The veterans' property tax exemption in Iowa

Gene William Gruver
Iowa State University

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THE VETERANS' PROPERTY TAX EXEMPTION IN IOWA

by

Gene William Gruver

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
MASTERS OF SCIENCE

Major Subject: Economics

Approved:

Signatures have been redacted for privacy

Iowa State University
Of Science and Technology
Ames, Iowa

1967
# TABLE OF CONTENTS

## I. INTRODUCTION

- Why Grant a Military Tax Exemption? .................................................. 2
- Economic Effects of the Exemption ..................................................... 5
- Iowa Tax Laws Concerning the Veterans' Exemption ......................... 6
- Iowa Tax Laws Concerning Military Service Tax Credits and Rebates ........ 8
- Exemption Laws in Other States ...................................................... 9

## II. IMPACT OF THE EXEMPTION

- Distribution of the Exemption Among Group Characteristics ................. 16
  1. Income classes ............................................................................. 17
  2. Net asset classes ...................................................................... 19
  3. Occupation classes ................................................................. 22
  4. Family classes .......................................................................... 24
- Distribution of Taxpayers and Claimants by Property Type .................. 27
- Estimating Tax Loss .................................................................. 35
- Impact of the Exemption Over Time 
  1. Relation of the exemption and the valuation .................................. 39
  2. Relation of the tax loss and rebate ........................................... 41
  3. Relation of net tax loss and taxes levied ..................................... 44

## III. ALTERNATIVE PLANS

- Means Tests .............................................................................. 49
  1. Means test on income .................................................................. 51
  2. Means test on net assets ............................................................. 52
- Maximum Aggregate Tax Savings ................................................... 53
- Specific Time Period .................................................................. 58
- Tax Credit Plan .......................................................................... 59
- Abolishing the Exemption .......................................................... 62

## IV. REBATING FORMULAS

- Alternative Rebating Methods ....................................................... 70
- The Effects of Changes in the Independent Variables upon the Ratio of Net Tax Loss to Net Taxes Levied ... 75
  1. Effects of changes in a county's millage ..................................... 76
  2. Effects of changes in a county's exemption .................................. 78
  3. Effects of changes in a county's valuation ................................... 80
- Rebating Formula for Tax Credit..................................................... 82

## V. SUMMARY AND CONCLUSION ..................................................... 84
TABLE OF CONTENTS
(Continued)

VI. BIBLIOGRAPHY .................................................. 88
VII. ACKNOWLEDGMENTS .............................................. 92
VIII. APPENDIX A .................................................... 93
   A. State Laws Concerning Veterans' Property Tax Benefits .... 93
IX. APPENDIX B ...................................................... 107
   A. Taxation Survey ............................................... 107
      1. How the sample was drawn .............................. 107
      2. Property types ........................................... 108
      3. Courthouse procedure .................................. 109
      4. Sampling rates .......................................... 110
      5. Who the sample includes ............................... 111
      6. Collection of information .............................. 112
      7. Estimation of totals .................................... 114
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Distribution of the Iowa veterans' exemption by income classes</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>Distribution of the Iowa veterans' exemption by net asset classes</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Distribution of the Iowa veterans' exemption by occupation classes</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>Distribution of the Iowa veterans' exemption by family classes</td>
<td>25</td>
</tr>
<tr>
<td>5</td>
<td>Distribution of the exemption by property type</td>
<td>29</td>
</tr>
<tr>
<td>6</td>
<td>Mean valuation and exemption on real and personal property type</td>
<td>31</td>
</tr>
<tr>
<td>7</td>
<td>Claimants applying exemption to property taxed at highest millage</td>
<td>33</td>
</tr>
<tr>
<td>8</td>
<td>Claimants applying exemption so to receive largest tax savings</td>
<td>33</td>
</tr>
<tr>
<td>9</td>
<td>Estimates of tax loss due to veterans' exemption</td>
<td>36</td>
</tr>
<tr>
<td>10</td>
<td>Relation of rural-urban exemption and valuation between 1954 and 1965 in Iowa</td>
<td>40</td>
</tr>
<tr>
<td>11</td>
<td>Relation of rural-urban tax loss and rebate between 1954 and 1965 in Iowa</td>
<td>42</td>
</tr>
<tr>
<td>12</td>
<td>Relation of rural-urban net tax loss and net taxes levied between 1954 and 1965 in Iowa</td>
<td>45</td>
</tr>
<tr>
<td>13</td>
<td>Effect of an income test on the veterans' exemption in Iowa</td>
<td>51</td>
</tr>
<tr>
<td>14</td>
<td>Effect of a net asset test on the veterans' exemption in Iowa</td>
<td>52</td>
</tr>
<tr>
<td>15</td>
<td>Distribution of the 1964 rebate under first and second rebating methods</td>
<td>74</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of veterans' exemption claims in Iowa between 1954 and 1965</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Cumulative tax savings of veterans</td>
<td>56</td>
</tr>
<tr>
<td>3</td>
<td>County composition of strata</td>
<td>108</td>
</tr>
</tbody>
</table>
I. INTRODUCTION

This thesis deals with the veterans' property tax exemption. The objectives of the thesis are to 1) discuss the rationale for granting such an exemption, 2) summarize state laws concerning the subject, 3) analyze the impact which the current exemption and rebating laws have in Iowa, and 4) analyze what effect certain changes in the exemption and rebating laws would have in Iowa.

There will be no section devoted to a review of the literature because only three articles concerning the specific subject of veterans' exemptions could be located. Each of these will be mentioned in subsequent parts of the text and references for them are included in Chapter VI (Bibliography).

The veterans' property tax exemption has a long history in Iowa as it has in several other states granting the exemption. As early as 1886 a law was enacted in Iowa which exempted the homestead of widows of federal soldiers and sailors (12). In 1902 the Iowa General Assembly passed a law exempting the property of those who were Union soldiers, or sailors of the Mexican War or the War of the Rebellion\(^1\) and of the unremarried widows of such veterans (13). It is likely that the major objective of this law was the same as that of a similar law passed in California nine years later. The California Committee on Review and Taxation states, "The veterans' exemption from the property tax became a part of the California Constitution in 1911 by a vote of the people....

\(^1\)Also known as the Civil War.
The original purpose of this exemption was to bring new citizens to the sparsely settled West" (2, p. 64). At the present level of economic development the attraction of new citizens to the state is an objective with much lower priority than it was when jobs were readily available for each new citizen. While the original objective for the law is of little importance now, the law remains in much the same form as when it was enacted 70 years ago.

It is of interest to question the present objective of the exemption. Possibly it should be discontinued or at least changed in its form of application.

A. Why Grant a Military Tax Exemption?

It is not easy to see obvious economic reasons for granting a property tax exemption to individuals who have served in the armed forces during a time of national conflict. The point might be made that many of those who have been obligated to serve in the armed services often have taken an economic loss. Some individuals suffer disabilities which cause a decline in their earning ability. The income of an individual in the armed services is often less than either the income of the individual in his civilian occupation or of other equally well trained individuals who remain civilians. This economic loss occurs, however, not only to those serving in time of national conflict but also to those who serve during peace time. It seems that if economic loss is the rationale for granting military property tax exemptions then all who suffer the loss during time of conflict or peace should be included.
There are certain programs of the federal government which provide benefits such as medical services, education, insurance, and loans for people who have served in the military service. Since, for the most part, the military service is a function of the federal government, it would seem that any compensation for economic loss while in the military service should come from the federal government. There is no reason to believe that a service man's economic loss varies directly with his state of residence and therefore it would seem that neither should any compensation which he receives for that loss. When states attempt to supply this compensation through a property tax exemption the variance in compensation becomes considerable among states.

While an economic loss does occur to some service men and some compensation can be justified, at least three major criticisms have been made of the present method of granting the property tax exemption. First of all, economic loss may occur to some military personnel serving during peacetime while the exemption is granted only to those serving during time of conflict. Second, there is no reason to believe that tax savings as a result of the property exemption is related very closely to the economic loss. In fact the veteran receives no benefit at all from the law unless he owns taxable property. Third, the granting of compensation for economic loss while one is in the service seems to be a federal governmental function rather than a state one.

It is not necessary that the rationale for granting a veterans' exemption be economic in nature. One might justify the exemption as a reward for service and for the risk to life and health involved in wartime. The policy of granting the exemption only to those who serve
during times of national conflict is consistent with such a rationale since there is usually much more risk involved at such a time. Under the present Iowa eligibility requirements for the exemption even this approach cannot be completely defended as has been pointed out by the California committee (2, pp. 66-67).

Since eligibility for the exemption only involves service during a war or military action, between the dates specified..., many men who never left the continental United States and others who served their wartime duty in military headquarters in large European cities are entitled to it. Some of these men lived in more comfort during their service days than they could have found at home...yet they may claim the same privileges as those who risked their lives in combat.

If the rationale for granting the exemption is to supply a reward it would seem that for at least a "first approximation" the reward should be equal to all. Any deviation from an equal reward should only result from different amounts of service rendered or of risk encountered.

The state of Wyoming has revised its veterans' exemption law such that it is characterized as a reward or bonus. In his article on the Wyoming exemption Bennion (1, p. 377) states, "The exemption was declared to be a bonus for military service and a ceiling of $800 total tax benefit over a lifetime was placed on the exemption".

Under the present Iowa laws concerning property tax exemption the value of property exempted for each veteran of a given war is equal. However, the amount of tax savings, which is the actual reward, varies widely depending upon the millage at which the exempted property would have been taxed. The higher the millage the greater the tax savings to the individual involved. There is, of course, no reason to believe that there is any relation between the millage at which an individual's
property is taxed and the amount of service he rendered or the amount of risk he encountered while serving in the military.

Thus while the rationale of considering the exemption as a reward for service is consistent with granting the exemption only to those who have served in times of conflict, it is not consistent with the fact that the amount of the reward varies according to the taxing district in which an individual's property happens to be.

From the preceding observations it would seem that the military service property tax exemption in its present form is difficult to justify on either economic or social-political grounds. In Chapter III we will suggest other forms the military exemption might take and examine the consistency of each with the economic and social-political rationales outlined above.

B. Economic Effects of the Exemption

The most obvious and direct effect of the veterans' tax exemption is that it leaves a smaller tax base than would exist otherwise. The smaller tax base results in either a smaller amount of collected taxes or a rise in the tax rate on nonexempt property or both. As will be pointed out later not only those without an exemption, but people who have an exemption may pay higher taxes on nonexempt property as a result of the exemptions granted.

It will be pointed out in a subsequent section that for property having a given market value a decrease in the ratio of assessed value to market value will increase the proportion of that property which is
exempt. Thus any pressure that those receiving the veterans' exemption might be able to assert on the assessment ratio would be for a lower ratio. For the same reason any tendency toward an increased ratio would make the exemption less important in the sense that it would comprise a smaller proportion of total valuation.

The veterans’ exemption may make it possible for some people to own property which they could not afford without the exemption. This would seem desirable if the exemption allowed the veteran to own his place of residence; however, the situation may not be desirable when it involves productive property such as agricultural and mercantile property. If the exemption is large enough it may allow inefficient marginal producers to continue producing while they would otherwise be forced to sell to more efficient producers.

Another important economic aspect of the exemption involves the fact that someone must pay for the tax loss due to the exemption. They must pay either in the sense that they pay more taxes or they receive a lower level of public service. Since property taxes are paid almost exclusively to local governments, the local governments and their services are affected.

G. Iowa Tax Laws Concerning the Veterans' Exemption

Iowa state tax laws grant property tax exemptions to veterans who have served in the armed forces during certain periods of conflict. The Iowa Code (11) reads as follows:
The following exemptions from taxation shall be allowed:

1. The property, not to exceed three thousand dollars in taxable value, and poll tax of any honorably discharged union soldier, sailor, or marine of the Mexican war or the war of the rebellion.

2. The property, not to exceed eighteen hundred dollars in taxable value, and poll tax of any honorably discharged soldier, sailor, marine or nurse of the war with Spain, Tyler Rangers, Colorado volunteers in the war of the rebellion, 1861 to 1865, Indian wars, Chinese relief expedition or the Philippine insurrection.

3. The property, not to exceed seven hundred fifty dollars in taxable value of any honorably discharged soldier, sailor, marine, or nurse of the first World War.

4. The property, not to exceed five hundred dollars in taxable value of any honorably separated, retired, furloughed to a reserve, placed on inactive status, or discharged soldier, sailor, marine, or nurse of the second World War, army of occupation in Germany November 12, 1918 to July 11, 1923, American expeditionary forces in Siberia November 12, 1918 to April 30, 1920, second Nicaraguan campaign with the navy or marines in Nicaragua or on combatant ships 1926-1933, second Haitian suppressions of insurrections 1919-1920, navy and marine operations in China 1937-1939 and Yangtze service with navy and marines in Shanghai or in the Yangtze Valley 1926-1927 and 1930-1932 or of the Korean Conflict at any time between June 27, 1950 and July 27, 1953, both dates inclusive.

In 1967 the Iowa legislature enacted a law providing a tax exemption on property not exceeding $500 of taxable value for veterans of the Vietnam Conflict who have been in the service between August 5, 1964, and some future date when the U.S. government orders the hostilities to cease (17). The exemption for Vietnam Conflict veterans was not in existence during the years our data covers, but its presence now indicates that military exemptions for property will probably become larger rather than smaller in the next few years. The larger these exemptions become the more important it becomes to study their
effects and distribution.

While the exemption of property up to $3,000 or $1,800 of taxable value seems quite large when compared to the exemption of property up to $750 or $500 taxable value, so few people remain to claim the larger exemptions that they have relatively little significance. For the year 1964 less than .36% of the military exemption claims in the state were for these larger exemptions. Approximately 20% of the total claims were for the WWI exemption of property up to $750 of taxable value. This leaves the largest number of claims, nearly 80%, which were for exemptions of up to $500 of taxable value (39).

If a veteran who is eligible for an exemption does not claim it, it may be claimed by his wife, his widow if not remarried, his widowed mother if she depended upon him for support, or his minor children who own property as tenants in common (11).

The exemptions apply to all real and personal property. The exemptions also apply to personal property held in partnership up to the veteran's share actually held (11).

D. Iowa Tax Laws Concerning Military Service Tax Credits and Rebates

Provisions are made in Iowa laws to pay to the counties an amount of money which partially compensates for the amount of tax loss due to veterans' tax exemptions. The law establishes a military service tax credit fund which is apportioned annually to replace all or a portion of the tax on property eligible for military service tax exemption in the state. The amount of the credit is limited to not more than 25 mills
upon the exempted valuation (10).

The military service tax credit fund was established by an initial appropriation of $800,000 (10). Five percent of the gross sales of the Iowa state liquor stores is designated for the purpose of replenishing the fund (9). The amount of money in the fund has been smaller than the total credit each year. The money in the fund is then prorated to the counties in proportion to their credit.

E. Exemption Laws in Other States

In order to determine how common the practice of granting a veterans' exemption is among states, a letter was sent to the property tax division of each state. Information was received from 44 of the 50 states. Of those 44 which responded 26 granted some type of veterans' exemption or benefit on property tax. Appendix A shows a listing of those states which responded and which grant an exemption. The basic characteristics of the exemption law in each state is outlined there.

Among the 44 responding states there seems to be little change in their laws since 1957 when a more comprehensive study of these laws was made by Spears (62). The only significant change seems to be that, in at least seven of those states where the veterans of the Vietnam Conflict were not automatically included by the wording of the existing law, they have been specifically included. Alaska and Hawaii have entered the Union as new states since 1957; Hawaii has provisions for an exemption while Alaska does not (7). Of those six states which did not reply the following four had provisions for an exemption in 1957: Alabama, Idaho, Maryland, and Rhode Island.
Under the assumption that none of the six nonreplying states have revised their exemption laws since 1957 there are 30 of the 50 states which grant some type of veterans' exemption or benefit on property tax. The decision of a state to grant or not to grant such an exemption seems to remain quite stable over time. The fact that veterans of the Vietnam Conflict have been specifically included in a number of cases signifies the continuing interest and importance of the veterans' exemption.

The state of Wisconsin takes an interesting position on the subject of a veterans' property tax exemption. It appears as though such a law would be unconstitutional in Wisconsin. In his reply Hulbert B. Pinkerton of the Wisconsin Department of Taxation stated the following:

Our Supreme Court has consistently held that our constitutional requirement that property taxes be levied on a uniform basis means that similar property must pay the same tax regardless of ownership. To be sure exemptions have been granted on the basis of broad or narrow statutory definitions, however, it has been held that people who are over 65 years of age must pay the same amount of real estate tax as people under 65 and the same reasoning has applied for possible veteran exemptions.

In Minnesota a unique method of granting the veterans' property tax benefit is followed. Rather than grant an exemption for certain qualifying veterans, Minnesota assesses the first $8,000 of true value at only a 5% rate while it would otherwise be assessed at a rate of 40% of true value (50). As a result veterans who qualify have a smaller tax bill just as in the case of an exemption.

In South Carolina the local governments decide whether or not to grant an exemption and what its amount should be. Since the exemption

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has its main effects on the revenues of the local government there is some defense for such a procedure; however, the lack of uniformity which would result throughout the state would be undesirable.

The maximum amount of assessed valuation exempted varies greatly among states. For example the maximum in Massachusetts is $10,000 (45-48) while it is only $200 in Oklahoma (59). The maximum assessed value is not the only factor to consider when making comparisons. The ratio of assessed value to market value is also important. Two veterans living in separate states may each own property with market values of $10,000 and each receive an exemption of $5,000 of assessed valuation. If the assessment ratio is .5 in one case and 1.0 in the other, the first man has all his assessed valuation exempted while the second has only one half of his exempted. The example shows that the assessment ratio affects the proportion of exempt property. The millage applied to the property must also be known if one is to determine the actual tax savings resulting from the exemption. Neither the assessment ratio nor the millage ratios for states other than Iowa were available for this study; therefore, it is not possible to compare the magnitude of the benefit received from the exemption between one state and another.

The states vary greatly in the qualifications which must be fulfilled to receive the exemption. Most states require the following for eligibility: 1) the veteran must have served in active duty with the armed forces during a period of national conflict, 2) he must have been discharged honorably, and 3) certain state residency requirements must be met. In addition to these three basic requirements many states require
that a veteran be either partially or totally disabled to be eligible. In some states the amount of exemption varies with the amount of disability. In over half of those states granting the exemption it applies only to property at the place of residence. Certain states have laws stating that to be eligible a veteran must not own more than some maximum amount of property or some maximum amount of assets. It is necessary for a veteran to earn less than some maximum amount of income to be eligible in other states.

In some states several of these additional requirements must be met at once leaving a very small class of veterans who fulfill all the eligibility requirements. In other states such as Iowa none of the additional requirements must be met and quite a large number are eligible for the exemption.

In most states the exemption is granted for the lifetime of the veteran, but there are two interesting exceptions. Wyoming terminates a veterans' exemption once he has acquired $300 aggregate tax savings (65). Louisiana has specified a period of five years during which the exemption can be claimed; no exemption is granted except during this five year period (43).

In 1963 New Jersey enacted a law which deducted $50 from the taxes levied on real or personal property of any veteran who satisfied the eligibility requirements (55). This new law replaced a provision for an exemption of $5,000 on the assessed property of such a veteran (62).

As has been pointed out the methods of granting veterans' relief on their property taxes varies greatly among states. Later in this thesis several of these methods will be analyzed to determine how reasonable they are and what the effect would be if they were applied in Iowa.
II. IMPACT OF THE EXEMPTION

One relevant measure of the impact of the veterans' exemption involves the number and proportion of taxpayers who are able to claim it. Figure 1 shows the total number of claimants in Iowa for the years between 1954 and 1965. The number of urban and rural claimants is also shown. The total number of claimants continually rose from 182,231 to 237,590 during that period. This is an increase of over 30%. A sharp increase is evident after 1955 when veterans of the Korean Conflict began to claim exemptions. Since 1959 the rise in claimants has been quite small; however, one can expect another sharp increase as veterans of the Vietnam Conflict return and claim exemptions.

As shall be pointed out later the fact that urban claimants far outnumber rural claimants has an important impact. Since 1958 the number of rural claimants has decreased by a small number each year. In 1954 there were just less than 3.5 times as many urban as rural claimants and by 1965 there were just less than four times as many. The ratio of urban to rural claimants will probably continue to rise as the population in general continues to be concentrated more in urban areas relative to rural areas.

The proportion of claimants receiving a $500 exemption can be expected to increase over time. Those receiving the larger exemptions tend to be the older claimants because they served either in WW I or some earlier war. In the period from 1954 to 1965 this proportion rose from 70% (30, p. 228) to 80% (41). With the inclusion of Vietnam veterans during the next few years, all of whom will receive the $500
Figure 1. Number of veterans' exemption claims in Iowa between 1954 and 1965.

Sources: 1954 (29, p. 228)
1955 (30, p. 237)
1956 (31, p. 261)
1957 (32, p. 301)
1958 (33, p. 309)
1959 (34, p. 319)
1960 (35, p. 175)
1961 (36, p. 70)
1962 (37, p. 72)
1963 (38, p. 76)
1964 (39)
1965 (40)
exemption, the proportion can be expected to continue to rise at a rapid rate.

From the taxation survey\textsuperscript{1} it was estimated that in 1964, 33\% of those paying property taxes in Iowa claimed a veterans' exemption. Thus, not only a large number but a large proportion of Iowa property taxpayers benefit directly from the exemption.

A. Distribution of the Exemption Among Group Characteristics

Data from the taxation survey was used to estimate how the impact of the exemption was distributed among each of four different group characteristics. The four group characteristics examined were income, net assets, occupation, and family composition.

From Tables 1 - 4 we will analyze which classes from each characteristic benefit most from 1) the exemption in general, 2) the different value of property exempted (i.e. $500, $750, $1800, etc.), and 3) the fact that tax savings is proportional to the millage. Tax savings is defined as the product of the exemption and the millage at which the property would have been taxed if it were not exempt. The average millage on exempt property is weighted according to the amount of exemption at each millage.

In the tables there are a few classes for which the number of claimants sampled was quite small. The number of claimants sampled is given in every case and it should be remembered that the estimate made from those small samples may reflect a large sampling error.

\textsuperscript{1}See Appendix B.
1. Income classes

Those households\(^1\) earning less than $3,000 and those earning more than $15,000 make up a larger percentage of all property taxpayers than of all claimants. The opposite is true for the middle income households. For example while households earning between $1,000 and $2,999 account for 17.5\% of all property taxpayers, they account for only 11.8\% of all claimants. But while households in the "$10,000 to $14,999" class account for 17.8\% of the claimants they account for only 12.2\% of the total taxpayers. In general we can conclude that relatively more middle income households benefit from the exemption than taxpayers at either extreme of the income classes.

To the extent that the average exemption for any class is greater than $500, a larger proportion of the claimants in that class must receive an exemption of $750 or more. Among the different income classes those earning between $1,000 and $2,999 seem to have the largest proportion of exemptions over $500. Those in the "$3,000 to $4,999", the "$15,000 to $24,999" classes and the class for which income information was not available also seem to contain a significant proportion of claimants receiving an exemption over $500. The remainder of the classes appear to contain predominantly claimants who receive $500 exemptions. Those claimants receiving an exemption of $750 or more served in either WW I or at some earlier time and all should be at an age at which earning power is small unless they have accumulated property from which they receive a sizeable income. This would account for the fact that most of

\(^1\)See page 110 for definition of household.
Table 1. Distribution of the Iowa veterans’ exemption by income classes

<table>
<thead>
<tr>
<th>Income class</th>
<th>Under $1000-</th>
<th>$1000-2999</th>
<th>$3000-4999</th>
<th>$5000-6999</th>
<th>$7000-9999</th>
<th>$10,000-14,999</th>
<th>$15,000-24,999</th>
<th>$25,000- and up</th>
<th>Income not available</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claimants sampled</td>
<td>5</td>
<td>29</td>
<td>52</td>
<td>47</td>
<td>46</td>
<td>39</td>
<td>14</td>
<td>3</td>
<td>13</td>
<td>248</td>
</tr>
<tr>
<td>Av. veterans' exemption (dollars)</td>
<td>508</td>
<td>635</td>
<td>591</td>
<td>507</td>
<td>508</td>
<td>515</td>
<td>564</td>
<td>500</td>
<td>563</td>
<td>545</td>
</tr>
<tr>
<td>Av. millage on exempt property</td>
<td>71</td>
<td>96</td>
<td>91</td>
<td>96</td>
<td>98</td>
<td>99</td>
<td>113</td>
<td>100</td>
<td>91</td>
<td>96</td>
</tr>
<tr>
<td>Av. tax value of exemption (dollars)</td>
<td>36</td>
<td>61</td>
<td>54</td>
<td>49</td>
<td>50</td>
<td>51</td>
<td>64</td>
<td>50</td>
<td>51</td>
<td>52</td>
</tr>
<tr>
<td>% of total^b claimants</td>
<td>1.3</td>
<td>11.8</td>
<td>21.3</td>
<td>19.9</td>
<td>19.1</td>
<td>17.8</td>
<td>2.8</td>
<td>1.1</td>
<td>4.9</td>
<td>100</td>
</tr>
<tr>
<td>% of total^c taxpayers</td>
<td>3.9</td>
<td>17.5</td>
<td>21.4</td>
<td>19.0</td>
<td>17.8</td>
<td>12.2</td>
<td>3.7</td>
<td>1.1</td>
<td>3.4</td>
<td>100</td>
</tr>
</tbody>
</table>

^aIncome is defined on page 112.

^bThe total number of claimants estimated by the survey was 236,121.

^cThe total number of taxpayers estimated by the survey was 753,616.
these claimants fall into the two lower income classes while some fall into the relatively high one.

In general the higher income households took their exemption on property taxed at higher millages. Those earning under $1,000 took their exemption on property taxed at an average of only 71 mills which is much below any of the other averages. Those earning between $15,000 and $24,999 had a notably high average milage of 113 on their exempt property. In general there is much evidence to support the proposal that higher income households benefit from the fact that tax savings varies with the milage.

As a result of the different average exemptions and different average millages the average tax savings varies greatly among classes. Those in the "Under $1,000" class receive the lowest average of $36 while those in the "$15,000 to $24,999" class enjoy the highest of $64.

2. Net asset classes

In viewing the distribution of claimants over net asset classes one notes an interesting parallel with the income classes. As is the case with income classes the two classes at each extreme of the net asset classes have a smaller proportion of the claimants than of the total property taxpayers. Likewise the middle net asset classes have a larger proportion of total claimants than of total taxpayers. It appears that a larger proportion of those taxpayers in the middle net asset classes benefit from the exemption than of those at either extreme.

While it appears that very few claimants with an exemption greater
Table 2. Distribution of the Iowa veterans' exemption by net asset classes

<table>
<thead>
<tr>
<th>Net asset class&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Under $1000</th>
<th>$1000-4999</th>
<th>$5000-9999</th>
<th>$10000-14999</th>
<th>$15000-19999</th>
<th>$20000-24999</th>
<th>$25000-29999</th>
<th>$50000-49999</th>
<th>$100000 and up</th>
<th>No information</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claimants sampled</td>
<td>2</td>
<td>14</td>
<td>35</td>
<td>36</td>
<td>31</td>
<td>21</td>
<td>58</td>
<td>27</td>
<td>17</td>
<td>7</td>
<td>248</td>
</tr>
<tr>
<td>Av. veterans' exemption</td>
<td>304</td>
<td>458</td>
<td>557</td>
<td>521</td>
<td>573</td>
<td>556</td>
<td>561</td>
<td>553</td>
<td>598</td>
<td>688</td>
<td>545</td>
</tr>
<tr>
<td>(dollars)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Av. millage on exempt</td>
<td>106</td>
<td>85</td>
<td>100</td>
<td>97</td>
<td>103</td>
<td>94</td>
<td>93</td>
<td>82</td>
<td>99</td>
<td>97</td>
<td>96</td>
</tr>
<tr>
<td>property</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Av. tax value of exemption</td>
<td>32</td>
<td>39</td>
<td>55</td>
<td>51</td>
<td>59</td>
<td>52</td>
<td>52</td>
<td>45</td>
<td>59</td>
<td>66</td>
<td>52</td>
</tr>
<tr>
<td>(dollars)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.5</td>
<td>9.0</td>
<td>18.9</td>
<td>17.7</td>
<td>13.3</td>
<td>7.8</td>
<td>18.7</td>
<td>6.1</td>
<td>4.3</td>
<td>2.7</td>
<td>100</td>
</tr>
<tr>
<td>claimants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of total&lt;sup&gt;c&lt;/sup&gt;</td>
<td>3.4</td>
<td>12.9</td>
<td>15.8</td>
<td>15.1</td>
<td>9.0</td>
<td>6.9</td>
<td>18.3</td>
<td>10.3</td>
<td>5.3</td>
<td>3.0</td>
<td>100</td>
</tr>
<tr>
<td>taxpayers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Net assets are gross assets minus liabilities. See Page 113 for definition of assets.

<sup>b</sup>The total number of claimants estimated by the survey was 236,721.

<sup>c</sup>The total number of taxpayers estimated by the survey was 753,616.
than $500 fall in the two net asset classes below $5,000, they seem to be distributed throughout those net asset classes above $5,000.

While claimants in higher income classes were able to take their exemption on property with a higher average millage the same is not true relative to claimants in net asset classes. In fact the claimants in the lowest net asset class of "Under $1,000" have the highest average millage on exempt property of 106 while claimants in the next to the highest class of "$5,000 to $9,999" have the lowest of 82. This large difference seems to be due to the fact that those with net assets under $1,000 took 100% of their exemption on residential property which has a higher millage in general while those with net assets between $5,000 and $9,999 took only 37% of their exemption on residential property. The higher net asset classes probably contain a large number of farmers whose property tends to be in lower millage districts. It should be noted that the estimate for the "Under $1,000" class was obtained from a sample of only two and thus is not very reliable.

In general claimants in the lower net asset classes tend to have a higher average millage on exempt property with one notable exception being claimants in the "$1,000 to $4,999" class which have a lower millage of only 85. While claimants in this class took 80% of their exemption on residential property the average millage on residential property for them was only 85.

Claimants in the two lower net asset classes have considerably lower average tax savings than other claimants. For those with net assets of less than $1,000 the low average tax savings are due entirely to the fact that many claimants in this group do not need the full $500
of exemption to cover their property valuation. For those with net assets between $1,000 and $4,999 the lower tax savings result from the fact that the exemption is applied to property with a lower average millage as well as from the fact that the average exemption is less than $500. Those claimants in classes above $5,000 receive a fairly constant average tax saving with claimants in the "$5,000 to $9,999" class having a little lower tax savings due to the low average millage.

3. Occupation classes

The survey indicates that farmers and farm managers, sales workers, laborers, and those not employed have a smaller percent of total claimants than of all taxpayers. The opposite is true for the classes of "Professional"; "Managers, officials, and proprietors"; "Craftsman and foremen"; "Operators"; and "Service workers". It is interesting to note that nearly 19% of the claimants are not employed. The tax savings will be very important to many individuals in this class, many of whom are retired.

It appears that nearly all those receiving an exemption greater than $500 fall into the "Not employed" class. This situation would be expected since all those receiving such an exemption would necessarily be near or past 65 years of age.

Farmers and farm managers have an average millage on exempt property which is 13 mills lower than the next highest average millage and 22 mills below the overall average. Along with the farmers and farm managers, laborers and service workers fall 5 mills or more below the overall average while claimants in the "Professional"; "Managers,
Table 3. Distribution of the Iowa veterans’ exemption by occupation classes

<table>
<thead>
<tr>
<th>Occupation class</th>
<th>Professional</th>
<th>Farmers and farm managers</th>
<th>Managers, Clerical</th>
<th>Sales workers</th>
<th>Craftsmen and foremen</th>
<th>Service workers</th>
<th>All laborers</th>
<th>Not Total employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claimants sampled</td>
<td>25</td>
<td>46</td>
<td>78</td>
<td>5</td>
<td>5</td>
<td>22</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Av. veterans' exemption (dollars)</td>
<td>503</td>
<td>510</td>
<td>522</td>
<td>500</td>
<td>500</td>
<td>537</td>
<td>505</td>
<td>500</td>
</tr>
<tr>
<td>Av. millage on exempt property</td>
<td>104</td>
<td>74</td>
<td>102</td>
<td>103</td>
<td>99</td>
<td>95</td>
<td>91</td>
<td>87</td>
</tr>
<tr>
<td>Av. tax value of exemption (dollars)</td>
<td>53</td>
<td>38</td>
<td>54</td>
<td>51</td>
<td>50</td>
<td>51</td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td>% of total claimants</td>
<td>11.9</td>
<td>14.3</td>
<td>17.4</td>
<td>3.1</td>
<td>2.4</td>
<td>14.1</td>
<td>13.0</td>
<td>3.6</td>
</tr>
<tr>
<td>% of total taxpayers</td>
<td>7.2</td>
<td>18.8</td>
<td>13.6</td>
<td>3.0</td>
<td>3.9</td>
<td>11.9</td>
<td>11.9</td>
<td>2.9</td>
</tr>
</tbody>
</table>


\(^a\) See page 113 for composition of occupation classes.

\(^b\) The total number of claimants estimated by the survey was 236,121.

\(^c\) The total number of taxpayers estimated by the survey was 753,616.
officials, and proprietors"; and "Clerical" classes fall more than 5 mills above the overall average of 96 mills.

Farmers and farm managers receive an average tax savings on their exemption of only $38 due to the low average millage on their exempt property. The average tax savings of service workers and laborers is also somewhat lower than most of the others due to lower millages. The average tax savings of those not employed and retired is high due to their large proportion of exemptions over $500.

4. **Family classes**

The family classes under "Families with children" in Table 4, are defined as follows:

- **Only over 19**: Families such that all children who continue to live as members of the household are over 19 years of age.
- **Only 5-18**: Families such that all children who continue to live as members of the household are between ages 5 and 18.
- **Only under 5**: Families such that all children who continue to live as members of the household are under age 5.
- **5 and up**: Families such that there is at least one child between ages 5 and 18 and at least one child over 19 and both live as members of the household.
- **0-18**: Families such that there is at least one child under age 5 and at least one child between ages 5 and 18 and both live as members of the household.

Thus all the family classes are mutually exclusive.
Table 4. Distribution of the Iowa veterans' exemption by family classes

<table>
<thead>
<tr>
<th>Family class</th>
<th>1 person only</th>
<th>Married couples</th>
<th>Families with children</th>
<th>Unrelated and nursing home</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claimants sampled</td>
<td>17</td>
<td>61</td>
<td>11</td>
<td>105</td>
<td>248</td>
</tr>
<tr>
<td>Av. veterans' exemption</td>
<td>699</td>
<td>619</td>
<td>435</td>
<td>502</td>
<td>545</td>
</tr>
<tr>
<td>(dollars)</td>
<td></td>
<td></td>
<td></td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Av. millage on exempt property</td>
<td>103</td>
<td>96</td>
<td>88</td>
<td>95</td>
<td>96</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>Av. tax value of exemption</td>
<td>72</td>
<td>60</td>
<td>38</td>
<td>48</td>
<td>62</td>
</tr>
<tr>
<td>(dollars)</td>
<td></td>
<td></td>
<td></td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>% of total&lt;sup&gt;a&lt;/sup&gt;</td>
<td>8.5</td>
<td>22.1</td>
<td>4.9</td>
<td>43.5</td>
<td>100</td>
</tr>
<tr>
<td>claimants</td>
<td></td>
<td></td>
<td></td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>% of total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>12.3</td>
<td>30.5</td>
<td>6.1</td>
<td>27.2</td>
<td>100</td>
</tr>
<tr>
<td>taxpayers</td>
<td></td>
<td></td>
<td></td>
<td>5.6</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Total number of claimants estimated by the survey was 236,121.

<sup>b</sup>Total number of taxpayers estimated by the survey was 753,616.
In the classes of "Families with children" the "only 5-18" and "0-18" classes both have a larger percent of the claimants than of total taxpayers. In all other classes the opposite is true. It is of interest to note that the two classes just mentioned along with the class of "Married couples" contain over 80% of all claimants.

As would be expected because of age distribution nearly all claimants in the "Families with children" classes appear to receive $500 exemption while a large proportion of claimants in the other three classes receive exemptions over $500.

Claimants in the "1 person only" class are able to apply their exemption on property with an average millage of 103 which is the highest among the classes. Claimants in the classes of "5 and up" and "Unrelated and nursing home" have the lowest average millages of 75 and 83 respectively. Together they make up less than 3% of all claimants and both estimates were made from samples of five or fewer claimants.

The main general conclusion one can draw about average millages on exempt property among family classes is that they vary greatly. The range between highest and lowest is 28 mills.

Claimants in the five family classes with children have average tax savings of less than $50 while claimants in the other three classes all have tax savings over $59. This differential is due to the fact that claimants in the three classes of families without children contain virtually all exemptions over $500.

From the information just discussed we can characterize the claimant receiving an exemption of over $500 as follows: 1) he is most likely to
have an income between $1,000 and $4,999 or between $15,000 and $24,999,
2) he most likely has net assets of over $5,000, 3) there are probably no children remaining in his household, and 4) he is probably not employed or retired.

The households which appear to profit by the fact that tax savings are proportional to millage are first of all high income households. Lower net asset households tend to profit slightly more than higher ones. Claimants in the "One person only" family class benefit most but claimants in other family classes also benefit from the dependence of tax savings on millage. Professional people, managers, officials, proprietors, and clerks benefit greatly also. Farmers and farm managers along with those earning incomes under $1,000 receive notably small tax savings because the property on which they apply their exemptions tends to be taxed at low millages.

B. Distribution of Taxpayers and Claimants by Property Type

The first row of Table 5 shows the percent of total taxpayers who pay taxes on each of the property types and the second column shows the percent of total claimants who pay taxes on each property type. Note that there is nothing to prevent one from paying taxes on more than one property type and therefore the rows add to over 100%.

The table indicates that the percent of claimants who pay taxes on agricultural property is less than the percent of all taxpayers who pay taxes on agricultural property. The opposite is true regarding mercantile and residential property. Most residential as well as mercantile property is in urban areas since farm dwellings are classified as
agricultural property. One can conclude that a larger percentage of claimants pay taxes on urban property and a smaller percentage pay taxes on rural property than do taxpayers in general.

Row three shows the percent of claimants who applied all or part of their exemption to the designated type of property. Because some claimants divide their exemption so that it applies to more than one type of property, this row also adds to greater than 100%. If one assumes that no claimant divides his exemption among more than two property types then the survey estimates that 33,257 of the 236,121 estimated claimants do apply their exemption to two property types.

By far the largest percentage of the claimants apply all or part of their exemptions to residential property. Seventy-five point six percent apply all or part to residential real and 15.3% apply all or part to residential personal property. The percent of claimants applying any of their exemption to mercantile real or personal property is very small being 1.2 and 1.5 percent respectively. While the percent of claimants applying their exemption to agricultural property is greater than the percent applying it to mercantile it is still small relative to the residential percentage.

The fact that so large a percentage of the exemptions are applied to residential property does not result solely from the fact that a smaller percentage of the claimants pay taxes on nonresidential property. Row four shows that of those claimants who paid taxes on nonresidential property, 1

1See Appendix B, page 108.
Table 5. Distribution of the exemption by property type\(^a\)

<table>
<thead>
<tr>
<th>Property type</th>
<th>Mercantile real</th>
<th>Mercantile personal</th>
<th>Agricultural real</th>
<th>Agricultural personal</th>
<th>Residential real</th>
<th>Residential personal</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of taxpayers(^b)</td>
<td>5.6</td>
<td>8.9</td>
<td>25.1</td>
<td>23.7</td>
<td>64.4</td>
<td>72.0</td>
</tr>
<tr>
<td>% of claimants(^c)</td>
<td>6.3</td>
<td>11.5</td>
<td>18.4</td>
<td>19.4</td>
<td>80.7</td>
<td>77.2</td>
</tr>
<tr>
<td>% of claimants receiving exemption</td>
<td>1.2</td>
<td>1.5</td>
<td>6.4</td>
<td>14.1</td>
<td>75.6</td>
<td>15.3</td>
</tr>
<tr>
<td>% of claimants paying taxes who apply exemption</td>
<td>19.7</td>
<td>12.9</td>
<td>34.5</td>
<td>72.5</td>
<td>93.8</td>
<td>19.8</td>
</tr>
<tr>
<td>Claimants av. millage</td>
<td>105</td>
<td>99</td>
<td>67</td>
<td>71</td>
<td>101</td>
<td>99</td>
</tr>
</tbody>
</table>

\(^a\)Source: Taxation survey.

\(^b\)Total number of taxpayers estimated by the survey was 753,616.

\(^c\)Total number of claimants estimated by the survey was 236,121.

...property a smaller percentage of them chose to take their exemption on that property than was the case with claimants paying taxes on residential real property. Ninety-three percent of those paying taxes on residential real property chose to take their exemption on that property. For every other property type there was a large percentage of claimants paying taxes on but not taking their exemption on that property type.

The low average millages on agricultural real and personal property would encourage those claimants paying taxes on both agricultural property and nonagricultural property to apply their exemption to the nonagricultural type of property. The higher millage would result in greater tax savings. This might explain the fact that a large percent of those...
paying taxes on agricultural property do not apply their exemption on that property. Because the average millage for mercantile and residential property are nearly equal, there is no millage differential to explain the large percent of mercantile property taxpayers choosing to not apply their exemption on mercantile property. No obvious explanation for this fact has appeared.

Less than 20% of the total exemption in the state was applied to agricultural property. While under 20% of the total exemption was applied to agricultural property more than 43% of the total valuation of claimants is accounted for by agricultural property. This fact can result from two situations. 1) The average valuation of claimants paying taxes on agricultural property may be greater than the average valuation of those paying taxes on nonagricultural property, while the average exemption is more nearly equal. 2) There may be a significant number of claimants paying taxes on multiple properties who apply their exemption to the property with the highest millage. Each of these hypotheses will be tested.

Table 6 shows that while the mean exemption on agricultural real property is only slightly larger than on nonagricultural real property; the mean assessed valuation is nearly double that of mercantile and is triple that of residential. Thus the first hypothesis is supported for real property which is the largest proportion of total property. The hypothesis also seems to be supported when comparing agricultural and residential personal property. While the agricultural personal mean exemption is nearly four times that of the residential personal exemption,
Table 6. Mean valuation and exemption on real and personal property type.

<table>
<thead>
<tr>
<th></th>
<th>Mercantile</th>
<th>Agricultural</th>
<th>Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Claimants mean assessed valuation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>real</td>
<td>5,369</td>
<td>11,182</td>
<td>3,044</td>
</tr>
<tr>
<td>personal</td>
<td>2,090</td>
<td>1,913</td>
<td>105</td>
</tr>
<tr>
<td><strong>Claimants mean exemption</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>real</td>
<td>548</td>
<td>568</td>
<td>535</td>
</tr>
<tr>
<td>personal</td>
<td>425</td>
<td>504</td>
<td>136</td>
</tr>
</tbody>
</table>

*Source: Taxation survey.*

The mean assessed valuation is over 18 times as large. The mean assessed valuation of mercantile personal property is only slightly smaller than that of agricultural personal property. Thus there is much evidence to support the first hypothesis.

The second hypothesis is tested by analyzing those claimants sampled in the survey which had a choice of applying their exemption to property taxed at different millages. Of the 248 veterans' exemption claimants who were sampled 48 paid taxes on multiple properties which were taxed at different millages. Thus 19.4% of the claimants sampled had a choice of applying their exemption on property taxed at different millages. In most cases a choice of only two different millages existed but in some cases more than two existed. Of those 48 having a choice, 33 claimants applied their exemption where their highest millage existed. The other 15 applied their exemption on property where some millage other than their highest existed. These 15 included some claimants who would have had to divide their exemption to have taken advantage of their highest
millage because the assessed value of their highest millage property was less than their exemption.

Under the hypothesis that one-half of the claimants apply their exemption to property with the highest millage a chi-square of 7.50 is obtained. This is significant at the .01 level. Thus one would reject the hypothesis. Actually this test indicates that if only one-half of the claimants in the population apply their exemption to the most favorable millage then one would expect to obtain a sample such as the one drawn less than 1 time out of 100. From the results of the test we would expect that more than one-half of those claimants with a choice apply their exemption to the property with the highest millage. This fact would contribute to a higher average millage on exempt property than in general. Because high millages are concentrated in urban areas it also helps explain the high proportion of the exemption which is applied to urban areas.

Table 7 shows the number of claimants whose choice involved a difference of 0 to 20 mills and of those whose choice involved a difference of over 20 mills. These two groups are subdivided into those applying their exemption to property with the highest millage and those who did not.

A chi-square test of independence was applied to determine whether or not the millage differential influenced the decision to take the exemption on the highest millage. A chi-square value of 1.11 was obtained which is not significant at the .01 level (4, p. 224). Thus we accept the hypothesis of independence stating that the decision is not dependent
Table 7. Claimants applying exemption to property taxed at highest millage

<table>
<thead>
<tr>
<th>Differential</th>
<th>No. not applying to highest</th>
<th>No. applying to highest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 20 mills</td>
<td>10</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Over 20 mills</td>
<td>5</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>33</td>
<td>48</td>
</tr>
</tbody>
</table>

*aSource: Survey.*

upon the millage differential.

A test similar to the one just completed was made in which the millage differential was replaced by the dollars of loss or savings which were involved in the decision. For those who did not choose the highest millage, calculations were completed to determine the amount each individual lost by not applying his exemption to property with the highest millage. In the case of those who chose the highest millage, calculations were completed to determine the amount saved by not applying the exemption to property with the lowest millage. The following table shows the number of claimants falling in each class.

Table 8. Claimants applying exemption so to receive largest tax savings

<table>
<thead>
<tr>
<th>Difference in tax bill</th>
<th>No. not applying to highest</th>
<th>No. applying to highest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 7 dollars</td>
<td>10</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>Over 7 dollars</td>
<td>5</td>
<td>22</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>33</td>
<td>48</td>
</tr>
</tbody>
</table>

*aSource: Survey.*
In this case the chi-square value was 2.94 which is still not significant at the .01 level. However, if the hypothesis of independence is true one would expect to obtain a chi-square value this large or larger less than 10 times out of 100. While one must accept the hypothesis of independence in this case, further testing might be of interest.

One can conclude that the fact that certain claimants have a choice of differing millages contributes to a higher average millage on exempt property than on property in general and to a large proportion of the exemptions being applied to urban property. However, from this sample there is not sufficient evidence to indicate that the decision to apply the exemption where the highest millage exists is dependent upon either the difference in millages or in amount of taxes involved.

As the total exemption is much more heavily weighted by nonagricultural property than is the total valuation of claimants, the average millage where the exemption is taken reflects more heavily the millages on nonagricultural property than does the average millage on the valuation of claimants. Thus the average millage where the exemption is taken reflects the higher nonagricultural millages and is estimated from the survey to be 96 mills while the average millage for all property of claimants is estimated to be 85 mills. In 32 of the 38 income, net asset, family composition, and occupation classes the average millage on exempted property was as high or higher than the average millage on the total property valuation of claimants. This would indicate that the difference in average millage is significant and not just a result of sampling error.
C. Estimating Tax Loss

It is of interest to be able to estimate the total amount of taxes lost in Iowa as a result of the exemption. The sample for the taxation study provided a statistical estimate of tax loss for the year 1964. The original estimate of tax loss was $12,320,000 and this was estimated to have resulted from $128,870,000 of exempt property. The total exempt property in 1964 is known to actually have been only $122,299,000. Thus we know that total exempt property is overestimated (See p.115) and will assume that the tax loss is overestimated by the same proportional amount. This assumption is made since tax loss is the product of the exemption and the millage. The readjusted survey estimate of tax loss would be $11,691,000. ¹ Similar readjusted survey estimates for each of the three stratum of counties are shown in Table 9.

Because of the difficulty of conducting such a survey for each year it is desirable to have a reliable method of obtaining an estimate of the tax loss which does not necessitate annual surveys. The product of the total exemption and the average millage weighted according to total valuation might serve as an estimate of tax loss. The necessary data is available from the Iowa State Tax Commission (18, 41). However, it has been noted that the exemption is distributed over the millages differently than is the total net valuation, and as a result the average millage on exempt property is higher than that on property in general. Thus such an estimate of tax loss could be expected to be biased and somewhat smaller than the actual tax loss.

¹\( \frac{122,299,000}{128,870,000} \times 12,320,000 = 11,691,000. \)
To refine the estimate and decrease this bias one could use the sum of the product of rural average millage and rural exemption and the product of urban average millage and urban exemption. This data is also available on a county basis from the Iowa State Tax Commission (18, 41).

Estimates for 1964 obtained by using the average millage and the rural-urban average millage approaches are shown in the second and third columns of Table 9. Strata estimates were obtained by aggregating over the counties of each strata. As was expected the rural-urban average millage approach provided a larger estimate of tax loss than the less refined approach. The rural-urban millage approach provided an estimate of total tax loss which is quite close to the survey estimate.

Table 9. Estimates of tax loss due to veterans' exemption

<table>
<thead>
<tr>
<th>Strata(^a)</th>
<th>Survey est.</th>
<th>Est. using average millage</th>
<th>Est. using rural-urban ave. millage(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large counties</td>
<td>4,548</td>
<td>4,550</td>
<td>4,785</td>
</tr>
<tr>
<td>Medium counties</td>
<td>4,240</td>
<td>3,468</td>
<td>3,821</td>
</tr>
<tr>
<td>Small counties</td>
<td>2,903</td>
<td>2,733</td>
<td>3,008</td>
</tr>
<tr>
<td>Total</td>
<td>11,691</td>
<td>10,751</td>
<td>11,614</td>
</tr>
</tbody>
</table>

\(^a\)See Figure 3 for county composition of each strata.

\(^b\)Source of original data (18, 41).
The estimates were paired according to county strata and the student t was used to test for significant differences (61, p. 50). First the significance of differences between the survey estimate and the estimate using the county average millages was tested. The calculations are as follows:

where, \( \overline{d} \) is the sample mean of strata differences and \( \mu_D \) is the population mean of strata differences

null hypothesis \( \mu_D = 0 \)

alternative hypothesis \( \mu_D \neq 0 \)

\( \alpha = .1 \)

accept null hypothesis if \(-2.920 \leq t \leq 2.920\)

\[ t = \frac{\overline{d} - 0}{S_d} = \frac{313}{2347} = .133 \]

therefore accept null hypothesis.

Next the significance of differences between the survey estimate and the estimate using the rural-urban average millages was tested. The calculations are as follows:

null hypothesis \( \mu_D = 0 \)

alternative hypothesis \( \mu_D \neq 0 \)

\( \alpha = .1 \)

accept null hypothesis if \(-2.920 \leq t \leq 2.920\)

\[ t = \frac{\overline{d} - 0}{S_d} = \frac{26}{174} = .150 \]

therefore accept null hypothesis.
Neither test was significant at the .1 level indicating that there is no reason to believe that the estimates given by either approach were different from those given by the survey. However, the mean of the strata differences in the first case has a very large .1 confidence interval. The mean of the strata differences in the second case lies in a much smaller .1 confidence interval.

Confidence intervals: Case 1. \[-6,540 \leq \mu_D \leq 7,166\]

Case 2. \[-479 \leq \mu_D \leq 531\]

Thus in the second case one can expect \(\mu_D\) to lie between -479 and 531 ninety percent of the time while one would expect \(\mu_D\) to vary much more in the first case. From this analysis one can expect that the rural-urban approach is most likely to give an estimate close to the estimate obtained by the survey. Thus the rural-urban average millage approach will be used to estimate tax loss when necessary in subsequent parts of this thesis.

D. Impact of the Exemption Over Time

The survey data has indicated that the average millage on agricultural property is lower than that of nonagricultural property and that the total exemption is distributed much more heavily over the high millage property than is the assessed valuation of property in general.

The survey data apply only for 1964, but Tables 10-12 will show that a similar situation existed for all years between 1954 and 1965. These tables also show the different impact of the exemption on rural and urban areas. The data for the tables including the rural and urban composition comes from the Iowa State Tax Commission (18-38; 41-42). The data under
the classification of cities and towns in those reports is classified as urban in the tables of this thesis.

1. Relation of the exemption and the valuation

The first three columns of Table 10 show total state veterans' exemption and its rural and urban composition. The total exemption rose continuously from less than 98 million in 1954 to over 122 million in 1962 and then remained relatively constant until 1965. The rise in the exemption was due to the rise in the number of claimants but slightly less pronounced as there was a corresponding decrease in the proportion of the claimants with an exemption over $500. The total exemption can be expected to begin another period of increase as veterans of the Vietnam Conflict return and claim new exemptions. In 1954, 23% of the exemption was applied on rural property while 77% was applied on urban property. Over the 12 year period the percentage of the exemption claimed on urban property continuously increased to 80%.

Between 1954 and 1965 the total net valuation increased by 1.5 billion from just under 4.5 billion to just under 6.0 billion. Such an increase is the result of a growing economy and continued increase will depend upon continued economic growth. It should be noted that an increase in the assessment ratio could increase the assessed valuation even without any economic growth. In 1954, 60% of the total valuation was rural. Since then there has been a steady decrease in the percent of assessed valuation which is rural until in 1965 it was only 53%.

While the veterans' exemption has been predominantly applied on urban
Table 10. Relation of rural-urban exemption and valuation between 1954 and 1965 in Iowa

<table>
<thead>
<tr>
<th>Year and source</th>
<th>Exemption (in thousands of dollars)</th>
<th>% rural</th>
<th>% urban</th>
<th>Net valuation (in thousands of dollars)</th>
<th>% rural</th>
<th>% urban</th>
<th>Exemption as % of valuation</th>
<th>Rural</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954 (29, pp.185,231)</td>
<td>97,938</td>
<td>23</td>
<td>77</td>
<td>4,465,122</td>
<td>60</td>
<td>40</td>
<td>.85</td>
<td>4.24</td>
<td>2.19</td>
<td></td>
</tr>
<tr>
<td>1955 (30, pp.171,240)</td>
<td>100,046</td>
<td>23</td>
<td>77</td>
<td>4,552,099</td>
<td>60</td>
<td>40</td>
<td>.84</td>
<td>4.22</td>
<td>2.20</td>
<td></td>
</tr>
<tr>
<td>1956 (31, pp.196,264)</td>
<td>110,009</td>
<td>24</td>
<td>76</td>
<td>4,605,426</td>
<td>59</td>
<td>41</td>
<td>.99</td>
<td>4.37</td>
<td>2.39</td>
<td></td>
</tr>
<tr>
<td>1957 (32, pp.225,304)</td>
<td>113,934</td>
<td>24</td>
<td>76</td>
<td>4,755,303</td>
<td>57</td>
<td>43</td>
<td>.99</td>
<td>4.26</td>
<td>2.40</td>
<td></td>
</tr>
<tr>
<td>1958 (33, pp.257,312)</td>
<td>116,625</td>
<td>23</td>
<td>77</td>
<td>4,862,568</td>
<td>57</td>
<td>43</td>
<td>.98</td>
<td>4.25</td>
<td>2.40</td>
<td></td>
</tr>
<tr>
<td>1959 (34, pp.259,322)</td>
<td>118,768</td>
<td>23</td>
<td>77</td>
<td>4,992,462</td>
<td>56</td>
<td>44</td>
<td>.96</td>
<td>4.22</td>
<td>2.38</td>
<td></td>
</tr>
<tr>
<td>1960 (35, pp.25,178)</td>
<td>120,168</td>
<td>22</td>
<td>78</td>
<td>5,103,897</td>
<td>56</td>
<td>44</td>
<td>.93</td>
<td>4.15</td>
<td>2.35</td>
<td></td>
</tr>
<tr>
<td>1961 (36, pp.17,73)</td>
<td>121,509</td>
<td>21</td>
<td>79</td>
<td>5,265,439</td>
<td>55</td>
<td>45</td>
<td>.90</td>
<td>4.03</td>
<td>2.31</td>
<td></td>
</tr>
<tr>
<td>1962 (37, pp.17,75)</td>
<td>122,214</td>
<td>21</td>
<td>79</td>
<td>5,398,827</td>
<td>55</td>
<td>45</td>
<td>.87</td>
<td>3.94</td>
<td>2.26</td>
<td></td>
</tr>
<tr>
<td>1963 (38, pp.17,79)</td>
<td>122,333</td>
<td>21</td>
<td>79</td>
<td>5,499,057</td>
<td>54</td>
<td>46</td>
<td>.84</td>
<td>3.86</td>
<td>2.22</td>
<td></td>
</tr>
<tr>
<td>1964 (18,39)</td>
<td>122,299</td>
<td>20</td>
<td>80</td>
<td>5,573,766</td>
<td>54</td>
<td>46</td>
<td>.83</td>
<td>3.77</td>
<td>2.19</td>
<td></td>
</tr>
<tr>
<td>1965 (19,40)</td>
<td>121,903</td>
<td>20</td>
<td>80</td>
<td>5,921,331</td>
<td>53</td>
<td>47</td>
<td>.80</td>
<td>3.46</td>
<td>2.06</td>
<td></td>
</tr>
</tbody>
</table>
property, less than half of the assessed valuation has been urban. The results of this fact are shown in the last three columns of Table 10. While the percent of rural valuation exempted was always under 1% and as low as .80%, the percent of urban valuation exempted has always been over 3.46% and has been as high as 4.37%. This shows that urban areas consistently lose a larger percent of their tax base than do rural areas as a result of the exemption. This differential in the percent of tax base lost will decrease only if the percent of total valuation which is urban increases more rapidly than the percent of total exemption applied to urban property. This would be difficult to forecast. For the state as a whole the exemption has ranged between 2.06% and 2.40% of the total net valuation.

2. Relation of the tax loss and rebate

The first three columns of Table 11 show the estimated tax loss due to the veterans' exemption on real and personal property and the rural-urban composition of that loss. The sum of the product of the average rural net millage times the rural exemption and average urban net millage times urban exemption is used to estimate tax loss. This is the same formula as that used on page 36 to estimate tax loss; however, in this case state rather than county average millage and totals are used. For 1964 the tax loss estimated from individual county data was $11,614,000, while that estimated from the state data was $11,587,000. We will assume that the state data provides an estimate of tax loss sufficiently exact for the way in which it is used here.

Sources of original data (18, 41).
Table 11. Relation of rural-urban tax loss and rebate between 1954 and 1965 in Iowa

<table>
<thead>
<tr>
<th>Year and source</th>
<th>Tax loss&lt;sup&gt;a&lt;/sup&gt; (in thousands of dollars)</th>
<th>% rural</th>
<th>% urban</th>
<th>Rebate&lt;sup&gt;b&lt;/sup&gt; (in thousands of dollars)</th>
<th>% due to rural exempt.</th>
<th>% due to urban exempt.</th>
<th>Rebate as % of loss Rural</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td>6,501</td>
<td>16</td>
<td>84</td>
<td>2,024</td>
<td>23</td>
<td>77</td>
<td>47 28 31.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(29, pp.185,231)</td>
<td>6,887</td>
<td>15</td>
<td>85</td>
<td>1,739</td>
<td>23</td>
<td>77</td>
<td>38 23 25.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>7,825</td>
<td>17</td>
<td>83</td>
<td>1,880</td>
<td>24</td>
<td>76</td>
<td>35 22 24.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(30, pp.171,240)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1956</td>
<td>8,301</td>
<td>16</td>
<td>84</td>
<td>2,091</td>
<td>24</td>
<td>76</td>
<td>36 23 24.98</td>
<td></td>
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<tr>
<td>(31, pp.196,264)</td>
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<td></td>
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<tr>
<td>1957</td>
<td>9,014</td>
<td>16</td>
<td>84</td>
<td>1,933</td>
<td>23</td>
<td>77</td>
<td>31 20 21.43</td>
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<tr>
<td>(32, pp.225,304)</td>
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<td></td>
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<tr>
<td>1958</td>
<td>9,705</td>
<td>16</td>
<td>84</td>
<td>2,197</td>
<td>23</td>
<td>77</td>
<td>33 21 22.65</td>
<td></td>
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<tr>
<td>(33, pp.257,312)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1959</td>
<td>10,257</td>
<td>16</td>
<td>84</td>
<td>2,205</td>
<td>22</td>
<td>78</td>
<td>30 20 21.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(34, pp.259,322)</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>10,587</td>
<td>15</td>
<td>85</td>
<td>2,401</td>
<td>21</td>
<td>79</td>
<td>31 21 22.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(35, pp.25,178)</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>10,893</td>
<td>15</td>
<td>85</td>
<td>1,889</td>
<td>21</td>
<td>79</td>
<td>24 16 17.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(36, pp.17,73)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>11,247</td>
<td>15</td>
<td>85</td>
<td>2,736</td>
<td>21</td>
<td>79</td>
<td>33 23 24.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(37, pp.17,75)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>11,587</td>
<td>15</td>
<td>85</td>
<td>2,791</td>
<td>20</td>
<td>80</td>
<td>33 23 24.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(38, pp.17,79)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>11,352</td>
<td>15</td>
<td>85</td>
<td>2,486</td>
<td>20</td>
<td>80</td>
<td>30 21 21.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(18,39)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>11,352</td>
<td>15</td>
<td>85</td>
<td>2,486</td>
<td>20</td>
<td>80</td>
<td>30 21 21.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(19,40)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Tax loss = (ave. rural mill X rural exemption on real and personal property)+(ave. urban mill X urban exemption on real and personal property).

<sup>b</sup>The rebate is called a prorated payment in the source. The rebate due to monies and credits exemption has been subtracted in each case by the following calculation: total prorated payment -(credit due to monies and credits exemption/total credit) X total prorated payment = rebate shown here.
The middle three columns of Table 11 show the total rebate payment made from the state to the counties and the percent of that payment due to rural and urban exemptions. The rebate is a partial compensation for the taxes lost as a result of the veterans' exemption.

The tax loss nearly doubled between 1954 and 1964 rising from $6,501,000 to $11,587,000. There was a slight decrease in the tax loss from 1964 to 1965 due to slightly lower millages. With an increasing exemption due to returning veterans from Vietnam the tax loss will continue to increase unless the effect is offset by decreasing millages.

Over the 12 year period only 15% to 17% of the tax loss occurred in rural areas while 83% to 85% occurred in urban areas.

Since the rebate is financed by 5% of the gross sales of the Iowa state liquor stores it is not directly related to total tax loss. As can be seen from the table the amount rebated from one year to the next is quite unpredictable. In general the rebate has grown some over the period.

Under the formula presently used by the state, which will be discussed more fully in Chapter IV, each county receives a rebate proportional to the exempted property in that county. Therefore, the percentages in columns five and six of Table 11 are identical to those in columns two and three of Table 10.

Columns seven and eight of Table 11 show that rural areas receive a larger percent of their tax loss in rebate than do urban areas. Column nine shows that in 1954, 31.13% of the tax loss was repaid by the rebate,
but over the period this has decreased to 21.91% in 1965. Tax loss has grown faster than the rebate. Because of the extremely low rebate in 1962 only 17.35% of the loss was repaid.

3. Relation of net tax loss and taxes levied

From Table 12 one can compare net tax loss and net taxes levied over the period and the impact of the net loss on rural and urban areas.

Net tax loss is the tax loss minus the rebate. The net tax loss nearly doubled between 1954 and 1965. The relatively high net tax loss of over $9 million in 1962 resulted from the low rebate in that year.

The percent of net tax loss occurring in rural areas has varied between 13% and 14% every year except in 1954 when it was 12 percent. This leaves a fairly constant 86% to 88% of the net tax loss which occurs in urban areas.

During the same period net taxes have nearly doubled from about $249 million to about $492 million. In 1954 there was a fairly even division of the taxes -- 48% rural and 52% urban. There is a clear trend for a larger percent of the total taxes to be urban. By 1965, 57% were urban and only 43% were rural.

From the seventh and eighth columns of Table 12 one sees that the proportion of net tax loss to taxes levied is much smaller for rural than for urban areas. The difference between the ratios is somewhat smaller in the last years of the period because the urban proportion of net tax loss has remained quite constant while taxes have become more concentrated in urban areas.
Table 12. Relation of rural-urban net tax loss and net taxes levied between 1954 and 1965 in Iowa

<table>
<thead>
<tr>
<th>Year and source</th>
<th>Net tax loss$^a$ (in thousands of dollars)</th>
<th>% rural</th>
<th>% urban</th>
<th>Net taxes levied (in thousands of dollars)</th>
<th>% rural</th>
<th>% urban</th>
<th>Net tax loss as % of net taxes levied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954 (29, p. 185)</td>
<td>4,478</td>
<td>12</td>
<td>88</td>
<td>248,873</td>
<td>48</td>
<td>52</td>
<td>.46 % 3.03 % 1.80</td>
</tr>
<tr>
<td>1955 (30, p. 171)</td>
<td>5,148</td>
<td>13</td>
<td>87</td>
<td>264,045</td>
<td>48</td>
<td>52</td>
<td>.53 % 3.25 % 1.95</td>
</tr>
<tr>
<td>1956 (31, p. 196)</td>
<td>5,945</td>
<td>14</td>
<td>86</td>
<td>280,355</td>
<td>47</td>
<td>53</td>
<td>.64 % 3.41 % 2.12</td>
</tr>
<tr>
<td>1957 (32, p. 225)</td>
<td>6,210</td>
<td>14</td>
<td>86</td>
<td>299,499</td>
<td>46</td>
<td>54</td>
<td>.63 % 3.28 % 2.07</td>
</tr>
<tr>
<td>1958 (33, p. 257)</td>
<td>7,081</td>
<td>14</td>
<td>86</td>
<td>323,873</td>
<td>45</td>
<td>55</td>
<td>.68 % 3.42 % 2.19</td>
</tr>
<tr>
<td>1959 (34, p. 259)</td>
<td>7,508</td>
<td>14</td>
<td>86</td>
<td>353,610</td>
<td>45</td>
<td>55</td>
<td>.65 % 3.34 % 2.12</td>
</tr>
<tr>
<td>1960 (35, p. 25)</td>
<td>8,052</td>
<td>14</td>
<td>86</td>
<td>380,274</td>
<td>45</td>
<td>55</td>
<td>.64 % 3.33 % 2.12</td>
</tr>
<tr>
<td>1961 (36, p. 17)</td>
<td>8,185</td>
<td>14</td>
<td>86</td>
<td>403,962</td>
<td>45</td>
<td>55</td>
<td>.61 % 3.18 % 2.03</td>
</tr>
<tr>
<td>1962 (37, p. 17)</td>
<td>9,004</td>
<td>14</td>
<td>86</td>
<td>424,493</td>
<td>45</td>
<td>55</td>
<td>.66 % 3.30 % 2.12</td>
</tr>
<tr>
<td>1963 (38, p. 17)</td>
<td>8,511</td>
<td>13</td>
<td>87</td>
<td>447,175</td>
<td>45</td>
<td>55</td>
<td>.56 % 2.98 % 1.90</td>
</tr>
<tr>
<td>1964 (18)</td>
<td>8,795</td>
<td>13</td>
<td>87</td>
<td>469,375</td>
<td>44</td>
<td>56</td>
<td>.56 % 2.92 % 1.87</td>
</tr>
<tr>
<td>1965 (19)</td>
<td>8,865</td>
<td>14</td>
<td>86</td>
<td>492,328</td>
<td>43</td>
<td>57</td>
<td>.56 % 2.75 % 1.80</td>
</tr>
</tbody>
</table>

$^a$Net tax loss equals tax loss minus the rebate. Table 11 gives the values for tax loss and rebate.
When one looks at the ratio of the net tax loss to taxes levied for the state one sees that it rose from .0180 in 1954 to .0219 in 1958 and then fell again to .0180 in 1965. What it will be in the future depends upon the relative levels of exemption, millages, and taxes.
III. ALTERNATIVE PLANS

In a prior section the plans used in different states for granting an exemption or benefit to veterans on their property taxes were discussed. This section deals with the advantages and disadvantages of some of the plans and analyzes what the effect would be if they were applied in Iowa.

First, the advantages and disadvantages of two plans used in a large number of the states will be discussed. A full analysis of their effect if applied to Iowa will not be made because of the lack of necessary data. The one plan involves the preferential treatment of veterans who are disabled over those who are not. The other plan involves the specification that only property used as a homestead can qualify for an exemption.

If one considers the exemption as a repayment for economic loss due to military service, then there is little doubt that a disabled veteran should receive a larger exemption. His earning power will most likely be lowered because of the disability and he will therefore suffer a greater economic loss than a veteran who was not disabled. The federal government may repay at least a portion of the increased economic loss of a disabled veteran through pensions and medical services. As was pointed out earlier it would seem more logical and equitable for the federal government to repay any economic loss which veterans may suffer than for states to grant a property tax exemption for that purpose. If, however, a veteran is disabled to the extent that his major source of livelihood is from a pension then it would be somewhat inefficient for him to pay property taxes from that pension.
Allowing the exemption only on the homestead can be defended in that it exempts a necessity of life from taxation while exemptions on productive property may encourage inefficient marginal producers to retain ownership and management of productive property. An increased amount of administrative burden results under such a plan because evidence must be obtained and a decision made concerning the qualification of each property as a homestead.

If such a plan were introduced in Iowa it appears likely that most present claimants pay taxes on property which would qualify as a homestead. Under such a plan the claimant would not have a choice of several different properties with different mill levies on which he could apply the exemption. As has already been pointed out (see Table 5) the survey indicated that 80.7% of the claimants pay taxes on residential real property. Most of this residential property could be expected to qualify as a homestead. Because the dwelling units of farmers are designated as agricultural property, many of the 18.4% of the claimants holding agricultural property could be expected to qualify for an exemption on property used as a homestead.

It appears that allowing the exemption to apply only to homestead property would increase the burden of administering the exemption, but might have more desirable economic effects. It is doubtful that such a plan would decrease the number of claimants appreciably if it were applied in Iowa.

1See page 108.
The following plans will be analyzed more completely:

1) The inclusion of a means test so that a veteran must fall below a certain income or asset level before he can qualify for the exemption.
2) Fixing a maximum of aggregate tax savings which can be obtained from the exemption.
3) Granting the exemption over a specified period of years only.
4) Granting a fixed credit on the tax bill rather than an exemption.
5) Completely abolishing the exemption.

A. Means Tests

A number of states have included a means test in their qualification requirements for an exemption. In Michigan a veteran must earn less than $7,500 annual income to qualify (49), while in North Dakota the maximum qualifying income is $3,000. In New Hampshire the assessed value of the residence must be less than $10,000 (53) while in Arizona the assessed value of all property must not exceed $5,000 if a veteran is to qualify for the exemption. In California not only assessed property is considered but all non-taxable property including checking accounts, life insurance policies, etc. The total value of all property in California must be less than $5,000 for a single veteran and less than $10,000 for married veterans or their widows (3).

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It should be noted that while such means tests increase the burden of administering the exemption for a particular claimant, they decrease the number of eligible veterans.

Is there any defensible reason for including a means test as a qualification requirement for the veterans' exemption? If the exemption is considered a repayment for economic loss then a means test implies that those who earn larger incomes or own large amounts of property suffered no economic loss. Actually such veterans would most likely be those who suffered the greatest economic loss. An important exception applies to those whose low income or lack of property holdings is a result of a disability suffered during the service.

If the exemption is considered to be a reward for service then the means test implies that those earning small incomes and owning small amounts of property made the greatest contribution. There is no obvious reason to believe this to be true.

One might defend the purpose of a veterans' exemption which includes a means test as being to help those veterans whose income or property ownership remains low for a few years as they re-enter civilian economic life.

To prevent certain people from bypassing an income or asset test it would probably be necessary to consider the income or assets of both the veteran and his wife. Most states using a means test seem to consider this. It should be noted that if assessed valuation were used in determining a maximum asset level it would increase resistance to raising the assessment ratio.
1. Means test on income

Table 13 shows what effects different means tests on income would have had in Iowa in 1964. The table shows that even at a maximum income as high as $7,000 a large proportion of the claimants would not have qualified. The number of claimants would have decreased from over 236 thousand to under 129 thousand. The exemption would have decreased from over $122 million to under $70 million. Tax loss would have decreased from over $11.6 million to under $6.5 million with a corresponding increase in taxes levied. This assumes that no change in millage would have accompanied the income test. If an income test would have been set at $3,000 then the impact of the exemption on the state would have been significantly decreased. The claimants would have numbered only approximately 31 thousand and tax loss would have been only 1.7 million.

Table 13. Effect of an income test on the veterans’ exemption in Iowa

<table>
<thead>
<tr>
<th>Income</th>
<th>Less than $3,000</th>
<th>Less than $5,000</th>
<th>Less than $7,000</th>
<th>No limit (present system)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterans’ exemption</td>
<td>18,250</td>
<td>46,515</td>
<td>69,147</td>
<td>122,299</td>
</tr>
<tr>
<td>Tax value of veterans’ exemption</td>
<td>1,701</td>
<td>4,290</td>
<td>6,459</td>
<td>11,692</td>
</tr>
<tr>
<td>Exemption claimants</td>
<td>31</td>
<td>81</td>
<td>128</td>
<td>236</td>
</tr>
<tr>
<td>Total net taxes levied</td>
<td>298,329</td>
<td>295,610</td>
<td>293,325</td>
<td>287,811</td>
</tr>
</tbody>
</table>

\[a\text{Source: taxation survey.}\]
\[b\text{See page 112 for definition of income.}\]
\[c\text{The actual survey estimate has been readjusted in each case by a factor of 122,299,000/128,870,000 to account for the overestimation explained on page 35.}\]
2. Means test on net assets

Table 14 shows what the effects of a net asset test would have been if applied in Iowa in 1964. Less than half as many claimants would have qualified for the exemption had there been a maximum net asset level of $15,000. The resulting veterans’ exemption and tax value of the exemption would both have been less than half what they actually were. If a maximum net asset level of $5,000 had been set the number of claimants would have declined to 25 thousand and the tax loss to under 1 million dollars.

Table 14. Effect of a net asset test on the veterans’ exemption in Iowa

<table>
<thead>
<tr>
<th>Net assetsb</th>
<th>Less than $5,000</th>
<th>Less than $10,000</th>
<th>Less than $15,000</th>
<th>No limit (present system)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(In thousands)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterans’ exemptionc (dollars)</td>
<td>10,286</td>
<td>33,882</td>
<td>54,578</td>
<td>122,299</td>
</tr>
<tr>
<td>Tax value of veterans’ exemptionc (dollars)</td>
<td>901</td>
<td>3,249</td>
<td>5,261</td>
<td>11,692</td>
</tr>
<tr>
<td>Exemption claimants</td>
<td>25</td>
<td>70</td>
<td>111</td>
<td>236</td>
</tr>
<tr>
<td>Total net taxes levied (dollars)</td>
<td>299,182</td>
<td>296,707</td>
<td>294,587</td>
<td>287,811</td>
</tr>
</tbody>
</table>

a Source: taxation survey.

b See page 113 for definition of net assets.

c The actual survey estimate has been readjusted in each case by a factor of 122,299,000/128,870,000 to account for the overestimation explained on page 35.
This analysis has shown that higher income and net asset classes both contain large proportions of the claimants. For these claimants the tax savings from the exemption is small relative to their income or net asset level and failure to receive the exemption would not be likely to have a noticeable effect on their standard of living. For those at the lower income or net asset levels, failure to receive the exemption might force more drastic readjustments in their living standards. If it were considered desirable to decrease the scope and impact of the veterans' tax exemption without unduly disrupting the economic situation of any individual, a maximum income or net asset qualification requirement might be used.

B. Maximum Aggregate Tax Savings

Wyoming is the only state which places a maximum on the aggregate tax savings to each veteran. This limit does not apply to those who are disabled or to unmarried widows. After a veteran has accumulated $800 tax savings he is no longer eligible to receive an exemption (65). Under this system each veteran receives an equal aggregate savings and the exemption is terminated more rapidly than if the veteran remained eligible throughout his lifetime. The millage on exempted property has no effect on aggregate tax savings except to cause them to accumulate and reach the maximum more quickly. The more rapidly the tax savings accumulate the longer the veteran has use of the money. One could determine how important this fact is by comparing the discounted values of the tax savings resulting from different millages.
As each veteran receives a nearly equal benefit under this plan it would seem an appropriate plan if one considers the exemption as a reward or bonus to veterans. It would be an appropriate plan to repay economic loss only if one assumed that an equal loss occurred to each veteran.

Such a plan would require a large amount of administrative record keeping during those years which the claimant remained eligible. However, after the maximum tax savings has been reached the exemption is terminated and incurs no more administrative time. Given current Iowa millages tax savings would accumulate more slowly in rural than urban areas resulting in a larger administrative cost per rural claimant.

Figure 2 depicts the cumulative tax savings of rural and urban individuals receiving exemptions. The product of the relevant average millage and exemption was used to estimate the tax savings for each year. The WW I and WW II veterans tax savings shown in Figure 2 are those tax savings occurring since 1945. World War I veterans were able to receive a significant amount of tax savings before 1945 but for those WW II veterans who first applied their exemption in 1945 it represents the total tax savings. In 1945 the exemption for WW I veterans was increased from $500 (8) to $750 and the exemption of $500 was initiated for WW II veterans (14). Figure 2 also shows the cumulative tax savings of a Korean veteran who has applied his exemption regularly since 1955.

One immediately observes that a WW I veteran in an average urban area has been able to accumulate over $1,200 just since 1945 and even the rural WW I veteran has been able to accumulate over $750 savings since 1945.
Figure 2. Cumulative tax savings of veterans

Sources:
1945 (20, p. 151)
1946 (21, p. 147)
1947 (22, p. 143)
1948 (23, p. 153)
1949 (24, p. 145)
1950 (25, p. 159)
1951 (26, p. 167)
1952 (27, p. 202)
1953 (28, p. 247)
1954 (29, p. 185)
1955 (30, p. 171)
1956 (31, p. 196)
1957 (32, p. 223)
1958 (33, p. 257)
1959 (34, p. 259)
1960 (35, p. 25)
1961 (36, p. 17)
1962 (37, p. 17)
1963 (38, p. 17)
1964 (18)
1965 (19)
One can conclude that virtually all WW I veterans who have regularly applied their exemption would have exceeded $800 of tax savings by 1965. An $800 maximum aggregate tax savings plan would immediately make these older veterans ineligible to receive an exemption. An amount either smaller or larger than $800 could of course be used as a maximum tax savings, but no matter what the amount, older veterans would tend to reach the maximum first. As was pointed out in the income and occupation data a large proportion of these older veterans are in low income classes and are not employed or retired. Loss of the veterans' exemption might be quite an economic shock to these people.

While an urban WW II veteran who had regularly applied his exemption would have been over the $800 maximum aggregate tax savings, a rural WW II veteran would have only accumulated approximately $500 of tax savings by 1965. The dotted lines extending past 1965 show future tax savings under the assumption that millages remain at 1965 levels. Under this assumption it would take rural WW II veterans until 1974 to accumulate $800 tax savings. This would be nine years longer than for the urban veteran. Urban Korean war veterans who regularly applied their exemption since 1955 would have accumulated $494 tax savings by 1965 while for rural veterans savings would have amounted to only $324. Under the assumption of constant 1965 millages the urban Korean veterans would reach $800 cumulative savings by 1972 and rural Korean veterans would require seven additional years taking until 1979. As is evident from Figure 2, under the present plan which sets no maximum aggregate savings the difference between aggregate savings of urban and rural veterans of the same war
continues to increase over time.

It appears that setting a maximum aggregate savings provides a method of terminating the exemption before death of the veteran in such a way that each veteran receives equal aggregate tax savings. The discounted values of the savings will not be equal because they accumulate over different time periods for different individuals. Given the current relation of rural and urban millages urban claimants would reach the maximum more rapidly and thus the discounted value of their tax savings would be greater than that of rural claimants. In general the older veterans will be the ones who will have reached the maximum and they are a group likely to be most adversely affected by loss of the exemption.

C. Specific Time Period

Louisiana grants a veterans' exemption over a specific period of years only. Veterans of WW I, WW II, or the Korean Conflict are allowed to claim their exemption only during the five year period between 1965 and 1969 (43).

Under such a plan no records need be kept of the aggregate tax savings of each claimant making the administrative burden much lighter than under the aggregate tax savings plan. All of the administering of the plan is accomplished during the set period of time.

Figure 2 shows what the cumulative tax savings of each would be if the exemption in Iowa were to be terminated in 1969. All projections in Figure 2 past 1965 assume a 1965 millage level. Such a plan would have allowed Korean Conflict veterans a 15 year period during which to claim an exemption.
A Korean veteran applying his exemption on property taxed at the average urban millage would accumulate nearly $700 tax savings by 1969. If he applied his exemption on property taxed at the average rural millage, he would accumulate just over $450 tax savings. The differences between accumulated tax savings of rural and urban WW II and WW I veterans would be even greater. In the case of rural and urban WW I veterans there would be a difference of $1,500 in the tax savings accumulated just since 1945. Terminating the exemption at a certain point in time leaves veterans from the same war with wide differences in accumulated tax savings. Such a situation seems hard to justify.

Under the present system the exemption is terminated only upon the death of the claimant. The aggregate tax savings can become quite large and the difference between rural and urban tax savings also continues to grow.

A Korean veteran who was 25 years old in 1955 and continuously applied his exemption to urban property until he reached 70 years of age in the year 2000 could expect to accumulate over $2,000 of tax savings. A similar veteran applying his exemption on rural property could expect to accumulate just over $1,500. This leaves $700 difference in the aggregate tax savings. These amounts were obtained under the assumption that the millages remain at the 1965 level throughout the period.

D. Tax Credit Plan

All of the plans considered thus far have exempted a certain amount from the taxable assessed valuation of a veteran's property. This section
will examine the results of deducting a fixed dollar amount from the property tax bill of eligible veterans. New Jersey follows such a plan in which they deduct $50 annually from the property tax bill of eligible veterans (55).

Such a plan has the advantage of allowing each veteran claiming the exemption an equal tax savings each year. If the benefit to the veteran is considered a reward for service, then such a plan rewards each veteran equally in terms of tax savings. If the benefit is considered a repayment for economic loss suffered as a result of the veteran's service then this plan would imply that the economic loss was equal for all veterans.

Under this credit plan the amount of tax savings would not increase with increases in millage as it does when an exemption plan is used. For example tax savings of WW II veterans applying their exemption on property with average urban millage, have increased from $21 in 1945 to $49 in 1965 due to millage increases.

Administrative record keeping should be somewhat less complex under a credit plan than under an exemption plan. The credit plan could be combined with a maximum level of tax savings and all who from some initial date annually obtained their deduction would reach the maximum at the same time. The amount of deduction which should be set is somewhat arbitrary. If in 1964 Iowa would have given a $40 deduction in place of the $500 exemption, a $60 deduction in place of the $750 exemption, and a $240 deduction in place of the $1,800 and $3,000 exemptions the total deduction would have amounted to not more than $10,568,420. The total de-
duction was calculated by multiplying each deduction times the number of claimants who would have received that deduction and summing the three products. Had the credits been placed at $50, $75, and $300 in place of the $500, $750, and greater than $750 exemptions respectively the total deduction over the state would have amounted to not more than $13,210,525. This assumes that every claimant would have had a sufficiently large tax bill to use all his deduction. Actually there were likely a number of claimants who would not have been able to use all their credit and so the total would have been less.

We have estimated that the total tax loss was $11,691,000 under the exemption system which was actually in effect. The credits of $40, $60, and $240 would have produced a total credit somewhat smaller than this estimated tax loss while the $50, $75, and $300 credits would have likely produced a total larger than this estimated tax loss. These credit examples are chosen such that the WW I credit is 1.5 times the WW II credit and the largest credit is four times the WW I credit thus the proportions are the same as those found in the $500, $750, and $3,000 exemptions.

Exemptions of $500, $750, and $3,000 on property taxed at 80 mills produce tax savings of $40, $50, and $240 respectively. Thus a change from the present exemption plan to the plan granting $40, $60, and $240 credits would benefit those individuals who apply their exemption to

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1 Source (39).

2 See Table 9.
property taxed at less than 80 mills. Those individuals would receive a greater deduction on their tax bill under the credit plan than they now save in taxes as a result of the exemption. The opposite is true for those individuals who apply their present exemption to property taxed at higher than 80 mills. For the larger credits the break even millage would be 100. Exemptions of $500, $750, and $3,000 on property taxed at 100 mills produce tax savings of $50, $75, and $300 respectively. Because of the rural-urban millage differential the change would in general benefit rural individuals and decrease the benefit to urban individuals.

Local governments in predominately rural areas would lose a larger amount of property tax while local governments in urban areas would lose a smaller amount if the credit system were used. It has previously been noted that tax loss due to the exemption is a much smaller percentage of total taxes in rural areas than in urban areas. Thus it would seem that the effects of the credit plan on tax loss to local governments would be desirable.

In a subsequent section it will be shown that the credit plan would facilitate a simple and equitable method for figuring the amount of rebate which should be paid to each county by the state.

E. Abolishing the Exemption

This section will analyze the effects of completely abolishing the veterans' property tax exemption. Property taxpayers are divided into those who claim a veterans' exemption and those who do not. The 1964
total taxes of each group are compared with what they would have been had there been no exemption. The theoretical framework used here could be applied to data from any year.

The symbols which will be used are defined as follows:

Variables:  \( V \) = Net state valuation of real, personal, and utilities property.

\( M \) = Average state millage on real, personal, and utilities property.

\( T \) = The amount of tax or the tax value of the exemption depending on which is applicable.

\( R \) = Rebate on real and personal exempted property for the state.

\( \Delta M \) = change in average state millage on real, personal, and utilities property when the exemption is in effect.

Variable subscripts:  

\( a \) Indicates taxes, valuation, or millage of people having no veterans' exemption.

\( b_1 \) Indicates taxes, valuation, or millage on non-exempt property of people who do have an exemption.

\( b_2 \) Indicates taxes, valuation, or millage on exempt property of people who do have an exemption.

No subscript indicates the total of the three subscripts above.
Variable primes: A primed variable indicates that the exemption is in effect.

A variable without a prime indicates that the exemption is not in effect.

Two assumptions will be made for this particular analysis.

1) Property taxes collected when the exemption is not in effect equal the sum of the rebate and taxes collected when it is in effect. In symbols this can be stated as $T_1 = T'_a + T'_b + R$.

2) There is no difference in the millages which are applied to the different classes of property. This assumption is $M = M_a = M_b = M_{b1} = M_{b2}$.

As has been noted previously the average millage on exempt property appears to be significantly higher than the average millage on other property, and therefore the second assumption is somewhat unrealistic. This over-simplification made in the assumption will only slightly affect the magnitude and not the signs of the variables and thus the results are still of interest.

From assumption 2:

$$T = M(V_a + V_{b1} + V_{b2})$$

and

$$T' = (M + \Delta M)(V_a + V_{b1} + V_{b2})$$

thus

$$\frac{T}{T'} = \frac{M}{M + \Delta M}$$

set

$$\frac{M}{M + \Delta M} = k$$

then

$$T = kT'$$
Thus taxes when the exemption is not in effect would equal a constant, k, multiplied by the sum of taxes and the tax value of the exemption when the exemption is in effect;

\[
\text{but } R + T_a' + T_{b1}' = T, \text{ by assumption 1}
\]

and \( kT' = T_a' + T_{b1}' + R \)

thus \( k = (T_a' + T_{b1}' + R) / (T_a' + T_{b1}' + T_{b2}') \)

We can now find the value of k since all the necessary values are given from our data as follows in thousands of dollars:

\[
\begin{align*}
T_a' + T_{b1}' &= 469,375^1 \\
T_{b1}' &= 86,556^1 \\
T_{b2}' &= 11,691^2 \\
T_a' &= 469,375 - T_{b1}' = 382,819 \\
R &= 2,791^3 \\
\text{Thus: } k &= 0.9814994 \\
kT_a' &= T_a = 375,737 \\
kT_{b1}' &= T_{b1} = 84,955 \\
kT_{b2}' &= T_{b2} = 11,475 \\
T_a' - T_a &= -7,082 \\
T_{b1}' - T_{b1} &= -1,601 \\
T_{b1}' + T_{b2}' &= 96,430
\end{align*}
\]

\(^1\text{Source survey.} \)

\(^2\text{See Table 9.} \)

\(^3\text{See Table 11.}\)
The values for $T_A$, $T_{B1}$, and $T_{B2}$ show us what total taxes would have been on the three classifications of property had the military exemption not been in effect. The taxes of those without an exemption would have been $7,082,000 less than they were with the exemption. Those who had an exemption would have paid $1,601,000 less on their nonexempt property had there been no exemption, but would have paid $11,475,000 on their exempt property. They would have paid a total of $96,430,000 rather than the $86,556,000 which they actually paid. It is interesting to note that under this analysis those people who enjoy a benefit of $11,475,000 from the exemption actually pay $1,601,000 of that benefit themselves because of increased millage rates on their nonexempt property. The remainder of the benefit is paid by those without an exemption and the rebate which comes from the state liquor sales. It is important to note that if the rebate were equal to the tax value of the exemption the millage rate would not change.

If $R = T_{B2}$

$$k = \frac{(T_a + T_{B1} + R)}{(T_a + T_{B1} + T_{B2})} = 1$$

and $k = \frac{M}{M + AM} = 1$ implies that $AM = 0$.

The fact that the taxes of those without an exemption and the taxes on nonexempt property of those with an exemption are larger when the exemption is in effect results from the fact that the rebate is not as large as the tax loss.

From the Tax Commission (18) one can obtain $M + AM = 84.211$ mills for 1964. Because $k = \frac{M}{M + AM}$ we can find that $M = 82.653$ mills and $AM = 1.558$ mills. Under this analysis the increase in the millage due
to the exemption was 1.558 mills.

An individual who has a military exemption and owns a substantial amount of property may actually have a smaller total tax bill when the exemption is not in effect. The average millage on exempted property was 96 in the taxation survey. An exemption of $500 on property taxed at 96 mills would save $48 in taxes; however, the increase of 1.558 mills applied to $30,809 nonexempt property would increase taxes by $48. Thus an individual with a $500 exemption on property taxed at 96 mills and over $30,809 nonexempt property would actually pay more total taxes with the exemption in effect than if it were not. Even if he has only one half that amount of nonexempt property, his tax savings from the exemption are cut in half. For an individual with a $750 exemption on property taxed at 96 mills the tax savings would be $72, and his total tax bill would be greater if he owned over $46,213 of nonexempt property. This is because a 1.558 mill increase on $46,213 of assessed value will increase the tax bill by $72 which is the amount saved on the exempted property.
It has been noted earlier that someone must pay for the tax loss resulting from the exemption. Someone must pay in the sense that either his taxes are higher or he receives a lower level of public services. Local governments and their services are most directly affected. A decision must be made as to who will pay for this tax loss. In deciding who should pay, the traditional concepts of benefit received and ability to pay will be considered. The first concept proposes that people should pay for public services in proportion to the benefit they receive from them. The second concept proposes that they should pay for public services in proportion to their ability (51).

It is not clear how one should evaluate the benefit received by individuals or counties from the defense provided by veterans during the war. We might consider being able to continue to live in a free country as the most important result of defense from which each person benefits equally. On the other hand we might say that each person benefitted according to the amount of property which he owned and which was defended by the veterans.

If none of the tax loss suffered by the local government is compensated by a rebate from the state then the loss may be paid in the form of higher property tax rates. Such a situation would be consistent with the benefit approach if one considers the amount of property owned as an index of that person's benefit from the service of the veteran.

If no rebate or rise in property taxes occurred the payment for the exemption would be made by those receiving a lower level of public services.
Such a situation would be more consistent with the concept that each benefitted equally from the veterans' services.

Ability to pay is usually linked to income levels or the amount of wealth which would include property owned. It would be possible for the state to rebate all the tax loss to the local government. If funds for the rebate came from, say state income tax revenue, then this would involve more nearly an ability to pay approach.

The present situation in Iowa lies between the two extremes mentioned above in that a portion of the tax loss is rebated to local governments. Under the present Iowa law no county can receive as a rebate more than 25 mills for each dollar of exempted valuation in that county. Because the average millage of every county is well over 25 mills the rebate can only partially compensate for the tax loss.

The tax credit for each county is computed by multiplying the amount of the exemption times 25 mills if the millage levy on that property was at least 25 mills or times the millage if the levy was less than 25 mills. The actual rebate paid to each county is directly proportional to the tax credit for that county. The ratio between the total amount to be rebated and the total amount of tax credit for the state is computed. This ratio multiplied times the tax credit for each county gives the amount of rebate which that county will receive.

The 5% of the gross sales of the Iowa state liquor stores which replenishes the military service tax credit fund is an arbitrary amount. It bears no direct relation to the actual amount of tax loss due to the exemption nor does it bear any direct relation to the total amount of tax credit figured for the counties. In practice between the years 1954 and
1965 the ratio of total amount rebated to the total amount of credit has varied between .816 and .913 (29-38; 41-42).

From Table 9 we noted that between 1954 and 1965 the rebate never amounted to more than 31% of the total tax loss and in one year only amounted to 17% of the tax loss. One can conclude that the state rebate pays only a portion of the tax loss in Iowa and that from year to year the proportion which will be paid is quite unpredictable.

A. Alternative Rebating Methods

When only a portion of the tax loss is to be rebated then one must decide how the total rebate is to be divided among the counties. The present Iowa method which has just been explained divides the total rebate in proportion to the amount of exempt property in each county. This method does not consider the fact that tax loss depends upon millage as well as the amount of exempt property.

An alternative method of dividing the rebate among the counties would be to pay to each county an equal proportion of their tax loss. Such a method would take into consideration the fact that the actual revenue loss to the county is in taxes and not the amount of property exempted.

If the exempted property is more concentrated in certain counties than others then these counties will lose a larger proportion of their taxes. This will occur even under the rebating method just suggested. Thus one might alternatively propose that the rebate be made in such a way that for each county the net tax loss is a constant proportion of the total taxes. Net tax loss is the tax loss minus the rebate. Such a method would introduce an ability to pay criterion in that the net tax loss left
for each county would be proportional to the taxes it collected. The index of each county's ability to pay would be the amount of taxes which that county collected.

Three methods which could be used to divide the rebate among counties have been outlined. 1) The present method divides the rebate in proportion to the exempt property in each county. 2) The rebate could be divided in proportion to the tax loss of each county. 3) The rebate could be divided such that the ratio of net tax loss to total taxes collected would be equal for all counties. The first two of these rebating methods will be discussed in relation to their effect in Iowa. In addition we will analyze how nearly the first two methods approximate the criterion of the third rebating method. Either of the rebating methods could be used in connection with any of the alternative exemption plans which were formerly discussed. It should be noted that implementation of the second or third rebating plan would require a change of the Iowa law.

The first method will produce a significantly different division of the rebate than will the second one. This is because of the large differences in millages among the counties. By merely looking at Table 11 one can see that the present rebating method returns a much larger proportion of tax loss to rural areas than to urban areas. Thus one would expect predominantly rural counties to receive a larger proportion of their tax loss as a rebate than predominantly urban counties. From Table 12 it is evident that for urban areas the proportion of net tax loss to taxes levied is larger than for rural areas.

Calculations have been made to determine how much each county would have received in 1964, had the rebate been divided in proportion to the
tax loss in each county. Tax loss was estimated from the rural and urban average millages of the county and the corresponding amount of exempt real and personal property. This formula for estimating the tax loss is the same as that used to obtain the tax loss estimates in column three of Table 9. To determine what proportion of the state rebate of $2,792,937.70 was due to exempt real and personal property rather than exempt monies and credits the following calculations were made:

\[
\frac{\sum_{1}^{99} (\text{county real and personal exemption}) \times (25 \text{ mills})}{\sum_{1}^{99} (\text{county credit for all exemption})} = \frac{3,057,473.97}{3,059,402.85} = 0.9993695
\]

Thus $2,791,177 of the state rebate was applied to exempt real and personal property. Each county would have received 24.0% of their tax loss as a rebate had this fund been divided among the counties according to the second rebating method as is shown by the following:

\[
\frac{\text{total rebate for real and personal property exemption}}{\text{total tax loss on real and personal property in state}} = \frac{2,791,177}{11,614,373} = 0.240.
\]

The rebate which would have occurred to each county under the second rebating method was computed by taking 24% of each county’s tax loss. Cal-

1To use this formula for a county’s credit one must assume that all exempt property has a tax levy of at least 25 mills. By subtracting the credit due to monies and credits exemption from the total credit shown in the Tax Commission data (41) one obtains a total of $3,057,413.25. This indicates that an extremely small amount of the property had a tax levy of less than 25 mills.

2Including credit due to monies and credits exemption.

3Source (41).
Calculations were also completed for each county to determine what percentage the rebate received under first method was of that county's tax loss. With the first method which was actually used the percent of tax loss received as a rebate ranged from a low of 18.8% in Polk county to a high of 35.8% in Carroll county. Thus some counties received as a rebate almost twice as large a proportion of their tax loss as did other counties.

Table 15 shows that had the second method been used the group of counties in the large county stratum would have received nearly 130 thousand dollars more rebate than they did. Six of the seven counties in that stratum would have benefitted. Dubuque is the only one of the seven which would have received a smaller rebate. An opposite situation would have occurred in the small county stratum. As a group they would have received approximately 120 thousand dollars less rebate. Fifty-three of the sixty counties in the stratum would have received smaller rebates. The effect would have been quite mixed in the medium county stratum. One can conclude that in general, changing to a rebating method which divides the rebate in proportion to the tax loss would cause the large counties to receive a larger rebate and the small counties to receive a smaller rebate.

It has been pointed out that even if each county received an equal proportion of its tax loss as a rebate, the ratio of net tax loss to taxes levied would still vary among counties. This would result from the fact that the ratio of exempted property to net taxable property varies among counties.

\footnote{See Figure 3 for county composition of strata.}
Table 15. Distribution of the 1964 rebate under first and second rebating methods

<table>
<thead>
<tr>
<th>County stratum</th>
<th>Large</th>
<th>Medium</th>
<th>Small</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratum rebate:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First method</td>
<td>1,021,243</td>
<td>928,010</td>
<td>841,924</td>
<td>2,791,177</td>
</tr>
<tr>
<td>Second method</td>
<td>1,149,945</td>
<td>918,238</td>
<td>722,994</td>
<td>2,791,177</td>
</tr>
<tr>
<td>Counties in stratum</td>
<td>7</td>
<td>32</td>
<td>60</td>
<td>99</td>
</tr>
<tr>
<td>Counties benefitting from second method</td>
<td>6</td>
<td>13</td>
<td>7</td>
<td>26</td>
</tr>
</tbody>
</table>

Source of original data (18, 31).

See Figure 3 for county composition of strata.

We shall take for an example Polk and Taylor counties, from the large and small counties respectively. In 1964 Polk county received only .1881 of its tax loss from the rebate while Taylor county received .2646 of its tax loss as a rebate. The ratio of net tax loss to taxes levied was .0284 in Polk county and only .0162 in Taylor county. If the second rebating method would have been used each county would have received .2403 of tax loss from the rebate. This change in rebate would have decreased the ratio of net tax loss to taxes levied in Polk county to .0266 and increased it in Taylor county to .0168. The remaining difference in the ratios results from the fact that in Polk county the ratio of exemption to net valuation was .0342 while in Taylor it was only .0198.¹

¹Source of original data (18, 38).
While this was an example of only one large and one small county, the same situation can be expected in general. Table 12 shows that for the state, urban net tax loss is a larger percent of taxes levied than in rural areas. We have noted that if the second method of rebating were used urban areas would in general receive a larger proportion of the rebate. Thus the ratios of net tax loss to taxes levied for rural and urban areas would become more equal. The ratio for urban areas would still be larger as a result of the fact that the ratio of the exemption to the net valuation is greater in urban areas than rural. Thus one can conclude that if the rebate were divided in proportion to tax loss the difference between urban and rural ratios of net tax loss to taxes levied would be smaller but not zero.

B. The Effects of Changes in the Independent Variables upon the Ratio of Net Tax Loss to Net Taxes Levied

The ratio of net tax loss to net taxes levied can be represented mathematically. The ratio using the current rebating method will be represented by $F_1$ while $F_2$ will represent the ratio when the rebate is divided proportional to tax loss.

$$F_1 = \frac{M_R E_R + M_U E_U - .025BE}{MV} = \frac{\text{Net tax loss}^1}{\text{Net taxes levied}}$$

$$F_2 = \frac{(1-D)(M_R E_R + M_U E_U)}{MV} = \frac{\text{Net tax loss}}{\text{Net taxes levied}}$$

^1 Use of this formula for net tax loss assumes that the levy on all exempt property is at least 25 mills.
where: \( T \) = Net taxes levied on county real, personal, and utilities property;

\( M \) = Average county millage;

\( V \) = Net valuation of county real, personal, and utilities property;

\( E \) = Exemption on real and personal property;

\( R \) Denotes rural;

\( U \) Denotes urban;

\( B \) = Ratio of total state rebate to total state tax credit;

\( D \) = Ratio of total state rebate to total state tax loss.

Note that: 

\[
E = E_R + E_U \\
V = V_R + V_U \\
M = \frac{V_R + V_U}{V}
\]

Throughout the analysis of this section it is assumed that the total state rebate, the total state tax credit, and the total state tax loss remain fixed. Thus \( B \) and \( D \) are not functions of the individual county variables.

1. **Effects of changes in a county's millage**

If the ratio of rural average millage to urban average millage remains a constant such that \( \frac{M_R}{M_U} = c \), we can solve for \( M_R = \frac{cMV}{V_R+V_U} \) and \( M_U = \frac{MV}{V_R+V_U} \).

By substitution, 

\[
F_1 = \frac{cE_R + E_U}{cV_R + V_U} - \frac{1}{M} \frac{0.025BE}{V} \\
F_2 = (1-D) \frac{cE_R + E_U}{V_R + V_U}
\]
One notes that $F_1$ depends not only on $c$, the ratio of rural average millage to urban average millage, but also upon the general level of $M$. However, $F_2$ is not a function of $M$ in general.

Thus, \[ \frac{\partial F_1}{\partial M} = \frac{0.025BE}{VM^2} > 0 \]

while \[ \frac{\partial F_2}{\partial M} = 0. \]

Under the first rebating method the ratio of net tax loss to taxes levied depends upon the level of the weighted average millage. The partial derivative shows that as the weighted average millage increases the ratio increases. With the second rebating method the ratio does not depend upon the weighted average millage and therefore the partial derivative is zero.

Under the current rebating method the ratio increases with an increase in the average millage and the average millage is higher in urban areas than rural areas. This identifies one of the factors causing urban areas to have a larger ratio of net tax loss to taxes levied as shown in Table 12. If the second rebating method were used the millage level would not contribute to this difference in ratios.

If one allows $c$ to vary but holds $M_U$ fixed the partial derivatives of the two functions with respect to $M_R$ are:

\[ \frac{\partial F_1}{\partial M_R} = \frac{E_R - \frac{V_R(M_R E_R + M_U E_U - 0.025BE)}{T}}{T^2} \]

\[ \frac{\partial F_2}{\partial M_R} = (1-D) \frac{M_U(V_{UE_R} - V_{UE_U})}{T^2} \]
The partial derivative of $F_1$ with respect to $M_R$ is either positive or negative depending upon the specific levels of the variables at which it is evaluated. The partial derivative of $F_2$ with respect to $M_R$ is positive only when $V_U/V_R$ is greater than $E_U/E_R$ and $D$ is less than one.

If one allows $c$ to vary but holds $M_R$ fixed the partial derivatives of the two functions with respect to $M_U$ are:

\[
\frac{\partial F_1}{\partial M_U} = \frac{E_U - V_U(M_R E_R + M_U E_U - .025 E_R)}{T} - \frac{T}{T^2}
\]

\[
\frac{\partial F_2}{\partial M_U} = (1-D) \frac{M_R(V_R E_U - V_U E_R)}{T^2}
\]

The partial derivative of $F_1$ with respect to $M_U$ is either positive or negative depending upon the specific levels of the variables at which it is evaluated. The partial derivative of $F_2$ with respect to $M_U$ is positive only when $V_U/V_R$ is less than $E_U/E_R$ and $D$ is less than one.

2. Effects of changes in a county's exemption

The following derivatives show what happens if the total exemption, $E$, in a county remains fixed while the proportion of rural exemption to urban exemption in the county changes.

\[
\frac{\partial F_1}{\partial E_R} \Bigg|_E = \frac{M_R - M_U}{T} < 0 \text{, for } M_R < M_U
\]

\[
\frac{\partial F_1}{\partial E_U} \Bigg|_E = \frac{M_U - M_R}{T} = - \frac{F_1}{E_R} \Bigg|_E
\]
\[
\frac{\partial F_2}{\partial E_R |_{E}} = (1-D) \frac{M_U - M_R}{T} < 0, \text{ for } M_R < M_U
\]

\[
\frac{\partial F_2}{\partial E_U |_{E}} = (1-D) \frac{M_R - M_U}{T} = \frac{\partial F_2}{\partial E_R |_{E}}
\]

From the partial derivatives with respect to \( F_1 \) one sees that an increase in the proportion of the exemption which is rural will cause \( F_1 \) to decrease if the rural average millage is less than the urban average millage. From the partial derivatives of \( F_2 \) one sees that an increase in the proportion of the exemption which is rural will cause \( F_2 \) to either decrease or remain fixed if the rural average millage is less than the urban average millage. The ratio, \( F_2 \), will remain fixed only if 100% of the net tax loss is rebated making \( D \) equal to one. For any \( D \) greater than zero and less than one a given change in \( E_R \) will cause a greater change in \( F_1 \) than in \( F_2 \).

It is also evident that the partial derivative of \( F_1 \) with respect to \( E_U \) is the negative of the partial derivative of \( F_1 \) with respect to \( M_R \). A similar situation exists in the case of \( F_2 \). Thus a change in \( E_U \) will produce exactly the opposite effect as a change in \( E_R \).

The preceding analysis can be summarized by stating that for \( E \) fixed, \( M_R \) less than \( M_U \), and \( D \) less than one an increase in the ratio of rural exemption to urban exemption will cause a decrease in the ratio of net tax loss to net taxes levied under both rebating systems. The decrease in the ratio, however, will be less under the second rebating method than under the first.
If the ratio of county rural exemption to county urban exemption remains fixed such that

\[ E_R = K_R E\] and \[ E_U = K_U E\], where \( K_R + K_U = 1 \)

then the effect of a change in \( E \) is shown by the following:

\[ \frac{\partial F_1}{\partial E} = \frac{M_R K_R + M_U K_U - 0.025 B}{T} > 0 \], for \( M_R \) and \( M_U > 25 \) mills

\[ \frac{\partial F_2}{\partial E} = (1-D) \frac{M_R K_R + M_U K_U}{T} > 0 \], for \( 0 \leq D < 1 \).

As would be expected an increase in the total county exemption will cause an increase in the ratio of net tax loss to net taxes levied for that county. By substituting specific values for the variables one can determine the rate of change of \( F_1 \) or \( F_2 \) with a change in \( E \). If 100% of the tax loss were rebated such that \( D \) equaled one, then \( F_2 \) would not change with a change in \( E \).

3. Effects of changes in a county's valuation

To view the effect of changes in the rural-urban ratio of net valuation, one can assume that the net county valuation remains fixed while the ratio of net rural valuation to net urban valuation varies within the county. The effects on \( F_1 \) and \( F_2 \) are shown by the following partial derivatives.

\[ \frac{\partial F_1}{\partial V_R} \bigg|_V = \frac{(M_U - M_R) (M_R E_R + M_U E_U - 0.025 B E)}{T^2} > 0 \], for \( M_R < M_U \)

\[ \frac{\partial F_1}{\partial V_U} \bigg|_V = \frac{(M_R - M_U) (M_R E_R + M_U E_U - 0.025 B E)}{T^2} = - \frac{\partial F_1}{\partial V_R} \bigg|_V \]
First note that the partial derivatives with respect to $V_R$ are the negative of the derivatives with respect to $V_U$ for both $F_1$ and $F_2$. This indicates that a given change in $V_R$ causes exactly the opposite effect that a similar change in $V_U$ would cause. Note that as long as the urban millage remains larger than the rural millage an increase in $V_R$ causes an increase in $F_1$ and except when $D$ equals one it will also cause an increase in $F_2$. The magnitude of the change in $F_1$ or $F_2$ depends upon the specific values of the variables in the derivative.

If the rural-urban ratio of net valuation remains fixed but the total county valuation changes the following derivatives indicate the effects on $F_1$ and $F_2$:

$$\frac{\partial F_1}{\partial V} = - \frac{M_R R + M_U E - 0.0256 E}{M V^2} < 0$$

$$\frac{\partial F_2}{\partial V} = -(1-D) \frac{M_R R + M_U E}{M V^2} \leq 0$$

An increase in $V$ causes a decrease in $F_1$ and, except when $D$ equals one, a decrease in $F_2$.

The preceding analysis has shown the effect of changes in the independent variables upon the county ratio of net tax loss to net taxes levied. In summary one can make certain observations. If 100% of the
tax loss in the state were rebated then D would equal one and \( P_2 \) as well as every partial derivative of \( P_2 \) would be zero. An increase in the county exemption or in the ratio of rural valuation to urban valuation causes the ratio of net tax loss to net taxes levied to decrease under either rebating method. An increase in the ratio of rural exemption to urban exemption or in the valuation causes the ratio of net tax loss to net taxes levied to decrease under either rebating method.

The effect of increases in the average county millage, the average county rural millage, or the average county urban millage upon the ratio of net tax loss to net taxes levied depends upon the rebating method used and the specific values of the independent variables.

C. Rebating Formula for Tax Credit

If a tax credit plan were used in place of an exemption plan then the most reasonable rebating method would be to rebate an equal proportion of the credit in each county. In this situation the credit granted would be the tax loss so each county would receive an equal proportion of its tax loss. The special characteristic of the credit plan is that the tax loss is a function of the number of claimants only. Thus when taxes levied increase because of either increased millage or increased valuation there is no change in tax loss. Taxes have been increasing rapidly as was shown in Table 12 and if this were to continue, the ratio of net tax loss to taxes levied would tend to decrease over time. Only a sufficient rise in claimants could offset this decrease.
This rebating method for the credit plan would return an equal proportion of tax loss to each county and for a given number of claimants the ratio of net tax loss to taxes levied would decrease with a rise in taxes.
V. SUMMARY AND CONCLUSION

Granting veterans a benefit on their property tax is not easily defensible. The benefit can be characterized as resulting from a state law which grants a benefit at the expense of local governments for services performed for the nation as a whole. The most logical solution would seem to be for all veterans' benefits to come from the federal government so that all veterans would receive uniform benefits from the services they performed for the nation.

The fact is, however, that some 30 states do grant veterans a benefit on their property tax. In Iowa the importance of the veterans' exemption is indicated by the fact that in 1964 it involved over 11 million dollars of tax loss and over 236 thousand taxpayers. These figures can be expected to increase in the future with the return of Vietnam veterans. Abolishment of the exemption would produce an increase of over 11 million dollars in local taxes (assuming tax levies would not change) but loss of the exemption might have quite adverse effects on low income claimants.

Three significant facts emerged when viewing the impact of the exemption on claimants with certain characteristics. 1) It appears that claimants earning higher incomes are able to apply their exemption on property taxed at higher millages and thus gain a larger benefit from the exemption. 2) Farmers and farm managers apply their exemption to property with millages much lower than the average and as a result receive a smaller than average benefit from the exemption. 3) Nearly all those claimants with an exemption greater than $500 are unemployed or retired.
It has been shown that nonagricultural property accounts for a much larger proportion of exempt property than of property in general. This fact is partially explained by the fact that mean nonagricultural valuation is less than mean agricultural valuation of claimants while the mean exemptions are nearly equal. The larger proportion of exempt nonagricultural property is further explained by the fact that those with a choice of applying their exemption to properties taxes at different millages tend to choose the property with the highest millage which is more likely to be nonagricultural property.

Over time the tax loss has increased as a result of increased millages and an increase in the amount of exempt property. The rebate has also increased but not as rapidly as tax loss. Total taxes levied have increased over time because of increased millages and an increasing amount of property valuation. The rural areas have consistently had a smaller percentage of their valuation exempted and have received a larger percentage of their tax loss as a rebate than have urban areas. The ratio of net tax loss to net taxes levied has consistently been smaller in rural than urban areas.

The inclusion of a means test on either income or net assets as an eligibility requirement could be used to greatly reduce the number of claimants and the tax loss. No claimant with a high income or net asset level should suffer great economic difficulty as a result of losing the exemption.

A limit on the aggregate tax savings of each claimant would help equalize the benefit gained by each claimant and would terminate the exemption more quickly than under the current system. Such a limit would immediately exclude the older claimants many of whom might be adversely
affected by loss of the exemption. A limit to the number of years during which the exemption is granted would terminate the exemption more rapidly than under the current plan; it would continue to allow large inequalities in the total benefits to claimants, however.

If a tax credit were granted rather than a tax exemption the tax loss would not rise with a rise in the millage. Under the credit plan each veteran of a given war would receive an equal benefit.

Under the current rebating methods rural areas receive a larger percentage of their tax loss as a rebate than do urban areas. A rebating method which returns an equal percentage of tax loss to each county could be used. Such a method would help to equalize among counties the ratio of net tax loss to net taxes levied. This ratio is not a function of the millage under the equal proportion of tax loss rebating method as it is under the current rebating method. If the credit plan were used the rebate could be divided such that each county received an equal proportion of the credit which it had granted.

After taking all factors into consideration it seems that the following plan would be preferable in Iowa. First of all a change from a tax exemption to a tax credit. If credits of $40, $60, and $240 were used as proposed on page 60 approximately the same total tax loss would be involved as is involved under the present system. The credit system would treat each veteran of a given war equally rather than allowing his tax savings to depend upon millage.

Secondly, by setting a specific period of years during which the credit could be received each claimant would receive a given amount of
benefit but the local government would suffer a tax loss over a much shorter period of time. Finally a provision could be included so that claimants whose income is below a certain level could continue to obtain the exemption after the set period of years had elapsed. Thus any claimant whose income was small due to retirement, disability, or other reasons would not be adversely affected by termination of the exemption. Table 13 gives an indication of the number of claimants who would fall under different income levels.

Under such a credit plan the rebate would be divided so that the proportion of rebate to tax credit would be equal for each county. The credit granted would be the tax loss so each county would receive as a rebate an equal percentage of its tax loss. This credit and rebating plan would also tend to equalize the urban and rural ratios of net tax loss to taxes levied.

Assuming that the present exemption plan is retained in Iowa a change from the present rebating method would seem preferable. By dividing the rebate so that each county received an equal proportion of its tax loss the counties with high millages will not suffer more than proportionate net tax losses. It has also been shown that such a rebating method would tend to equalize the urban and rural ratios of net tax loss to taxes levied.

Finally one might propose that a larger allocation be made for the rebating fund. As the percentage of the tax loss which is rebated approaches 100% the inequities among counties become very small. From Table 9 we noted that the percentage of tax loss rebated has been as low as 17%. An increase in this percentage would prevent any county from being particularly disadvantaged because a large proportion of its residents could claim veterans' exemptions.
VI. BIBLIOGRAPHY


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52. Nebraska. Constitution of Nebraska, Art. 8, Sec. 2. 1966.

VII. ACKNOWLEDGMENTS

Completion of this thesis would not have been possible without the assistance and encouragement of many different people. The assistance received from Dr. Wayne Fuller, Richard Lund, and Helen Ayres in clarifying certain points concerning the taxation survey should be acknowledged specifically. Specific assistance in clarifying certain aspects of the Iowa taxation laws was received from Dr. Neil Harl. The largest debt is owed to Dr. James Prescott for the many hours he spent in discussing the ideas and correcting the mistakes of the author.
VIII. APPENDIX A

A. State Laws Concerning Veterans' Property Tax Benefits

This appendix contains an outline of the basic laws in each state from which information was received and which grants a property tax benefit to veterans. In every state which replied it is necessary for the claimant to complete an application for the exemption and to supply the documents necessary to confirm his eligibility.

Arizona: Eligible claimants include those who fulfill requirements 1-5.

1. Honorably discharged servicemen, army nurses, or widows of the former.
2. Served at least 60 days during time of war.
5. Total property assessment is less than $5,000.

Property on which the exemption can be applied includes real and personal property up to $2,000 of assessed value.

California (3): Eligible claimants include those who fulfill requirements 1-4.

1. Veterans honorably discharged or presently in active service, the widow, the widowed mother, or the pensioned father or mother of such veterans.


2These requirements are waived in the case of widows.
2. Served during certain specified periods of war.

3. Own less than $5,000 property or $10,000 property if married or widowed.

4. Current residents of California.

Property on which the exemption can be applied includes all taxable property up to $1,000 of assessed value. Veterans who are blind or totally disabled due to military service can receive, in lieu of the former exemption, an exemption of up to $5,000 on the assessed value of their homes.

Connecticut (5): Eligible claimants include those who fulfill requirements 1-2.

1. Veterans honorably discharged or currently on active duty, the widows, minor children, or in some cases the parents of such veterans.

2. Served in time of war.

Property on which the exemption can be applied includes

1) all property\(^1\) up to an assessed value of $1,000 for those with less than 10% disability,

2) all property\(^1\) up to an assessed value of $1,500 for those with 10% to 25% disability,

3) all property\(^1\) up to an assessed value of $2,000 for those with 26% to 50% disability, and

4) all property\(^1\) up to an assessed value of $3,000 for those with

\(^1\)Exemption must be applied first to property in place of residence.
76% to 100% disability or for those over age 65 and with at least 10% disability.

In addition to the above those with a service connected disability which is "serious" may obtain an exemption of up to $10,000 on a lot and home of which they are the owner and occupier.

Florida (6): Eligible claimants include those who fulfill requirements 2-3 or 1 and 3.

1. Service connected disability requiring specially adapted housing and classed as paraplegic for which pecuniary assistance has been received.

2. Service connected total disability and receiving special pecuniary assistance due to disability requiring specially adapted housing and required to use a wheel chair for their transportation.

3. Honorably discharged from the armed services.

Property on which the exemption can be applied includes all real property owned and used as a homestead.

Hawaii (7): Eligible claimants include those who fulfill requirement 1.

1. Persons who are totally disabled due to injuries received while on duty with the armed forces of the United States or the widow or widower of such a person.

Property on which the exemption can be applied includes all real property owned and occupied by the claimant as a home.
Indiana: Eligible claimants include those who fulfill requirements 1-2.

1. Honorably discharged persons who served in military or naval forces of the U.S. during any of its wars, Mexican border affair, or Korean Conflict, or the widow of such persons.

2. Ten percent or more service-connected disability.

Property on which the exemption can be applied includes all real and personal property up to an assessed value of $2,000.

In addition to the preceding exemption certain persons are granted the following exemption.

Eligible claimants include those who fulfill requirements 1-4.

1. Honorably discharged soldiers, sailors, nurses, or the widow or widower of such a person.

2. Served 90 days or more in the military or naval forces of the U.S.

3. Totally disabled or are pensioners and age 62.

4. Taxable property as shown by tax duplicate is not in excess of $5,000.

Property on which the exemption can be applied includes all real and personal property up to an assessed value of $1,000.

Iowa: For information concerning Iowa property tax laws see pages 6-8 of this thesis.

Louisiana (44): Eligible claimants include those who fulfill requirement 1.

1. Honorably discharged veterans of WW I, WW II, or the Korean Conflict or the widow or orphan children of such a veteran.

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Property on which the exemption can be applied includes the homestead of the veteran consisting of not more than 160 acres on which up to $5,000 assessed value is exempt from state, parish, and special taxes for the period of 5 years between 1965 and 1969.

In place of the preceding exemption certain persons are granted the following exemption.

Eligible claimants include those who fulfill requirement 1.

1. Honorably discharged veterans of WW II and the Korean Conflict or the widow or orphan children of such a veteran.

Property on which the exemption can be applied includes the homestead of the veteran consisting of not more than 160 acres on which up to $5,000 assessed value is exempt from state, parish, and special taxes for a period of 10 years which must fall between 1947 and 1969.

Maine (45): Eligible claimants include those who fulfill requirements 1-4.

1. Honorably discharged or currently serving veterans who served during any federally recognized war period, the Korean Conflict, or Vietnam\(^1\) or the widow, minor children, or widowed mothers of such a veteran.

2. Legal residents of Maine.

3. Legal residents of Maine when entering military service or have been legal residents of Maine for at least 10 years prior to making claim for the exemption.

4. Age 62 or receiving a compensation from the U.S. government for total disability.

Property on which the exemption can be applied includes real and personal property in the place of legal residence up to an assessed value of $3,500.

Massachusetts (46-49): Eligible claimants include those who fulfill requirements 1-4.

1. Honorably discharged soldiers or sailors, or the wife, widow, or parents of such a person.

2. Served in one of several periods of war in which the Vietnam Conflict is included.

3. Domiciled in Massachusetts for at least 6 months prior to entering the service or resided in Massachusetts for 5 consecutive years prior to the date of filing for the exemption.

4. Service connected disability of at least 10% or served in the Spanish War, the Philippine Insurrection, or the Chinese Relief Expedition or have been awarded the decoration of the Purple Heart.

Property on which the exemption can be applied includes

1) real property occupied by the claimant as his domicile up to an assessed value of $2,000,

2) real property occupied by the claimant as his domicile up to an assessed value of $4,000 for those who fulfill the first 4 requirements and in addition have certain disabilities or certain service medals,
3) real property occupied by the claimant as his domicile up to an assessed value of $8,000 for those who fulfill the first 4 requirements and in addition have certain disabilities, and
4) real property occupied by the claimant as his domicile up to an assessed value of $10,000 for those who fulfill the first 4 requirements and in addition are permanently and totally disabled and have received assistance in acquiring specially adapted housing.

Michigan (50): Eligible claimants include those who fulfill requirements 1-4.

1. Honorably discharged veterans of the Philippine Insurrection, the China Relief Expedition, the Spanish-American, or Indian Wars, or disabled veterans of WW I, WW II, or the Korean Conflict, or unmarried widows of such veterans or persons currently in the armed forces.

2. Own real and personal taxable property of not greater than $10,000 state equalized valuation.

3. Not in receipt of an income in excess of $7,500 per calendar year unless in receipt of compensation paid by the veterans administration or the armed forces of the United States for service incurred disabilities.

4. Residents of Michigan at the time of entry into the armed forces and had been such a resident for at least 6 months prior to such entry or were residents of Michigan for 5 years prior to the filing for the exemption.
Property on which the exemption can be applied includes real estate used and owned as a homestead to the state-equalized value of $2,000.

Minnesota (51): Eligible claimants include those who fulfill requirement 1.

1. Paraplegic veterans requiring special housing who have been assisted in obtaining such housing.

Property on which the benefit can be obtained includes the home- stead of the veteran, the first $8,000 true value of which is assessed at 5% rather than at the usual 40%.

Nebraska (53): Eligible claimants include those who fulfill requirement 1.

1. Paraplegic or multiple amputee veterans or the unmarried wives of such veterans.

Property on which the exemption can be applied includes the total value of a veteran's home substantially contributed by the Veterans' Administration of the U.S.

Nevada: Eligible claimants include those who fulfill requirements 1-4.

1. Veterans who were honorably discharged or remain in active duty.
2. Served at least 90 days of active duty during one of certain specified periods of war which include the Vietnam Conflict.
3. Residents of Nevada before entry or before December 31, 1963.
4. Currently residents of Nevada.

Property on which the exemption can be applied includes all property up to an assessed value of $1,000.

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New Hampshire (54): Eligible claimants include those who fulfill requirements 1-4.

1. Honorably discharged veterans or the spouse or widow of such a veteran.

2. Served not less than 90 days of active duty during certain specified periods of war which include the Vietnam Conflict or whose services were terminated by a service connected disability.

3. Residents of New Hampshire.

4. True value of residential real estate is not in excess of $10,000 or claimant has reached age 65.

Property on which the exemption can be applied includes

1) real residential property to the value of $1,000,

2) real and personal property to the value of $8,000 for those who are totally and permanently disabled, paraplegic, or a double amputee as a result of service connection, and

3) specially adapted homesteads which have been acquired with the assistance of the veterans' administration are exempt from all taxes.

New Jersey (56): Eligible claimants include those who fulfill requirements 1-3.

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2 Requirement 4 does not apply in these two cases.
1. Honorably discharged veterans, the widows of such veterans or the widows of servicemen who served in time of war and died while on active duty.

2. Served during certain specified periods of war which include the Vietnam Conflict (55).

3. Citizens of the U.S. and residents of New Jersey. Property on which a tax benefit can be obtained includes

1) real and personal property on which a $50 annual tax deduction is received and

2) the house and lot owned and occupied by certain seriously disabled veterans or the widows of such veterans. Such property is exempt from all taxes.

New Mexico (57): Eligible claimants include those who fulfill requirements 1-4.

1. Honorably discharged soldiers or the unmarried widow of such a soldier.

2. Served during one of certain specified periods of war or has been awarded a Vietnam campaign medal (58).

3. Served at least 90 days of active duty or discharged because of a service connected disability.

4. Residents of New Mexico before certain dates specified according to the soldier's time of service.

Property on which the exemption can be applied includes real and personal property up to an assessed value of $2,000.
New York (59): Eligible claimants include those who fulfill requirement 1.

1. Veterans or wives, unmarried widows, dependent parents, or minor children of veterans.

Property on which the exemption can be applied includes real property which was purchased with the proceeds of a veteran's pension, bonus or insurance or dividends or refunds on such insurance paid by the U.S. or New York State and is exempt from taxation to the extent of such moneys so applied not in excess of $5,000.

North Dakota: Eligible claimants include those who fulfill requirements 1-2.

1. Honorably discharged veterans or their wives or unmarried widows.

2. Do not earn during the year more than $3,000 net income exclusive of any pension for service connected disabilities.

Property on which the exemption can be applied includes

1) fixtures, buildings, and improvements upon lots in any city or village up to a net assessed valuation of $4,000 or personal property up to an assessed value of $4,000 used and owned as a homestead for those veterans who have a service connected disability of greater than 50%, and

2) fixtures, buildings and improvements upon lots in any city or village up to a net assessed valuation of $10,000 for paraplegic disabled veterans.

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Oklahoma (60): Eligible claimants include those who fulfill requirements 1-2.

1. Enlisted or commissioned personnel, whether on active duty or honorably discharged or their widows who are residents of Oklahoma.

2. Served during certain periods of war or during any other period during which a state of national emergency has been declared to exist by the Congress or the President of the U.S.

Property on which the exemption can be applied includes personal property up to an assessed value of $200.

Oregon (61): Eligible claimants include those who fulfill requirements 1-3.

1. Honorably discharged veterans of wars preceding WW I or veterans rated as having disabilities of 40% or more or the unmarried widow of such a veteran.

2. Have not received more than $2,500 total gross income for the year.

3. Residents of Oregon.

Property on which the exemption can be applied includes the veteran's homestead or personal property up to $7,500 of the true cash value and for unmarried widows of veterans of the Civil or Spanish Wars who are pensioned and actually reside in their homestead an additional exemption of $500 of the taxable value of the homestead is granted.
South Carolina: The state of South Carolina does not have specific laws granting veterans' tax exemptions; however, certain counties of the state have exempted property of disabled veterans.

Tennessee: Eligible claimants include those who fulfill requirements 1-2.
1. Disabled veterans.
2. Have served during a time of national conflict.

Property on which the exemption can be applied includes real property up to the value of $10,000 when such property is owned and used exclusively by a disabled veteran as a home.

Utah (64): Eligible claimants include those who fulfill requirements 1-2.
1. Served in any war in the military service of the United States, or of the State of Utah, or the unmarried widows or minor orphans of veterans
2. Disability of at least 25%.

Property on which the exemption can be applied includes the real and tangible personal property of claimants up to $3,000 for those 100% disabled or, for those having a lesser percentage of disability, up to that percentage of $3,000.

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3 Widows and orphans are entitled to an exemption of up to $3,000.
Vermont (65): Eligible claimants include those who fulfill requirements 1-2.

1. Veterans of any war or the spouse, widow, or children of such a veteran.

2. Receiving wartime disability compensation for at least fifty percent disability, wartime death compensation, wartime dependence and indemnity compensation, or pension.

Property on which the exemption can be applied includes real and personal property up to $6,000 of appraised value which is owned and occupied by the claimant.

Wyoming (66): Eligible claimants include those who fulfill requirements 1-3.

1. Honorably discharged veterans or the widow of such a veteran or the widow of a member of the military forces who died while serving honorably therein.

2. Residents of Wyoming at the time of their entry into the military service.

3. Residents of Wyoming at the time of claiming their exemption.

Property on which the exemption can be applied includes property owned by the claimant up to an assessed value of $2,000 for those who have accumulated less than $800 total tax benefit from the exemption in prior years and after an $800 total tax benefit has been realized those claimants with a disability are granted an exemption on the assessed value of their property up to that percentage of $2,000 as their disability bears to 100%, except that any claimant with less than 10% disability receives an exemption equal to those with 10% disability.
IX. APPENDIX B

A. Taxation Survey

The survey data used in this thesis is taken from a general property tax survey conducted at Iowa State University. The survey included a cross section of Iowa property taxpayers. Property tax information was obtained for taxes levied in 1964 and collectable in 1965. The survey was financed by the Agricultural Extension Service, Iowa State University, and the Statistics Department cooperating closely with the Economics Department carried out the actual survey. Data were collected from both county courthouse records and personal interviews.

1. How the sample was drawn

First of all, the 99 Iowa counties were separated into three strata according to the population of the largest city in the county. Seven counties contained cities with a population greater than 50,000 and were placed in the stratum which will be called the large county stratum. In thirty-two counties the largest city had a population of between 5,000 and 50,000. The stratum consisting of these counties will be called the medium county stratum. Finally in the 60 remaining counties the largest city had a population of less than 5,000 and these counties make up the small county stratum.

All seven of the large county stratum counties were included in the sample. In the medium and small county strata a systematic sample of eight counties was chosen from each stratum. All the counties in the large county stratum were sampled while smaller proportions of the counties in the other
Figure 3. County composition of strata.
strata were sampled to make the sample more efficient. Figure 3 shows the county composition of each strata and the counties which were sampled.

2. Property types

Property was classified as either mercantile, agricultural, or residential. Real property is also distinguished from personal property throughout the survey. Neither industrial property nor monies and credits were included in the sample.

An attempt was made to keep the property type classification as consistent as possible for all property sampled throughout the state. Thus the property in one type such as mercantile is comparable among counties and among strata. In most cases the classification of the assessor was retained. The type and function of the property were discussed with the property owner during the interview and any reclassifications were made on this basis. When a property was used for more than one purpose it was classified according to the predominant type.

Housing units were classified as residential unless they housed three or more households besides the owner in which case they were classified as mercantile property. In the case of a farmer living on a farm his home and all household property were classified as agricultural property. Because the farm dwelling and the 40 acre plot on which it is located are usually assessed as a unit it was not possible to determine the assessed value of only the dwelling.

3. Courthouse procedure

The actual names of people to be interviewed were obtained from the tax
receipt files in the counties which were sampled. In each county a systematic sample was made from these tax receipt files.

The method of filing tax receipts varied among the counties sampled. For the most part the receipts were filed according to the owner or the location of the property. In some counties all property belonging to one owner was filed together in alphabetical order. In other counties real property tax receipts were filed according to location while personal property tax receipts were filed according to owner.

The different filing methods necessitated somewhat different methods of selecting the sample of owners to be interviewed in that county. In every case the attempt was made to give each property owner whose residence was in that county only one chance to enter the sample. Property owners whose residence was in another county were not included in the sample.

4. **Sampling rates**

The sampling rates within each county varied over different strata and over property types. The within county sampling rates were designed so that mercantile property was sampled at a rate of $1/266$ for the whole state, agricultural at a rate of $1/600$ for the whole state, and residential at a rate of $1/16,000$ for the whole state. This meant that it was necessary to sample at a higher rate within each smaller county than within the larger counties. When a property taxpayer was sampled all property types which he owned as well as all property owned by other members of his household were considered in the sample. All persons who cooked and ate together and occupied the same housing unit including boarders and grandparents were
considered as members of the same household.

When during the interview it was discovered that other members of the household were also property owners, a reweighting was made so that the final sampling unit became the household. The fact that the household is the sampling unit and that the interviewer obtained information about the household is of importance in this thesis.

5. Who the sample includes

We can characterize the sample used in this thesis as coming from households where the members are Iowa residents and own non-corporate property in Iowa. Two important aspects of the sample should be pointed out, however. If a property owner had an exemption which was greater than the assessed valuation of his property often there were no records at the courthouse so these people did not have a chance to enter the sample. A certain class of households where a veterans' exemption was involved were thus excluded from the sample causing some bias in the sample which is of concern in this thesis.

The other aspect of the sample which is of interest in this thesis is that monies and credits are involved only in determining the household's asset position. Even though the veterans' exemption can be applied to monies and credits no record of this exemption was made in the survey. Actually monies and credits have been taxed at much lower rates than real, personal, and utilities property. The percent of the veterans' exemption which was applied to monies and credits was less than 41% in the period between 1954 and 1965 (29-38; 41-42). In 1965 the Sixty-First Iowa General Assembly repealed the 5 mill levy on monies and credits leaving only a one
mill levy on them (16). Thus tax loss due to veterans' exemption applied to monies and credits has been quite small in the past and will be of even less importance in the future. Because of its minor importance the exemption applied to monies and credits has been disregarded throughout this thesis. Only the veterans' exemption applied to real and personal property has been considered.

6. **Collection of information**

The information obtained in the survey came from two basic sources. From the county courthouse records the assessed value, millage, and taxes as well as any exemptions or credits were obtained for each piece of property that was included in the sample. It is this information which came from courthouse records which is most important in this thesis. It should be pointed out that while the information obtained by interview may be somewhat biased by people who failed to give accurate answers to questions the information coming from tax records should be quite exact.

The second source of information came from an interview with the property owner or the person most responsible for the business and financial dealings of the household involved. A large amount of general information was obtained during this interview most of which is not of any concern in this thesis. That information which is of concern in this paper includes household composition, the income and net assets of the household, and the occupation of the head of the household. In this thesis income refers to the net income from all sources for all household members as reported in the interview. Income sources specifically include wages or
salary; net income from business, professional practice, farming, or self employment; interest and dividends; retirement or disability income; net rent from real estate, boarders or roomers; and miscellaneous sources.

Net assets include assets of members of the household minus all liabilities. The market value of Iowa and out of state real estate was included in the asset figure. Examples of personal property items included as assets are vehicles, boats, equipment, furniture, machinery, inventories accounts receivable, livestock, grain, movable buildings, bonds, savings accounts, stocks, loans to other people, and the cash value of life insurance.

In the survey, occupations were divided into ten occupation classes. Examples of those in the "Professional" class include doctors, teachers, engineers, lawyers, administrators, and clergymen. The "Farmers and farm managers" class includes farm owners and tenants. Examples of those in the "Managers, officials, and proprietors" class include real estate agents, supervisors, small enterprisers, jobbers, and building contractors. The "Clerical" class includes people such as postal clerks, telephone operators, bookkeepers, insurance adjustors, and secretaries. The class of "Sales workers" includes both those working in the office and the field. The class of "Operators" includes mass production workers, service station attendants, vehicle operators, and meat cutters. The "Service workers" class includes housekeepers, food service attendants, practical nurses, and custodians. The class of "All laborers" includes groundsmen, warehousemen, and unskilled workers. Unemployed and retired persons are included in "Not employed" class.

It is important to stress that these income and net asset figures refer to the household, not to an individual, and the figures are those reported in an interview, not figures taken from actual records.
7. **Estimation of totals**

It was previously mentioned that people having an exemption which was greater than the assessed value of their property did not enter the sample. In estimating the totals from the sample data it was assumed that no real estate property of any type or any mercantile personal property was excluded by this fact.

The following method was used in estimating the strata totals. First the schedules were divided into 18 groups according to property type, presence of a veterans' exemption, and proportion of rural to personal property.

"From the assessment records for each county the following totals were obtained for each of the three strata.

\[
\begin{align*}
X_1 &= \text{the total assessed value of mercantile real estate} \\
X_2 &= \text{the total assessed value of mercantile personal} \\
X_3 &= \text{the total assessed value of agricultural real estate} \\
X_4 &= \text{the total assessed value of residential real estate} \\
X_5 &= \text{the total value of soldier's exemptions on real estate} \\
X_6 &= X_2 + X_3 - X_7 \\
X_7 &= \text{the total value of soldier's exemptions on personal property} \\
X_8 &= \text{the sum of the total assessed value of agricultural and residential personal.}^1
\end{align*}
\]

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Weights were then calculated for the 18 groups in each stratum so that the totals estimated from the sample were equal to the known population totals, $X_1, X_2, X_3, X_4, X_5,$ and $X_6,$ for that stratum.

"These weights were chosen such that the sum of the squared deviations from the inverse of the initial sampling rate expressed in percentage terms should be a minimum. Thus 18 weights were obtained in each stratum by minimizing the Lagrangian

$$\sum_{i=1}^{18} \frac{(W_i - R_i)^2}{R_i} + 2 \sum_{k=2}^{6} \gamma_k (\sum_{i=1}^{18} W_i x_{ki} - X_k)$$

where

- $R_i$ is the inverse of the sampling rate for the $i^{th}$ group
- $\gamma_k$ is the Lagrangian multiplier associated with the $k^{th}$ restriction
- $x_{ki}$ is the total of the $k^{th}$ characteristic (e.g. assessed value of mercantile real estate) for the $i^{th}$ group
- $X_k$ is the population total for the $k^{th}$ characteristic."  

It should be pointed out that while the weights were calculated such that the estimated total value of veterans' exemptions on real estate equal the actual total the same is not true for total exemptions on personal property. This fact is of special interest in this thesis because due to sampling error the weights give an over estimate of the total value of soldiers' exemptions on personal property. The problem is further considered when the estimates are presented.

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