
	Pressing, Alterations, Garment Repair, Fur Repair, Storage	
		\$1,705,320 252 34,110
	Turkish Baths, Massage, Reducing Salons Receipts in 1965 Number of establishments Sales tax revenue	\$357,480 35 7,150
	Rug, Furniture Cleaning on Location Receipts in 1965 Number of establishments Sales tax revenue	\$294,840 32 5,900
	Other Miscellaneous Personal Services Receipts in 1965 Number of establishments Sales tax revenue	\$965,520 110 19,310 ²
C.	MISCELLANEOUS BUSINESS SERVICES (27, pp. 17-6,	17-7)
	Window Cleaning Receipts in 1965 Number of establishments Sales tax revenue	\$490,320 27 9,810

Part of this item is already subject to the sales tax: "caskets, vaults and other tangible personalty" (9, p. 203). For the purposes of this study it has been assumed that the tax revenues for this item would have been doubled if the entire funeral and burial services had been also included in the tax base. Thus, the tax revenues were \$227,000, and it has been assumed that they would have increased by \$227,000 to \$554,000.

²This category includes other personal services such as checkroom concessions; porter service; social escort service; scalp treatment; establishments; personal, marriage, shopping consultants; etc.

Pest Control and Exterminating Devices Receipts in 1965 Number of establishments Sales tax revenue	\$1,127,520 43 22,550
Private Employment Agencies Receipts in 1965 Number of establishments Sales tax revenue	\$831,600 21 16,630
Receipts in 1965 Number of establishments Sales tax revenue	\$270,000 8 5,400
Testing Laboratories Receipts in 1965 Number of establishments Sales tax revenue	\$2,209,680 24 44,190
Business, Management Consulting Service Receipts in 1965 Number of establishments Sales tax revenue	<u>s</u> \$7,615,080 167 152,300
Public Relations Services Receipts in 1965 Number of establishments Sales tax revenue	\$798,120 20 15,960
Detective Agencies, Protective Services Receipts in 1965 Number of establishments Sales tax revenue	\$615,600 17 12,310
Armored Car Services (28, pp. 1-38) Receipts in 1965 Number of establishments Sales tax revenue	\$489,240 N.A. 9,780
Equipment Rental Receipts in 1965 Number of establishments Sales tax revenue	\$5,522,040 83 110,440
Water Softening Services (28, pp. 17-6, Receipts in 1965 Number of establishments Sales tax revenue	17-7) \$2,023,920 N.A. 40,480

¹ This information was not available.

Coin-Operated Machine Rental,	2
Repair Service Receipts in 1965 Number of establishments Sales tax revenue	\$198,720 4 3,970
Interior Designing Receipts in 1965 Number of establishments Sales tax revenue	\$285,120 29 5,700
Sign Painting Shops Receipts in 1965 Number of establishments Sales tax revenue	\$908,280 82 18,170
Auctioneers' Establishments Receipts in 1965 Number of establishments Sales tax revenue	\$1,081,080 135 21,620
Telephone Answering Service Receipts in 1965 Number of establishments Sales tax revenue	\$374.760 15 7.500
D. AUTO REPAIR, AUTO SERVICES, GARAGES	(27, pp. 17-6, 17-7)
Auto Repair Shops Receipts in 1965 Number of establishments Sales tax revenue	\$59.562,000 2,483 595,6201
Auto Dealers Receipts in 1965 Number of establishments Sales tax revenue	\$620,342,280 ² 940 1,488,820

It was estimated that approximately fifty percent of each repair bill comprises parts that are already taxed; hence, it was concluded that one-half of the total receipts were services and that only this part could be used to increase tax revenue.

²From the outset it was obvious that at least part of the receipts from auto dealers could be attributable to repair services. By using consumer expenditure information from The Survey of Current Business (31, p. 16), it was determined that about twenty-five percent of auto (continued on next page)

	Auto Parking Total receipts in 1965 Number of establishments Sales tax revenue	\$2,306,880 94 46,140
	Auto Services, except Repair Total receipts in 1965 Number of establishments Sales tax revenue	\$2,021,760 40 20,2201
E.	MISCELLANEOUS REPAIR SERVICES (27, pp. 17-7)	
	Electrical Repair Shops Total receipts in 1965 Number of establishments Sales tax revenue	\$16,237,800 1,226 324,760
	Watch, Clock, Jewelry Repair Total receipts in 1965 Number of establishments Sales tax revenue	\$722.520 90 14,450
	Reupholstery, Furniture Repair Total receipts in 1965 Number of establishments Sales tax revenue	\$3,386,880 252 67,740
	Miscellaneous Repair Shops, Related Services Total receipts in 1965 Number of establishments Sales tax revenue	\$19,157,040 1,390 383,140
F.	AMUSEMENT, RECREATION SERVICES, EXCEPT MOTION PICTURES (28, pp. 1-33)	
	Children's Dance Schools Total receipts in 1965 Number of establishments Sales tax revenue	\$541.650 N.A. 2 10,830

(continued from previous page) expenditures were repairs. Therefore, it was concluded that about twelve percent -- i.e., one-half of twenty-five percent -- of the total receipts of auto dealers could be considered to be repair services.

¹Again, it was assumed that fifty percent of the bill was already taxed.

²This information was not available.

		Other Dance Schools (28, pp. 1-38) Total receipts in 1965 Number of establishments Sales tax revenue	\$786,880 N.A. 1 15,740
		Golf Clubs, Country Clubs Total receipts in 1965 Number of establishments Sales tax revenue	\$1,264,680 38 12,650 ²
		Other Commercial Recreation Total receipts in 1965 Number of establishments Sales tax revenue	\$1,601,640 142 32,0303
		Total receipts in 1965 Number of establishments Sales tax revenue	\$2,461,320 71 49,230
		Coin-Operated Amusement Devices Total receipts in 1965 Number of establishments Sales tax revenue	\$4,384,800 84 87,700
G.	OTHER	SOURCES OF CONSUMER SERVICES	
	*	Farm Equipment Dealers (26, pp. 1-39) Total receipts in 1965 Number of establishments Sales tax revenue	\$238,887,360 1,100 573,3304

¹This information was not available.

²Golf Clubs and Country Clubs are already required to collect sales tax on some items. It was assumed that one-half of their receipts are already taxable; hence, fifty percent of the added revenue would be taxable. At the present time, those persons playing golf at public golf courses pay tax on green fees, but persons playing golf at private clubs are not required to pay tax on their membership fees.

³⁰ther Commercial Recreation includes boat and canoe rentals, golf professionals, swimming or ski instructors, ice skating schools, bicycle rentals, domino parlors, boat rental with operator, powerboat rides, pony tracks, wired music, etc.

⁴Farm equipment dealers were treated the same as auto dealers. It was assumed that twelve percent of their gross receipts were attributable to repair services, and only this part was taxed at the two percent rate.

Public Warehousing (25, p. 9) Total receipts in 1965 Number of establishments Sales tax revenue	\$2,203,520 ¹ N.A. 2 44,070 ¹
Taxi Services (31, p. 16) Total receipts in 1965 Number of establishments Sales tax revenue	\$9,400,410 N.A. 2 188,010
H. PERSONAL BUSINESS SERVICES (31, p. 16)	
Brokerage Charges and Interest and Investment Counseling Total receipts in 1965 Number of establishments Sales tax revenue	\$19,130,040 N.A. 2 382,600
Bank Service Charges Total receipts in 1965 Number of establishments Sales tax revenue	\$15,133,500 N.A. 2 302,670

¹ Food lockers, which are included in public warehousing, but which are already subject to the retail sales tax are not included.

²This information was not available.

XI. APPENDIX F - THE METHOD OF ESTIMATING THE RETAIL SALES TAX REVENUE FROM MEDICAL AND LEGAL SERVICES

A. Medical Services

The following table outlines the components that have been considered as extensions of the consumption tax base for this study. The first four items are services while the last is not a service; however, optical goods stores have been included since they are not currently included in the retail sales tax base.

Table 27. Estimated tax revenue from medical services and optical goods stores

Taxable goods or service	Estimated receipts for 1965	Tax revenue
Hospitals ^a Voluntary non-profit Proprietary Physicians and surgeons ^b Dentists ^b Optical goods stores ^c Total revenue	\$81,074,000 854,000 81,815,580 33,277,860 9,984,500	\$1,751,200 18,450 1,767,210 718,800 199,690 \$4,455,360

a(1, pp. 464-465).

^b(31, p. 16).

c(26, p. 17-6).

B. Legal Services

An estimate of the total value of legal services for the state of Iowa was obtained by adjusting a 1963 statistic for the United States (31, p. 16).

It was estimated that Iowa income represented 0.01386 of total U.S. income, and that Iowa income has increased by a factor of 1.08 since 1963. The total value of expenditures on legal services for the United States in 1963 was \$3,314 million.

The total value of legal services in Iowa for 1965 is computed as follows:

(1.08)(0.01386)(\$3,214,000,000) = \$48,109,000.

Multiplying the estimated value of legal services by two percent we find that the estimated tax revenue for 1965 is \$962,180. Moreover, the Office of Business Economics of the Department of Commerce estimated that approximately 69 percent of gross legal services was consumed by the private, non-business sector of the economy. It was assumed that the private demand for legal services is correlated with wealth; hence, the 69 percent of the estimated tax revenue from legal services was assigned to the budget item, "Increase in Assets".

It was then assumed that the remaining 31 percent of legal services was consumed by Iowa businesses and was shifted on to consumers. This part of the estimated tax revenues from legal services was assigned to the budget item, "Expenditures for Current Consumption".