

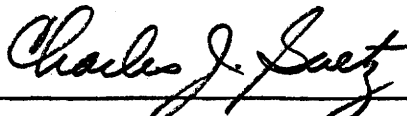
SOME ECONOMIC IMPLICATIONS OF CITY
STATUS FOR BLACKSBURG, VIRGINIA

by

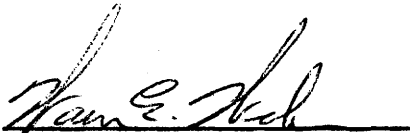
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in
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CHAPTER I

INTRODUCTION

General Introductory Remarks

Although there is a current trend among governmental units toward consolidation of public services, if not entire local governmental units, there still persists considerable desire among citizens to maintain so-called "local identity." While it may be argued that the desire to maintain local identity is rooted deeply in the psychological and traditional culture of society, strictly economic self-interests may or may not indicate that the independence of a particular local governmental unit is the optimum course to follow.

From an efficiency standpoint, for example, there frequently are cost-reduction gains from consolidation. Indeed, this may be true in the typical case. It is not at all clear, however, that such is the case in the more specific example.

This thesis is concerned with just such a specific example; namely, the Town of Blacksburg, Virginia. Blacksburg is a rapidly developing university town located in southwest Virginia's Montgomery County. In 1970 Blacksburg had a population of 9384 residents.

However, a recent annexation of about 18 square miles of territory from surrounding Montgomery County has swelled the population of the town to approximately 23,000 residents. This increased size has enabled Blacksburg to far surpass the minimum population requirement imposed by the State of Virginia for a town to assume independent city status. Fulfillment of that legal requirement serves as only one of a number of reasons why many Blacksburg citizens are thus speculating about the desirability of seeking independent city status for their town.

Statement of the Problem

Because of the interest expressed by many Blacksburg residents in seeking independence, it is the purpose of this study to explore whether it is economically desirable from a preference and an efficiency standpoint for the Town of Blacksburg to sever its relationship with Montgomery County and become an independent city. An attempt to get at the issues involved in reaching such a decision is made using various analytic techniques which will be more fully discussed later. Essentially, however, the analysis as to whether Blacksburg should or should not seek independence will be based upon the following factors:

- (a) evidence of a community of interest among Blacksburg residents which indicates a preference

for services and for economic ideologies which are not in significant congruence to the remainder of Montgomery County;

(b) Blacksburg's predicted capability to provide "city level" services in a manner compatible with the experience of other Virginia cities; and finally

(c) the extent to which independence would increase revenue sources for the new city vs. the extent to which independence would increase expenditures which the new city would encounter.

The study is not exhaustive. Rather, it is intended to bring to the fore relevant economic issues that should be considered before any decision is made regarding independence for the town. It is the writer's opinion, after having engaged in various discussions with local citizenry, and been exposed to various hearsay and half-truths, that many of the issues surrounding the subject of independence are extremely clouded. This study is an attempt to remove some of the haze.

Outline

The next chapter presents some necessary background information on (a) the statutory requirements imposed by the State for the transition of towns to cities and, (b) a general feeling about the issue of independence as expressed (either directly or indirectly) by Blacksburg

residents. Additionally, the pros and cons of independence, as viewed by many Blacksburg citizens, will be presented.

Chapter III will deal with evidences of divergent economic interests and philosophies between Blacksburg and non-Blacksburg residents. Evidence will also be presented, using multiple regression analysis, which indicates the impact of various socioeconomic variables on the demand for certain public goods by urban citizens. In addition, a comparison will be made between actual per-capita expenditures for selected public goods in other Virginia cities and the predicted expenditures for Blacksburg. Such a comparison should indicate how Blacksburg, as an independent city, would "measure up" to other cities in Virginia.

Perhaps the most important issue to the general public, that of the financial implications of independent status, will be discussed in Chapter IV. An attempt will be made in that chapter to realistically explore the relevant financial considerations incumbent in Blacksburg's assumption of city status. Principally, the analysis in this chapter will deal with Blacksburg's debt assumption and the operation of its own public school system were it to become a city. Other important financial issues will also be considered, however.

Finally, Chapter V will take a look at some bizarre, but relevant future issues which should be considered.

Chiefly, the implications of a shifting tax burden, as evidenced by the assessment of property in Montgomery County, will be explored. Some rather interesting findings appear to emerge.

CHAPTER II

PRELIMINARIES

Legal Considerations

The Code of Virginia provides that a town of 5,000 or more residents may become a city of the second class and a town of 10,000 or more residents may become a city of the first class. While there is a statutory provision for a town to make the transition to city status, there is no requirement that it do so. The action is strictly voluntary on the part of the local governance structure.

Nonetheless, it is relatively easy for a town of sufficient population to effect the legal transition from town to city. The Code mandates that any town claiming to be of sufficient size to become a city need only petition the Circuit Court of the County in which the town is located indicating its desire to make the transition from town to city. If the Court is satisfied that the population requirement is met, either by a recent federal census or a legally recognized state or local census, then it will certify such to be the case and proclaim such town to be a city, effective ". . . on

and after the first day of the month following the entry of the order. . . ."¹

When a town in Virginia does become an independent city it gains complete fiscal independence from the county of which it was formerly a part. It is not, however, relieved of any of the obligations, fiscal or otherwise, of the former town. All town property and town assets are likewise transferred to the city. In addition, the existing governance structure of the town continues in force until subsequent city elections are held, at which time the mayor and council are elected. Cities are also required to establish elective offices for the city treasurer, the commissioner of the revenue, and the city sheriff, as well as maintain Corporation and Municipal Courts.

A final responsibility, usually of extreme importance for a town making the transition to city status, revolves around the assumption of county debt by the new city. The Code specifies that:

¹Va. Code, § 15.1-982 (1950). It should be noted here that the procedure outlined above applies to a town making the transition to second class city status. The legal process for becoming a first class city, which it is assumed Blacksburg would become were it to assume city status, is a bit more involved and lengthy; no problems would likely be encountered, however. The issue we are concerned with is making the transition from Town to City. Whether the designation be second class or first class makes only minor difference in certain required elective functions, and no difference as far as this thesis is concerned. For a discussion of the two classifications and the transitional process involved see Va. Code, §§ 15.1-978 to 15.1-982 and §§ 15.1-1011 to 15.1-1013.

whenever a town hereafter becomes a city . . . , the city shall assume and provide for the reimbursement of the county of a just and reasonable proportion of any debt of the county existing at the date the town becomes a city and also for compensation to any school district of which the town was a part for the city's just and reasonable proportion of any debt existing . . . at such date.¹

We will see in Chapters IV and V that this particular issue presents some rather interesting, but bizarre, implications in the Blacksburg case. The Code also provides that, in the event that the new city and the county cannot agree upon a voluntary settlement of debt, the Court itself shall decide the issue. That provision too, as subsequent analysis will indicate, would appear to have extreme relevance in the Blacksburg case.²

Conventional Wisdom

Before getting into specific aspects of the study it would also be beneficial to gain some notion of the general feeling of the citizens of the Blacksburg community about the issue of independent city status. Conversations with various citizens at large and several town officials seem to point to a rather favorable reception to the idea of independence, although the desire to seek

¹Va. Code § 15.1-1003 (1950).

²For a complete discussion of the legal issues surrounding the transition of a town to a city the reader is referred to Chapters 22 and 23 of the Code of Virginia (§ 15.1-978 thru § 15.1-1032.1).

independence is by no means unanimous. Apparently, though interest in seeking independent city status is prevalent, it is by no means as topical an issue as it was in the mid-to-late sixties when Blacksburg citizens were quite upset over (and apparently quite determined to do something about) what they perceived as the somewhat-less-than adequate status of the local public school system.

It is a well documented phenomenon that more affluent and more highly educated communities typically demand a higher level of educational services as well as other public goods.¹ Blacksburg, being a relatively high-income university community, would appear to be no exception to this phenomena. However, because the voting strength of Blacksburg residents has been consistently diluted by the other citizens of Montgomery County outside of Blacksburg (for instance, even today Blacksburg residents account for less than 34 per cent of the registered voters in Montgomery County),² efforts to alleviate overcrowded conditions in local schools and increase per-pupil expenditures, for example, have been unsuccessful on a

¹This phenomenon is borne out by the multiple regression analysis of 35 independent cities in Virginia. Further considerations will be presented in regard to this issue in Chapter III.

²This percentage is based on figures supplied by the General Registrar of Elections for Montgomery County, for persons registered as of July 1, 1973.

number of occasions in local bond referenda. Apparently, frustrated in their efforts to implement what they perceived as a higher quality educational program, many Blacksburg residents openly advocated severing relations with the County and establishing an independent city in the late-sixties. Further confrontation was averted, however, at least temporarily, when a \$7.5 million school bond construction referendum was approved by the majority of Montgomery County citizens in April of 1969.

This apparent shift in preferences by the citizens outside of Blacksburg on what was regarded as a most important issue by proponents of independence, caused the talk about seeking independent city status to subside. It is now an issue which is discussed among the local citizenry in a much more subdued atmosphere. The tone of the arguments and the approach toward the issue of independence are considerably less emotional and more rational now than was prevalent earlier. Much of the current talk about independence stems directly from the fact that a group of citizens representing each of the three jurisdictional governments in Montgomery County -- i.e. Blacksburg, Christiansburg, and the County itself -- is presently spearheading a drive to determine the feasibility of consolidating these three local governments. This move is viewed by some citizens as a strategic ploy on the part of non-Blacksburg interest groups

to prevent Blacksburg, as currently constituted, from becoming an independent city. Such a move, they argue, would severely cripple the remainder of Montgomery County, especially if, as would likely be the case, Christiansburg followed suit and became a city.

Other Advantages of Assuming City Status

I have provided the rather lengthy example above of the apparent difference in philosophy of the two localities (Blacksburg and non-Blacksburg) to underscore what many persons feel is one of the main factors that a town in Virginia has to weigh when deciding to transform to an independent city. That advantage is, of course, the ability to better satisfy a particular preference structure. In addition, there are other frequently mentioned advantages voiced by Blacksburg residents which will be discussed in more detail below.

(a) An argument frequently voiced by proponents of independent city status revolves around the contention that in many cases the Town is being exploited by residents of the County outside of the Town. This hypothesis seems to be quite popular among some Blacksburg citizens who allege that Blacksburg residents are paying far more than their "fair share" of the costs of local government in Montgomery County. In effect, these citizens claim, Blacksburg is

subsidizing the remainder of the citizens in Montgomery County to a large extent. If these claims are true, then a strong argument could be made for independence on that basis. Independence could effectively solve the problem of direct subsidization, that is the alleged transfer of a disproportionate amount of funds, or benefits, from Blacksburg citizens to non-Blacksburg citizens.

To elaborate on the above contention a bit further, it does appear that there are some public goods--streets and highways, police protection, and park and recreational facilities, for instance--which do benefit a disproportionate number of non-Blacksburg residents. This circumstance is occasioned by the fact that large numbers of non-Blacksburg residents are employed in Blacksburg by the University. These persons, in essence, "consume" public goods supplied by Blacksburg taxpayers at no direct cost to themselves. It should be recognized, however, that it is difficult to confine the benefits which are generated by public goods to any one jurisdictional unit. Because of the relative proximity of governmental units and because of the difficulty, if not impossibility, of "dividing" many public goods, "spillover" benefits are often to be expected.¹

¹The obvious, and frequently cited, example of a

(b) Of a somewhat related nature to the taxploitation issue is the contention by proponents of independence that a city of Blacksburg would no longer be subject to what they, rather ambiguously, claim is "double taxation." As things presently stand Blacksburg citizens are taxed by both the Town of Blacksburg and the County of Montgomery for the provision of public services. Surely, proponents of independence argue, this is grossly unfair and economically inefficient. Why not let just one government--the City--be responsible for public services. Greater conformity of services for city residents would ensue and a more equitable distribution would result, advocates of independence argue. What these citizens seem to be overlooking, however, is the fact that even though taxes are paid to both governments there is very little overlap of services provided, law enforcement and protection probably being the major service provided by both the Town and the County. Their efficiency contention will have haunting implications, however, as later analysis will reveal.

good with spillover benefits is "national defense." This good affords protection not only to you but to me and everyone else as well. On the local level "police protection" would be the obvious example of a good with spillover characteristics.

(c) Finally, it is frequently contended by independence-backers that a City of Blacksburg would have greater stature than does a town. This stature, they claim, would be of importance in attracting more industry and more highly educated and technically oriented people to the community.

Disadvantages of Assuming City Status

On the other side of the ledger, proponents of the status quo, i.e. those opposed to seeking independent city status for the town, frequently argue that such a move would be extremely costly. While it must be recognized that each particular situation must be judged on its own merits, most of their arguments fall along the following lines.

(a) Firstly, it is presumed by anti-independence forces that taxes, especially property taxes, will rise substantially, and considerably faster, than they would if independence were not consummated. Although this is probably a correct assumption on the part of these forces, later evidence suggests that such rises would result from the demand on the part of city-dwellers for a higher quantity (and presumably quality) of certain public goods. If, in fact such increases occur for that reason, then they would be purely voluntary increases on the

part of the city residents, and as such, not to be disdained.

(b) Secondly, these forces argue that in all likelihood an independent city would elect to maintain its own public school system since this is frequently the main issue over which would-be cities and counties disagree. If indeed the new city did elect to operate its own school system, the cost of purchasing existing school facilities from the County (or of building new ones if need be), along with general maintenance and operations expense, is alleged to be prohibitive. The problem is compounded, they argue, if, as in the case of Montgomery County, there is a large amount of school bond debt outstanding, a part of which the new city would have to assume as its "just and reasonable proportion."¹

(c) Thirdly, opponents of independence argue that few, if any, small cities really encompass a sufficient number of residents to be able to realize any genuine economies of scale in the provision of a wide variety of public goods. The school system, police and fire departments, and even the administrative bureaucracy, would either be woefully inadequate because top-notch personnel could not be attracted and retained or else would be extremely expensive to maintain at adequate

¹Va. Code § 15.1-1003 (1950).

levels because of insufficient population to realize cost economies.

(d) Fourthly, it is pointed out by anti-independence forces that cities are required to provide for public health and welfare services, functions that are now delegated to the County. If it is true that Blacksburg, as an independent city, would provide relatively more public services, then would it not likely be more attractive to low-income persons than it is at present under the collective arrangement with Montgomery County. Why, they ask, should the town wish to bring this extra burden upon itself?

(e) Finally, an issue of vital concern often expressed by local oponents of independence relates to Blacksburg's highly transient citizenry. It is no secret that Blacksburg's citizenry is quite mobile, as is the case in most university communities. It might be the case that such a citizenry would not always have the best interests of the city in view over the long run simply because it is transient and would therefore be relatively unaffected by policy decisions made today but with ramifications for years to come. A jurisdictional unit which encompasses both the Town and the County, such as in the present situation, would effectively circumvent this problem, independence opponents argue. In this case, outside-Blacksburg

residents, most of whom might be considered as "permanent residents" who are concerned about situations which would affect them over the long run would be enabled to exercise a balancing effect to combat the "transient" forces on matters of vital import to permanent local residents.

Opponents of independence thus tend to view the transition from town to city as a losing proposition. That is, they tend to feel that the costs associated with independence will far outweigh the accompanying benefits which might result. They appear to be more concerned about costs and efficiencies, whereas their adversaries, city-status proponents, seem to view self-determination and exploitation as primal concerns.

What we have presented thus far then has been directed mostly at giving the reader: (1) a feel for the legal issues involved in the assumption of city status by Blacksburg; and (2) a notion of the general mood of the populace regarding the issues surrounding city status. As has no doubt been perceived already, there is considerable confusion and uncertainty--although much speculation--about many of the issues involved, by Town residents. The next chapter, which deals with specific evidences of nonhomogeneous preference structures between Blacksburg and non-Blacksburg residents, as well

as the impact of socioeconomic variables on the demand for public goods, will hopefully begin to clarify some of the issues.

CHAPTER III

EVIDENCES OF DIVERGENT ECONOMIC INTERESTS AND IDEOLOGIES ON PUBLIC WELFARE ISSUES BETWEEN BLACKSBURG AND NON-BLACKSBURG RESIDENTS

Evidences of Nonhomogeneous Preferences on Local Issues

As stated above, there seems to be a somewhat strained relationship between Blacksburg and non-Blacksburg citizens over many local issues. Such divergence of preferences frequently serves as the stimulus for localities to sever relations with one another. If the preference structure of two groups are grossly dissimilar then it has been shown that both groups can be made better off if each is allowed to consume its own desired amount of the publicly provided good.¹ If the two groups with dissimilar preferences can be segregated, then the preferences of each consumer in a particular group will more closely approximate those of the median consumer of

¹Cf. Yoram Barzel, "Two Propositions on the Optimum Level of Producing Collective Goods," Public Choice, Vol. 6 (Spring 1969), 31-38.

that group.¹ Frequently, if the dissimilar groups cannot be segregated neither group will be able to adjust to its desired quantity of the collectively provided good. In such instances it is observed that compromise solutions are reached in which one group is forced to purchase more of the good than it desires while the other is forced to purchase a smaller quantity than it desires. Such solutions, though not optimal, do tend to minimize welfare loss given the existing arrangement. Tiebout suggests, however, that if in fact dissimilar levels of services are offered by different communities, consumers will gravitate towards the locality that best agrees with their preference structure.²

Such a grouping apparently exists in Montgomery County between Blacksburg and non-Blacksburg residents. Empirical evidence of this nonhomogeneity of preferences is ample. Analysis of voting patterns in past local elections, for example, provides striking evidence of the wide disparity of preferences between Blacksburgers and non-Blacksburgers on many public welfare and ideological issues. Take, as an excellent example, the local school bond construction issue which was alluded to in

¹Cf. Duncan Black, The Theory of Committees and Elections (Cambridge: Cambridge University Press, 1958).

²Charles M. Tiebout, "A Pure Theory of Local Expenditures," Journal of Political Economy, Vol. 64 (October 1956), 416-24.

Chapter I. Table 1 traces the voting pattern of the citizens of Montgomery County on the school bond issues which occurred in the late 1960s. Two referenda were held in 1967, one in April and one in June, and one referendum--the one which was finally approved--in April of 1969.

Even a cursory glance at the table indicates that there is a considerable difference in preferences between the two groups. In no instance did less than two-thirds of the Blacksburg citizens voting in the referenda express a desire to purchase a higher quantity of educational services than was being provided under the existing collective arrangement with the remainder of Montgomery County. Conversely, in only one instance--and then only barely--did a majority of non-Blacksburg citizens voting in the referenda express a preference for an increase in the quantity of educational services. Based upon the relative demands for public school services expressed by Blacksburg and non-Blacksburg consumers strong preference divergence is indeed observed. At least one group, Blacksburg citizens, has been unable to quantity adjust to its desired level of consumption of this particular collectively provided good. It might also be plausibly argued that the substantial number of negative votes cast by non-Blacksburg citizens indicated their dissatisfaction with the

TABLE 1
A Comparison of the Voting Patterns of Blacksburg and Non-Blacksburg
Voters in Montgomery County on School Bond Referenda, 1967-1969

	Blacksburg	Per Cent	Non-Blacksburg	Per Cent	Both (%)
	\$4.5 Million School Bond Referendum (April 1967)				
For	1388	75.2	804	30.8	49.2
Against	<u>457</u>	24.8	<u>1808</u>	69.2	50.8
Total Votes	1845		2612		
	\$4.5 Million School Bond Referendum (June 1967)				
For	1877	69.9	990	16.9	33.6
Against	<u>808</u>	30.1	<u>4869</u>	83.1	66.4
Total Votes	2685		5859		
	\$7.5 Million School Bond Referendum (April 1969)				
For	2165	86.5	1578	54.7	69.5
Against	<u>338</u>	13.5	<u>1308</u>	45.3	30.5
Total Votes	2503		2886		

Source: All figures were extracted from unofficial election returns tabulated by The Montgomery County News-Messenger, Christiansburg, Virginia.

existing amount of educational services that were being provided, and that they in fact desired that a lesser quantity be provided. The existing quantity then may be viewed as a compromise solution. If so, both parties could be made better off if each group were allowed to contract for its own desired level of educational services, an option which is not available under the current collective arrangement.

While the example just presented revolves around the collective provision of free public education, the analysis is by no means limited to this one particular good. We would expect analogous conflict on many other public goods between Blacksburg and non-Blacksburg residents. The public school issue is simply the most pronounced, and perhaps, in many respects, the most important and easily observed issue; there have been no other recent county-wide referenda on important local fiscal issues. The basic premise is the divergence in preference structure between the two groups which gives rise to these conflicts.

Even in elections which deal with state issues, the divergence in preference structure is observed. Of particular interest is the statewide bond referendum which was held in 1968 for more expansive higher education and mental health programs. Again, as Table 2

TABLE 2

A Comparison of the Voting Results of Blacksburg and Non-Blacksburg Voters of Montgomery County on State Bond Referendum Held in November, 1968

	Blacksburg	Per Cent	Non-Blacksburg	Per Cent	Both (%)
	\$67 Million Higher Education Bond Referendum				
For	3770	82.9	2803	44.1	60.3
Against	<u>778</u>	17.1	<u>3557</u>	55.9	39.7
Total Votes	4548		6360		
	\$13 Million Mental Health Bond Referendum				
For	3856	85.4	3207	52.2	66.3
Against	<u>659</u>	14.6	<u>2939</u>	47.8	33.7
Total Votes	4515		6146		

Source: All figures are extracted from unofficial election returns tabulated by The Montgomery County News-Messenger, Christiansburg, Virginia.

vividly portrays, a substantial difference in preferences exists between the two groups.

Evidences of Nonhomogeneous
Preferences on a Wider Scale

On ideological issues of a more global dimension, evidence of divergent preference structures still exists. In recent state gubernatorial races, again, as in the previous cases, a noticeable divergence in preferences appears. Table 3 presents the results for the County in the last two gubernatorial races, showing Blacksburg and non-Blacksburg voting results. Although one might tend to dismiss the claim of significant differences in preferences in these elections because of the relative closeness of some of the percentages one would no doubt reconsider his position if he would reflect upon the situation for a moment. A four per cent plurality (i.e. 54% to 46%), for example, would be considered a relatively close election in most circles, as in the case of Holton and Godwin in the 1965 election for Blacksburg-proper. On the other hand, the 63 per cent to 37 per cent margin amassed by Holton in non-Blacksburg precincts can hardly cause one to claim that it was a close election. It was a landslide! As the absolute percentage deviation from the mean for the two localities indicates, a substantial divergence in preferences exists.

TABLE 3

A Comparison of the Voting Results of Blacksburg and Non-Blacksburg Voters in Montgomery County for Gubernatorial Elections Held in 1965 and 1969

	Blacksburg	Per Cent	Absolute Percentage Deviation from the Mean	Non-Blacksburg	Per Cent	Absolute Percentage Deviation from the Mean
1965 Gubernatorial Election						
Godwin (D)	957	45.7		1239	36.8	
Holton (R)	<u>1139</u>	54.3		<u>2124</u>	63.2	
Total Votes	2096		(8.6)	3363		(26.4)
1969 Gubernatorial Election						
Battle (D)	1412	42.9		1739	36.3	
Holton (R)	<u>1881</u>	57.1		<u>3226</u>	63.7	
Total Votes	3293		(14.2)	5065		(27.4)

Source: All figures are extracted from unofficial election returns tabulated by The Montgomery County News-Messenger, Christiansburg, Virginia.

Statistical Evidence on Preference
Impact of Socioeconomic Variables

Just as divergent preference structure is frequently cited as a reason for the division of political units, differences in socioeconomic characteristics are also thought to be quite important. Indeed it may be rationally argued that it is the socioeconomic characteristics themselves which give rise to the divergent preference structures. If such is the case, it should be helpful to have some idea of precisely how the divergent socioeconomic characteristics of cities tend to play a significant role in explaining differences in consumer demand for certain public goods.

In an effort to gain information as to how these various socioeconomic characteristics account for differences in per-capita expenditures for selected public goods, multiple regression analysis was performed on eight expenditure functions containing 14 independent variables each for the 35 independent cities which existed in Virginia on January 1, 1967.¹ The best linear unbiased estimates which resulted from the regression analysis were used to predict expenditure levels for Blacksburg for these same public goods had it been a city in 1967 and to ascertain how expenditures

¹Data for 1967 was chosen because it was the latest year for which most of the necessary information was available. A complete listing of data sources is contained in the Appendix at the end of this chapter.

for these public goods are estimated to vary with the socioeconomic characteristics in the model.

The eight public good expenditure categories analyzed were education, streets and highways, police protection, financial administration, fire protection, sewerage and sanitation (not including capital outlay), parks and recreation, and welfare.¹ Per-capita expenditures for these eight goods serve as the dependent variables in the model. The independent variables, chosen to include a variety of socioeconomic, political, and environmental factors which might cause variations in per-capita expenditure levels, are:

- (1) land area (in square miles);
- (2) the ratio of intergovernmental revenue to total revenue;
- (3) the ratio of property tax revenue to total revenue (note: the property tax is assumed to be the main source of local funds);
- (4) the percentage of nonwhite population (1970);
- (5) median number of years of school completed (greater than 9 years) by persons aged 25 years or more (1970);

¹The eight categories of public expenditures chosen for analysis were selected so as to include only those categories which were common to all cities in the survey. An attempt was also made to include only those public expenditure categories which are generally presumed to be the responsibility of the local governance structure so that variations, where they exist, could perhaps be more readily explained by the independent variables in the model.

- (6) total population;
- (7) population density (population per square mile);
- (8) the rate of population increase from 1960-1966;
- (9) the percentage of school-age population
(7-19 years);
- (10) median family income (1970);
- (11) the percentage of families with incomes below the
poverty level (1970);
- (12) housing density (housing units per square mile);
- (13) "normal" precipitation in January;
- (14) a dummy variable indicating those cities which
might be considered "college towns."¹

All variables used in the model are for the year 1967 unless otherwise indicated or where it was necessary to estimate data for an intervening year. (For instance, the rate of population increase from 1960-66 was crudely extrapolated as 60 per cent of the per cent of increase from 1960-1970.) In addition, the median number of years of schooling completed, median family income, and percentage of persons below the poverty level were used at 1970 levels because of the unavailability of data for 1966-67. These minor adjustments should present no major interpretative problems, however. Tables 4 and 5 present a

¹A dummy variable is a pseudo-variable which attempts to pick up differences which might be associated with certain groups of observations. It assumes the number "1" for all observations in the specified group and the number "0" for all other sample observations.

TABLE 4

Regression Results for Selected Public Expenditure Categories for
35 Independent Cities in Virginia in 1967

	Edu- cation	Finan- cial Admini- stration	Fire Protec- tion	Parks & Rec- reation	Police Pro- tection	Sewer- age & Sani- tation	Streets & High- ways	Wel- fare
Land Area	-.0648 (.0598) -1.083	-.009 (.0072) -.125	.0217 (.0098) 2.199 ^a	.0071 (.0097) .740	.0073 (.0128) .569	.0113 (.0112) 1.006	.0126 (.0193) .651	.0140 (.0476) .294
% Inter- governmental Revenue	131.84 (73.69) 1.789	7.053 (8.972) .786	-21.527 (12.15) -1.772	5.732 (11.96) .479	17.859 (15.83) 1.128	-10.172 (13.85) -.735	-60.013 (23.85) -2.516 ^a	-7.801 (58.58) -.133
% Property Tax Revenue	6.496 (68.99) .094	11.159 (8.401) 1.328	-10.403 (11.37) -.915	3.326 (11.20) .297	16.784 (14.83) 1.132	9.052 (12.96) .698	-11.342 (22.33) -.508	-3.716 (54.85) -.068
% Nonwhite Population	.0968 (.3439) .282	.0083 (.0418) .199	.1077 (.0566) 1.901	.0451 (.0558) .810	.0437 (.0738) .592	-.0586 (.0646) -.907	-.2506 (.1113) -2.252 ^a	-.1130 (.2734) .414
Median Years Schooling Greater than 9	4.828 (6.330) .763	-.3252 (.7707) -.422	.4939 (1.043) .473	.1793 (1.027) .175	-.260 (1.360) -.191	2.211 (1.189) 1.859	-2.167 (2.049) -1.058	(3.838) (5.032) .763

TABLE 4--Continued

	Edu- cation	Finan- cial Admini- stration	Fire Protec- tion	Parks & Rec- reation	Police Pro- tection	Sewer- age & Sani- tation	Streets & High- ways	Wel- fare
Total Population (in 1,000's)	.0667 (.0802) .832	.0083 (.0097) .851	.0019 (.0132) .151	.0079 (.0130) .611	.0102 (.0172) .595	.0006 (.0150) .040	.0063 (.0259) .245	.0659 (.0638) 1.034
Population Density	-.0102 (.0060) -1.691	-.00067 (.00074) -.916	.0012 (.0010) 1.232	.0018 (.0009) 1.869	-.0005 (.0013) -.427	.0007 (.0011) .672	-.0013 (.0019) (.079)	.0027 (.0048) .575
Population Increase	-.6638 (.3633) -1.827	-.0499 (.0442) -1.129	-.0056 (.0598) -.930	.0009 (.0589) .016	-.1073 (.0780) -1.375	-.0937 (.0682) -1.373	.0056 (.1176) .0048	-.4208 (.2888) -1.457
% School Age Population	2.358 (1.164) 2.026a	-.0574 (.1417) -.406	-.4003 (.1919) -2.086a	-.1220 (.1889) -.646	-.0613 (.2501) -.245	-.2002 (.2187) -.915	.5249 (.3768) 1.393a	.5532 (.9254) .598
Median Income	.0030 (.0048) .630	.00068 (.00058) 1.165	.00003 (.0007) .041	.0002 (.0007) .336	.0026 (.0010) 2.540a	.0002 (.0009) .223	.00058 (.0015) .375	-.0027 (.0038) -.712
Percentage of Families Below Poverty Level	-1.447 (1.033) -1.402	.0539 (.1257) .429	-.1284 (.1702) -.754	-.2390 (.1676) -1.426	.3125 (.2219) 1.408	.2426 (.1941) 1.250	.6260 (.3343) 1.873	-.1203 (.8211) -.147

TABLE 4--Continued

	Edu- cation	Finan- cial Admini- stration	Fire Protec- tion	Parks & Rec- reation	Police Pro- tection	Sewer- age & Sani- tation	Streets & High- ways	Wel- fare
Housing Density	.0346 (.0143) 2.411a	.0010 (.00175) .609	-.0015 (.0023) -.634	-.0018 (.0023) -.778	.0039 (.0030) 1.278	-.0008 (.0027) -.302	.0003 (.0046) .083	-.0062 (.0114) -.545
Average "Normal" Precipitation in January	10.117 (5.235) 1.933	.9725 (.6374) 1.526	.2492 (.8629) .289	-.4814 (.8494) -.567	.6728 (1.125) .598	2.068 (.9836) 2.102a	.5351 (1.695) .316	.5517 (4.162) .133
Dummy	.8617 (13.14) .066	.4720 (1.600) .295	-1.8816 (2.166) -.869	.0938 (2.132) .044	.9244 (2.824) .327	-.0739 (2.469) -.030	5.666 (4.254) 1.332	1.5216 (10.45) .146
Constant Term	-75.56 (58.7) -1.287	-8.594 (7.15) -1.202	24.07 (9.68) 2.487 ^a	2.856 (9.53) .300	-28.56 (12.6) -2.264 ^a	-1.588 (11.0) -.144	12.61 (19.01) .663	16.31 (46.7) .349
R ²	.6624	.4278	.7703	.6222	.6675	.7612	.5054	.4122

^aStatistically significant at .05 level.

TABLE 5

68.32% Confidence Band Around the Mean for Per
Capita Expenditures for Selected Public
Goods for 35 Independent Cities
in Virginia in 1967

Expenditure Category	<u>Mean</u>	<u>SEE</u>	Confidence Band Around the Mean
Education	\$96.99	\$12.74	\$84.13-\$109.73
Financial Administration	\$ 4.44	\$ 1.95	\$ 2.49-\$ 6.39
Fire Protection	\$ 6.57	\$ 2.64	\$ 3.93-\$ 9.21
Parks and Recreation	\$ 4.72	\$ 2.60	\$ 2.12-\$ 7.32
Police Protection	\$14.02	\$ 3.44	\$10.58-\$ 17.46
Sewerage and Sanitation	\$10.71	\$ 3.01	\$ 7.70-\$ 13.72
Streets and Highways	\$12.13	\$ 5.19	\$ 6.94-\$ 17.32
Welfare	\$15.54	\$12.74	\$ 2.80-\$ 28.38

summary of the regression results along with a listing of the mean per-capita expenditures and a confidence band for each expenditure category for the 35 independent cities used in the sample.

Although the model was fairly successful in explaining a large amount of the variation in per-capita expenditures for most categories, it was not as successful in separating out the specific effects which cause the variation. Nonetheless, there do seem to emerge certain notable general characteristics about the cities surveyed.

Of primal importance is the positive force exerted by the so-called wealth variables--median family income and median years of schooling completed--on the level of expenditures, although the coefficients are not always statistically significant. This finding seems to further substantiate the claim that wealthier communities do demand a higher level of public services for most categories. That finding assumes substantial dimensions in this case when one realizes that the median number of years of schooling completed by persons 25 years old and over in Blacksburg is approximately 15.0 and the median family income is estimated to be \$9825, both of which are among the highest in the Commonwealth.¹

¹U.S. Bureau of the Census, Census of Population: 1970, General Social and Economic Characteristics, Final Report PC(1)-B48, Virginia.

Equally relevant is the fact that in six of the eight expenditure categories a positive relationship was observed between expenditure levels and those cities which were dubbed "college towns."¹ Again, in the case of Blacksburg, this finding should be of importance in any study aimed at determining how expenditure levels would change for certain public goods were city status assumed.

Also of more than passing interest is the strong relationship exhibited between intergovernmental revenues and expenditure levels for certain goods categories. Relatively strong positive relationships are observed between education and police expenditures and governmental transfers, whereas relatively strong negative relationships (and in the case of streets and highways, a significant one) exist between fire protection, streets and highways, and sewerage and sanitation expenditures. The importance of this factor cannot be denied when it is realized that substantial amounts of monies do in fact flow to independent governmental units in Virginia-- i.e. cities and counties--from other agencies, the principal one being the State itself, that do not flow directly to towns located within counties. More detailed

¹The seven cities designated as "college towns" in this study were: Charlottesville, Fredericksburg, Harrisonburg, Lexington, Radford, Staunton, and Williamsburg.

analysis will be presented in regard to this particular factor in the next chapter when financial considerations are explored more thoroughly.

Another point of general interest to be gleaned from the regression results concerns the effect of population on expenditure levels. It was found that population was positively associated with every expenditure category. This finding would seem to suggest that there are no economies of scale to be realized in the provision of public goods. That is, apparently no savings are to be reaped by providing any of these public goods on a larger scale. One should be cautioned here, however, or else he will arrive at some fallacious conclusions. Whether economies of scale exist in the provision of public goods depends entirely on the elasticity of demand for these public goods. Common sense tells us, however, that, statistical evidence or naught, there are some public goods that can be provided more cheaply on a larger scale, or through joint arrangements with other governments. This point should not be overlooked.

Further evidence of Blacksburg's divergent preferences is indicated by the fact that for four of the public expenditure categories analyzed, the predicted amounts which Blacksburg would have spent had it been an independent city in 1967, which are presented in Table 6,

TABLE 6

68.32% Confidence Band Around the Predicted Per
Capita Expenditure Values for Selected
Public Goods for a City of
Blacksburg in 1967

Expenditure Category	Predicted Value	<u>SEE</u>	Confidence Band Around the Predicted Value
Education	\$84.30	\$12.74	\$71.56-\$97.04
Financial Administration	\$ 1.45	\$ 1.95	\$ 0-\$ 3.40
Fire Protection	\$ 6.74	\$ 2.64	\$ 4.10-\$ 9.38
Parks and Recreation	\$ 6.18	\$ 2.60	\$ 3.58-\$ 8.78
Police Protection	\$15.23	\$ 3.44	\$11.79-\$18.67
Sewerage and Sanitation	\$16.47	\$ 3.01	\$13.46-\$19.48
Streets and Highways	\$ 1.90	\$ 5.19	\$ 0-\$ 7.09
Welfare	\$ 9.59	\$12.74	\$ 0-\$22.33

are higher than the mean amount spent by the other Virginia cities included in the sample. Also, it is interesting to note that the predicted per-capita expenditure for education is some \$9.76 higher than the actual per-capita amount spent by Montgomery County in 1966-67, as reported in the 1967 issue of the Census of Governments, additional evidence of the divergent preference structure between the two groups.

The range calculated for the predicted estimates represents the "degree of confidence" we have in the values obtained from the regression. We are willing to wager that in more than two-thirds of the cases (approximately one Standard Error) the predicted expenditure values for Blacksburg (as well as the mean expenditure values calculated for the 35 cities in the sample and presented in Table 5) would fall within the specified confidence band.

Thus, we find in this chapter, that there seems to be a substantial difference in the relative demands for certain public goods by Blacksburg and non-Blacksburg residents of Montgomery County. The evidence further suggests that each group could be made "better off," exclusively from a preference satisfaction point of view, if each were allowed to completely maintain its own governance structure. In the next chapter, attention

will be focused on another area of legitimate concern--
that of finances--to present a more balanced view of
the situation.

APPENDIX TO CHAPTER III

The data sources for the variables used in the regression analysis are as follows:

- (1) All of the dependent variables, i.e. per-capita education, welfare, streets and highways, fire protection, police protection, financial administration, parks and recreation, and sewerage and sanitation, plus total population and land area, were obtained from U.S. Bureau of the Census, Census of Governments, 1967, Vol. 7: State Reports No. 46: Virginia.
- (2) Per cent of nonwhite population, median number of years of schooling completed by persons 25 years old and over, median income, rate of population increase from 1960-70, percentage of school-age population, and percentage of families below the poverty level were obtained from U.S. Bureau of the Census, Census of Population: 1970, General Social and Economic Characteristics, Final Report PC(1)-C48, Virginia.
- (3) "Normal" precipitation in January was obtained from U.S. Department of Commerce, Environmental

Sciences Administration, Climatological Data,
Annual Summary 1966, Vol. 76, No. 13, Virginia.

- (4) Total number of housing units (needed to
calculate housing density) was obtained from
U.S. Bureau of the Census, Census of Housing:
1970, Vol. 1, Housing Characteristics for States,
Cities, and Counties, Part 48, Virginia.

CHAPTER IV

FINANCIAL CONSIDERATIONS

In the previous chapter, evidence was presented which tended to demonstrate that a significant difference exists in the preference structure of Blacksburg and non-Blacksburg residents for certain public goods. Although differences in preferences are a legitimate concern in the field of Economics, of much more pressing importance to most people are issues which deal with finance. In particular, local residents are concerned with the issue of whether a City of Blacksburg would be able to generate sufficient revenues to offset the increased costs of the added expenditure responsibilities that would accompany the transition from Town to City. In this regard, several financial items are of sufficiently significant proportion to warrant specific consideration, and each of these will be explored in detail below. The operation of an independent school district is the "new" financial item which is most sizeable and which, largely because of its magnitude, is most susceptible to estimation error. The other functions are of such a magnitude that estimation error for those functions would not seriously alter the results of the analysis, if at all.

After these financial items are presented, a comparative analysis will be made between the estimated expenditures and revenues that would have resulted had Blacksburg been a city in fiscal 1973, and the estimated revenues and expenditures for the Town of Blacksburg in fiscal 1973, assuming the annexation had become effective July 1, 1972. This analysis should give some idea of the cost to Blacksburg citizens of these two alternate forms of government, assuming that the level of services provided under both arrangements were equal.

Assumption of Debt and Establishment
of City School System

An obvious, and in many cases, extremely costly financial item which towns making the transition to city status must consider concerns the assumption of a "just and reasonable" proportion of the County debt. This is a legal requirement imposed upon new cities by the State, as outlined in Chapter I. Although it is not impossible that Blacksburg and Montgomery County would voluntarily agree upon a settlement of the County debt, the seemingly strained relations which evidently exist between the two groups make such a voluntary settlement appear improbable. It is on the assumption of involuntary settlement that the remainder of this analysis rests. In the event that the two localities cannot reach mutual agreement on this

issue, the local Circuit Court is required to determine a financial settlement.

The precedent on which many of the issues are based relative to the assumption of debt by a new city is the Spratley Decision in the case of the City of Colonial Heights vs. the County of Chesterfield in 1954.¹ In that case, the Court ruled that the "city should assume such proportion of the county debt as the assessed value of property in the city at the time of transition bore to that in the county as a whole." In addition, the Court reasoned that "the city should be credited on its debt assumption with that same proportion of the value of the county assets as it must assume of the county debt."² Such a settlement might be thought of as the dissolution of a corporation in which the stockholders share equally in the assets and liabilities of the firm. This approach, taken by the Court in the Spratley Decision, viewed the County as the "corporation," which was in effect being dissolved as originally constituted, and the citizens in the County and proposed City as the "stockholders"--both of whom had vested interests in the "firm."

¹City of Colonial Heights vs. County of Chesterfield, 196 Va. 155, 82 S.E.2d, 566 (1954).

²Ibid., p. 566.

With that precedent in mind, an estimate of the County debt which Blacksburg would have assumed had it become a city on July 1, 1972 based upon that which is "just, fair, and right in the view of a fair-minded man,"¹ was prepared. Also, in order to provide a realistic picture, the premise that Blacksburg would establish its own school system is incorporated into the analysis. (It should be recalled that based on the previous evidence of differences in preferences between Blacksburg and non-Blacksburg residents, it hardly seems reasonable to assume that Blacksburg would elect to become a City and yet not establish its own school system.) That being the case, the City would probably find it advantageous to purchase the school buildings and equipment located within its boundaries. The results appear in Table 7. To aid the reader in understanding Table 7, a line by line explanation of the table is presented below.

Lines (1) and (2) give the 1972 estimated assessed valuation of property in Blacksburg and Montgomery County respectively. The ratio of these two assessed valuations gives Blacksburg's proportion of the total assessed valuation of property in the County-City--the percentage of the County debt to be assumed by Blacksburg as well as

¹Ibid.

TABLE 7

Estimated Amount of County Debt to be Assumed by
Blacksburg Had It Become a City July 1, 1972

Line

(1) 1972 Assessed Valuation of Property in Blacksburg.	\$15,050,700
(2) 1972 Total Assessed Valuation of Property in Montgomery County (est.).	52,000,000
(3) Blacksburg Proportion of Assessed Property Values:	
	$\frac{\$15,050,700}{\$52,000,000} = 28.943\%$
(4) Total County Debt Outstanding July 1, 1972	\$11,691,400
(5) Blacksburg's Portion of County Debt (28.943%)	\$ 3,383,842
(6) Fair Value of Schools Located in Blacksburg (est.)	<u>10,305,000</u>
(7) Gross Blacksburg Debt.	<u>\$13,688,842</u>
(8) Fair Value of <u>All</u> Schools in Both Montgomery County and Proposed City of Blacksburg (est.). .	\$26,511,000
(9) Blacksburg's Equity in Total School Properties (28.943%) of Fair Value of <u>All</u> Schools	\$ 7,673,078
(10) Fund Balances: (a) County Funds. .	\$1,284,377
(b) Other Funds . .	98,455
(11) Blacksburg's Proportion of Fund Balances:	
(a) 28.943% of County Funds.	\$ 371,737
(b) 46% of Other Funds	45,289
(12) Sale of Mobile Classroom Units at Blacksburg Schools.	<u>99,000</u>
(13) Net Debt Assumption by Blacksburg, July 1, 1972	\$ <u>5,499,738</u>
Line (7)-Line (10)-Line (11)-Line (12)	

the percentage to be applied as a credit to certain County assets.

Line (4) gives the total amount of County debt outstanding as of July 1, 1972, to which has been applied Blacksburg's percentage of assessed valuation to arrive at the portion of the debt to be assumed by the City, Line (5). Line (6) lists the fair value, as estimated by the Montgomery County School Board, of the school properties located in Blacksburg which the City would probably have purchased. Line (7) lists the gross debt for which Blacksburg would be responsible.

To Blacksburg's gross debt responsibility would be credited certain sums as specified in the Spratley Decision. The major credit would be the equity, Line (9), which Blacksburg citizens had in the total value of all school properties, Line (8), in the County and the proposed City. A credit, Line (11a) would also be granted, again on the ratio of assessed valuation of property, for County fund balances (other than the school debt fund), Line (10a). An additional credit, Line (11b), would be applied on the various other agency and trust fund balances, Line (10b), (e.g., law library fund, special welfare and health funds, etc.) this time, purely on the basis of population. A final credit could be applied against the gross debt assumption through the sale of mobile classroom units which were being utilized

at several schools in Blacksburg. These units are valued at approximately \$99,000. Thus the net debt assumption which it is estimated Blacksburg would have assumed had it become an independent city last year is \$5,499,738.

It is interesting to note from Table 7 that a critical determinant of the magnitude of Blacksburg's debt assumption is the maintenance of its own school system. Were Blacksburg to decide not to establish its own school system, but rather to contract with the County for educational services, the experience of other municipalities that have elected to operate a joint school program with a neighboring county indicates that it would still probably assume a portion of the County school debt as a part of the negotiated contractual agreement for educational services with the County.¹ To speculate how the Court would decide to settle the debt assumption issue if Blacksburg did elect to initially contract with the County, and then later establish its own school system, is rather risky. Whether it would lose the equity that it accumulates in school properties during the

¹This conjecture is based primarily on the current situation which exists in Salem, Virginia. Although Salem is an independent city, it contracts with Roanoke County for educational services. In addition, Salem is required, as a part of the negotiated agreement with the County, to assume a portion of the County school debt.

contractual period is an issue which has no precedent upon which a conjecture could be based.

It would thus have been necessary for Blacksburg to assume an estimated 5.5 million dollar school debt if it had become a city and established its own school system.¹ This would have been the amount required by the City to purchase the school properties in Blacksburg and assume its fair share of the remaining County debt after all adjustments and claims had been made. While this amount of indebtedness might seem rather burdensome, it must be realized that Montgomery County was (and still is) in the midst of a rather sizeable school construction program, the bulk of which was approved by County voters in 1969. It is of no small consequence that school facilities valued at nearly seven million dollars are currently being constructed in Blacksburg.

Thus, though the cost of purchasing the school properties from Montgomery County may be viewed as burdensome now, one should look a bit deeper into longer-term aspects of the matter before summarily denouncing it as an undesirable move. For example, it is estimated that there are currently 2674 school age children living in Blacksburg. The rated capacities² of

¹See Appendix B at the end of this chapter.

²It is fully recognized that many of the schools located in Blacksburg are already operating at a level

the five school buildings located in Blacksburg, not including mobile units or temporary facilities, is approximately 4230 students, broken down as given in Table 8.

Although Tables 8 and 9 indicate that there would be substantial excess capacity in the initial years of operation were Blacksburg to operate its own school system, much of which could be used to perhaps lower the teacher-pupil ratio, estimates of future school-age population contained in Table 9 indicates that by 1980--just seven years hence--the schools would be operating at full capacity. The rapid growth in school-age population is partially based on the initiation of a public kindergarten program no later than the 1974-75 school year. This kindergarten program accounts for much of the large increase in school-age population between 1972 and 1974. The continued rapid growth of Blacksburg, whose growth is very definitely intertwined with that of Virginia Polytechnic Institute and State University, accounts for the expected increases in school-age population in later years. If the anticipated growth does materialize, then perhaps the purchase of the school

substantially above the rated capacity. However, the schools were designed for the capacities contained in Table 8. A larger enrollment simply indicates the degree to which the schools are overcrowded.

TABLE 8
 Rated Capacities of School Buildings
 Located in Blacksburg

School	Rated Capacity
Gilbert Linkous School	725 ^a
Harding Avenue School	550
Margaret Beeks School	710 ^a
Blacksburg Intermediate School (Currently Blacksburg High School)	845
Blacksburg High School (New Blacksburg High School under construction)	1400
Total	4230

^aApproximate figures, Kindergarten facilities are now being constructed.

Source: Montgomery County School Board.

TABLE 9
 Estimated School-Age Population
 for Blacksburg
 1972-80

Year	School-Age Population
1972	2674
1974	3338
1976	3733
1978	4161
1980	4605

Source: Blacksburg Planning Department
 (amended).

Note: These estimates were extracted from population forecasts compiled by the Blacksburg Planning Department. It was assumed in the preparation of this table that the current ratio of school-age population, exclusive of freshman and sophomores at VPI&SU, will continue to be of the same magnitude as that which existed in 1972--11.6%. Obviously, such an assumption relies heavily on prevailing socioeconomic conditions and mores. However, because of the fairly consistent relationship which has existed between VPI&SU growth and Blacksburg population in the past, the estimates seem entirely plausible.

properties would not really be excessively burdensome. Table 9 gives estimates of the school-age population of Blacksburg through 1980 to better acquaint the reader with the dimensions of this parameter.

Additional Functions Required of Cities

Of the additional functions which would have been required of the new City, by far the most costly one is the operation of a public school system. This function is of such importance that it will be treated in a separate section later. The remaining functions are of such a dimension that they account for less than three per cent of the total operating budget of the city and are presented in this section.

The most costly of these minor functions is the operation of a public health and welfare program. Even this function would not have engendered significant costs for the City, however, based on previous County experience. In 1972-73, Montgomery County spent approximately \$107,321 in local funds for public health and welfare services. Since this is a relatively small total amount it would probably be advantageous for Blacksburg to enter into a joint contractual arrangement with the County for these services, if such could be arranged. Assuming that the costs for these services, under such an arrangement,

would be apportioned on the basis of population, Blacksburg's share of the costs would have been approximately 46 per cent of the total, or \$49,638 in 1972-73.

Cities in Virginia are also required to maintain a Municipal Court and a Corporation Court (or else share in the cost of operating the Circuit Court with the County until the General Assembly establishes a Corporation Court for the City). The State provides localities with partial funding for the operation of the Corporation Court. However, it is estimated that a City of Blacksburg would have required approximately \$7889 in local funds as its share for the operation of the local Circuit Court and approximately \$5800 in local funds for the operation of a Municipal Court, which it already has, in fiscal 1973.

Finally, it is estimated that approximately \$54,941 in local funds--\$5842 for a City Sergeant, \$8,492 for a Commonwealth's Attorney, \$13,017 for a Commissioner of Revenue, \$22,250 for a City Treasurer, who would handle both City and State funds, and \$5340 for recording documents--would have been required in 1973. The derivation of the budget estimates for these functions are presented in Appendix C at the end of this chapter.

It should be emphasized that, although care has been taken to generate reasonable estimates for these various functions, even if they are out of line by as much as plus or minus 100 percent, the total operating costs of the City would not be appreciably altered.

Estimated Expenditures for Operating
an Independent City School System,
1972-1973

The school operating budget which it is estimated Blacksburg would have required had it been a city is calculated below. In arriving at the estimated expenditures which would have been encountered had Blacksburg operated its own school system last year, and provided the same quantity of educational services which were provided under the collective arrangement with the County, it was assumed that the same number of dollars per school-age pupil would have been spent on current operating expenses as was spent in the County.

Montgomery County spent \$6,192,402 (not including capital outlay) to operate its public schools in 1972-73. This translates to approximately \$652 per 1971 school-age pupil. Thus, estimating the comparable amount which would have been spent by Blacksburg as \$652 x 2566, a Blacksburg City school budget of \$1,673,032 is indicated.

Additional Revenues Accruing to the City

Much attention has been directed in this chapter to the increased expenditures that would be associated with the assumption of City status by the Town. To keep matters in the proper perspective, it should also be pointed out that with the transition to City status also comes the opportunity to receive more monies, especially from the State. Most of the additional funds would accrue from the Basic State Aid to Education and the State Sales and Use Tax. In addition, independent city status would bring in more funds from other small state education funds and from several federal sources.

School Aid from State and Federal Sources

Since the State participates extensively in the funding of public school systems, Blacksburg would have received substantial amounts of money from the State to operate its school system had it formed one. It is estimated that Blacksburg would have received approximately \$785,996 from the State for educational purposes in 1972-73 (exclusive of Sales Tax Revenue which is also considered educational aid) had it been a City. Of this amount, \$676,644 would have come from the Basic State Aid to Education Fund. (See Appendix A at the end of this chapter for the derivation of the above figure.)

Additionally, the State allocated Montgomery County \$406,515 in aid from various other minor educational funds. Recall that 26.9 per cent is the percentage of school-age population which resides in Blacksburg. Crudely estimating the amount which Blacksburg would have received operating its own school system as 26.9 per cent of these minor state funds yields \$109,352. Applying this same type of analysis to that aid which was received from the federal government yields \$167,298. Thus the total amount of school aid which it is estimated Blacksburg would have received to operate an independent school system in 1972-73 is on the order of \$953,294.

State Sales and Use
Tax Revenue

As a City, Blacksburg would also have received State Sales and Use Tax monies in full proportion to the school-age population within its boundaries. (For this particular fund the school-age population is defined to be those youth between the ages of 7 and 20.¹) In the past fiscal year Montgomery County received \$767,507 as its share of the State Sales and Use Tax and collected another \$791,923 from the optional 1 per cent local levy. Thus the County received \$1,559,430 in sales tax revenue. A Blacksburg town which included the recently annexed area would have received an estimated \$106,513 in sales tax revenue. As a City it would have

¹Acts of the Assembly, Sec. 58, 441.48 (1966).

received approximately \$421,046, or 27 per cent of the total amount received by the County. This represents an increase of \$314,533.

Other Minor Revenue Sources¹

In 1973, Montgomery County also received roughly \$110,000 from various other sources to provide certain services to all citizens in the County. Splitting these funds purely on a population basis, it is estimated that Blacksburg would have received roughly 46 per cent of these funds, or about \$50,600, had it been a City.

Estimated Expenditures and Revenues for Blacksburg, Town vs. City

The following two tables--Tables 10 and 11--present a breakdown of the estimated revenues and expenditures that would likely have been associated with a Town of Blacksburg and with a City of Blacksburg for fiscal 1973. It is assumed that because the Town presently provides many of its own general governmental services, if Blacksburg had become a City, it would probably have continued to provide the same level of services for most of these categories. Some additional functions, principally the ones discussed above, do enter the picture when City status is hypothesized, however.

¹Such funds included amounts received for the County library, sheriff's cars, jail expense, trailer fees, taxes on deeds, public assistance recoveries, civil defense, etc.

TABLE 10

Estimated Blacksburg Revenues, Town vs. City
(Including Annexed Territory, Fiscal 1973)

	Blacksburg Town	Blacksburg City	Blacksburg Status City
A. Revenues Not Expected to Change Significantly:			
(1) Licenses and Permits	\$155,000	\$155,000	
(2) Fires and Forfeitures	62,600	62,600	
(3) Rents and Services (including parking meters, garbage collection, VPI fire protection donation, etc.)	181,100	181,100	
(4) Utility Tax	125,500	125,500	
(5) Highway Maintenance Funds from State	137,000	137,000	
(6) Miscellaneous Revenue (interest, recreation facilities use, etc.)	97,874	97,874	
(7) Water and Sewer Fund Revenue	735,196	735,196	
(8) Equipment Fund Revenue	128,000	128,000	
(9) Debt Fund Revenue	151,566	151,566	
(10) Share of ABC profits	81,000	81,000	
	\$1,854,836	\$1,854,836	
B. New or Significantly Changed Revenue Sources:			
(11) Taxes on Bank Capital	20,000	10,000	
(12) Share of State Sales and Use Tax	106,513	421,046	
(13) Revenue from Other Governments:			
(a) Base State Aid School Fund	-----	676,644 ^a	
(b) Miscellaneous State Educational Fund Revenues	-----	109,352	
(c) Revenues from Federal Government	-----	167,298	
(d) Miscellaneous Revenue	-----	50,600	
	\$126,513	\$1,434,940	

TABLE 10--Continued

	Blacksburg Status
	<u>Town</u> <u>City</u>
B. New or Significantly Changed Revenue Sources:	
(14) Total Revenue Other Than Property Taxes	\$1,981,349 \$3,289,776
Property Taxes:	
(15) Taxes Paid to County by Blacksburg Residents	\$1,076,125 -----
(16) Taxes Paid to Blacksburg by Blacksburg Residents	451,521 1,487,009 ^b
(17) Total Taxes for Identical Services	<u>\$1,527,646</u> <u>\$1,487,009</u>
Total Revenue	<u>\$3,508,995</u> <u>\$4,776,785</u>
(18) Nominal Tax Rates (.20 Assessment Ratio)	
County Levy (based on Line 15)	\$ 7.15
Blacksburg Levy (based on Line 16)	<u>3.00</u> \$9.88
	\$10.15 \$9.88

^aSee Appendix A at end of Chapter.

^bNecessary budget-balancing Blacksburg City property tax levy determined residually by subtracting total nonproperty tax revenues (Line 14) from estimated total expenditures (Line 23 of Table 12).

TABLE 11

Estimated Blacksburg Expenditures, Town vs. City
(Including Annexed Territory, Fiscal 1973)

	<u>Town</u>	<u>City</u>
A. Expenditures Not Expected to Change Significantly:		
(1) Administration	\$ 54,665	\$ 54,665
(2) Police Protection	204,723	204,723
(3) Employee Benefits (including SS payments)	91,047	95,000
(4) Fire Protection	19,345	19,345
(5) Municipal Court	5,800	5,800
(6) Planning, Zoning, etc.	42,556	42,556
(7) Public Works	408,086	408,086
(8) Recreation	110,556	110,556
(9) Miscellaneous General Fund Expenditures	11,160	11,400
(10) Water and Sewer Fund	737,480	737,480
(11) Equipment Operations Fund	58,250	58,250
(12) Capital Improvement Fund	302,885	302,285
Subtotal	\$2,046,553	\$2,050,146
B. New or Significantly Changed Expenditure Sources:		
(13) Debt Retirement Fund Expenditures	\$ 156,566	\$ 544,260 ^a
(14) Debt Service (Interest)	60,600	402,331 ^a
(15) Public School Operations (\$652 for 2566)	-----	1,673,032
(16) Public Health and Welfare	-----	44,368 ^b
(17) Treasurer	39,635	22,250 ^b
(18) Commissioner of the Revenue	-----	13,017 ^b
(19) City Sergeant	-----	5,842 ^b
(20) Commonwealth Attorney	-----	8,492 ^b
(21) Recording Documents	-----	5,340 ^c
(22) Circuit Court	-----	7,889 ^c
Subtotal	\$ 256,801	\$2,726,621
TOTAL:	\$2,303,354	\$4,776,767

TABLE 11--Continued

^aSee Appendix B at end of chapter.

^bCity's share. See Appendix C at end of chapter.

^cAssuming no Corporation Court would have been established the year of City status. This figure represents 46% of the costs of operating the Montgomery County Circuit Court in 1972-73, and of Recording Documents.

In fiscal 1973, the year for which the estimated revenues and expenditures for Blacksburg are presented in Tables 10 and 11, the estimated total amount paid in general property taxes by Blacksburg residents was \$1,527,046. Of this amount \$451,521 (\$3.00 per \$100 of assessed valuation of \$15,050,700) was paid in Town taxes and \$1,076,125 (\$7.15 per \$100 of assessed valuation of \$15,050,700) was paid in County taxes. The combined tax rate paid by Blacksburg residents to the Town and County was \$10.15 per \$100 of assessed valuation. Tables 10 and 11 unequivocally demonstrate that as an independent City, in order to provide the same level of services as a City which were provided under the collective arrangement with the County in 1972-73, Blacksburg citizens would have needed to be taxed at a rate of only \$9.88 per \$100 of assessed valuation of property. Such a reduction in the tax rate would have meant a decrease of approximately 2.7 per cent in the average tax bill of a Blacksburg citizen. This finding could also be interpreted to mean that even if the estimated revenues and expenditures are in combined error by as much as 2.7 per cent, Blacksburg could still have provided the same quantity of services as cheaply as was provided under the collective arrangement with the County.

It should be emphasized that the only assumption made about the quality of the services which would have been provided under the two arrangements--Town-County vs. City--is that the quality would remain constant. What the above analysis indicates is that Blacksburg, as a City, could have provided the same quantity of services at a reduced cost to its citizens. Assuming that Blacksburg would have elected to spend these savings, approximately \$40,000, to increase per-pupil education expenditures for its students, the educational expenditures per 1971 school-age pupil could have been increased from \$652 to \$667, with Blacksburg citizens paying the same amount in property taxes as were paid under the collective arrangement with the County.¹

¹The estimated revenues and expenditures in virtually every case (except where it was necessary to generate estimates in the Appendices) were obtained from either actual expenditures and revenues or budgeted estimates contained in Annual Reports and Budget Exhibits of the Town and County, and from annexation documents which estimated the additional yearly expenditures and revenues which would have resulted from Blacksburg's recent annexation of a portion of Montgomery County.

APPENDIX TO CHAPTER IV

Appendix A

Calculations of the Basic State Aid to Education revenue which Blacksburg would have received had it operated its own school system in 1972-73 are based on a number of underlying assumptions which need clarification.

Firstly, since the particular section to which this estimate refers was concerned with determining whether the same quantity of services could have been supplied more cheaply under the collective arrangement with the County or by an independent city, it is assumed that the number of instructional personnel needed to operate Blacksburg's school system could be prorated at 26.9 per cent of the total County instructional staff; or 122 persons.

Secondly, since time and expense considerations precluded categorizing each of the 122 estimated instructional personnel by years of teaching experience and degree to conform to the Minimum Salary Schedule of the State Board of Education to arrive at the Total Cost for Minimum Program, it was deemed rational to utilize an "average" State Minimum Salary. The \$6500 "average"

utilized would mean that the "typical" instructional personnel employed by the Blacksburg Public School System would have been relatively inexperienced in the teaching profession (i.e. no advanced degree and four years of experience, or advanced degree but less than one year of experience). It is fully recognized that this is not the correct manner in which the calculations are meant to be made. However, in apportioning expenditures between Blacksburg and the County, the average qualifications of teachers, both in Blacksburg and the remainder of the County, were implicitly considered to be identical to the present "County average." Thus the estimated expenditure figures incorporate the true qualifications of the teachers as they are reflected in the present County payroll for teachers. To the extent that the hypothetical "typical" Blacksburg teacher, as used in the present calculations, actually understates the qualifications of the true typical teacher, the quantity of state aid generated is also understated.

Thirdly, in estimating the Average Daily Membership for a Blacksburg School System last year the following approach was used:¹

Total School-Age Population in County	
in 1971.	9504

¹Superintendents Annual Report, Montgomery County, Virginia.

Total School-Age Population in Blacks- burg (26.9%) in 1971 (including Annexed Territory)	2566
Average Daily Membership in County in 1972-73	8442
Average Daily Membership in Blacks- burg (26.9%) in 1972-73.	2271

Keeping in mind the assumptions that are being made, the estimated amount of Basic State School Aid which Blacksburg would have received is calculated in Table 12. For a full discussion of the manner in which such aid is in fact calculated, see "ABC's of School Finance," Virginia Education Association, June 1972.

TABLE 12

Estimated Basic State School Aid for City of Blacksburg, 1972-73

I.	Total Cost of Salaries:		
	# of instructional personnel X "average" salary		
	122 x \$6500 = \$793,000		
II.	Allowance for Other Operating Costs:		
	\$160 x Average Daily Membership		
	\$160 x 2271 = \$363,360		
III.			
	(a) Total Cost of Salaries.	\$793,000	
	(b) Allowance for Other Operating Costs:		
	\$160 x 2271 (Adm.).	<u>363,360</u>	\$1,156,360
	(c) Total Cost of Minimum Program		
	(d) Local Share (60¢ per \$100 of 1972a		
	True Values = .60 x \$752,535)	\$451,521	
	(e) Basic State Share (60% of Total		
	Cost of Salaries)	<u>475,800</u>	
	Total of Items (d) and (e)		\$ 927,321
	(f) Supplementary State Share		\$ 229,039
	(g) Basic State Share		475,800
	(h) Estimates Total State Share		<u>\$ 704,839</u>
	96% of Estimated Total State Share ^b		<u>\$ 676,645</u>

^aActually, the formula calls for the use of 1970 True Values. Again, because of the recent annexation such information is not available. This figure, then, is biased upward, which actually deflates the State's share.

^bAll localities were funded at 96% of their Estimated Total State share because of budget limitations.

Appendix B

Had Blacksburg become a City on July 1, 1972, it was calculated that it would be necessary to assume a debt of approximately 5.5 million dollars. Since the fair value of the school buildings and equipment which it is assumed the City would have purchased is \$10,305,000 and the equity which Blacksburg citizens had in the total school properties of the County was \$7,673,078, it is estimated that the City would have to sell bonds in the amount of approximately \$2,631,922 to purchase school properties from the County. The remaining debt assumption--\$2,867,816--would have been paid to the County each year as bond payments in which the City had a vested interest came due.

Assuming that Blacksburg elected to retire a \$2,600,000 serial bond issue, which would have been necessary to purchase City schools, over a 20 year period, principal payments each year would be \$130,000. Interest for the first year, assuming a 5.5 per cent interest rate, which is the present going rate for a municipality of Blacksburg's credit standing (see Moody's Municipal Manual, August 1973), would have been \$143,000 the first year and would decrease thereafter, falling to \$135,850 the second year and \$128,700 the third year, etc.

In addition, Blacksburg's share (28.943%) of the County debt in which it had vested interest would have been \$257,694 the past year, since \$890,350 in principal of the debt in which Blacksburg had a vested interest was retired in that year. Interest payments for Blacksburg in fiscal 1973 would have been \$198,731, or 28.943% of total interest payments of \$686,631.

It should be pointed out that Virginia cities are prohibited from assuming bonded indebtedness in excess of 18 per cent of the assessed valuation of property within the City.¹ In 1972, property in Blacksburg was assessed at .20 of fair market value. The estimated assessed value of Blacksburg property in 1972 was \$15,050,700. Eighteen per cent of this assessed valuation is \$2,709,126. Since Blacksburg already had a bonded indebtedness of \$700,000 on July 1, 1972, an additional bond issue of \$2,600,000 would have put it outside its legal limit as imposed by the Virginia Constitution. To overcome this legal obstacle it would have been necessary to increase the ratio at which property is assessed to its true value. For example, increasing the ratio from .20 to .25 would mean that the same property would be assessed at \$18,813,375 rather than \$15,050,700. The City's legal

¹Constitution of Virginia, art. VII, § 10.

debt ceiling then would have been increased from \$2,709,126 to \$3,386,407, more than enough to allow for the \$3.3 million bonded indebtedness that would have been necessary. It should also be realized that an increase in the ratio at which property is assessed to its true value would probably have caused a decrease in the tax rate per \$100 of assessed valuation. The increased ratio was necessary only to get around the debt limit imposed by the Constitution. It in no way changes the results of any of the analysis in this thesis.

Appendix C

The allowable range within which cities may compensate certain required public officials is specified in the Code of Virginia, Sec. 14.1, Cost, Fees, Salaries and Allowance. The allowable salary ranges for the officials which would be required by a City of Blacksburg, as set in 1971, are as follows:

- (1) Commonwealth's Attorney: \$6500-\$13,000 -- §14.1-53
- (2) City Treasurer: \$8400-\$14,490 -- §14.1-55
- (3) Commissioner of Revenue: \$8400-\$14,490 -- §14.1-57
- (4) City Sergeant: \$8400-\$14,490 -- §14.1-73

In preparing the budget estimates below attention was given to the current salary enjoyed by certain comparable County officials where possible. Where such was not possible, the assumption was made that the salaries paid by the new City would be in the upper fifth of the allowable range.

It is assumed that office space and some office equipment is currently available for the use of these new personnel, and that in some instances the space and equipment presently utilized by personnel performing similar functions would be made available.

For a discussion of the manner in which costs for the above functions are to be apportioned between the locality and the State, see the following sections

of the Code: for the Commonwealth's Attorney, City Treasurer, and Commissioner of Revenue, Sec. 14.1-64; for the City Sergeant, Sec. 14.1-79.

I. Proposed Budget--Commonwealth's Attorney

Compensation of Commonwealth's Attorney.	\$12,000
Compensation of Secretary	4,000
Office Supplies, Postage, Telephone, etc.	450
Office Equipment.	<u>400</u>
Total Cost.	\$16,850
City's Costs: 1/2 of salaries =	\$8,000
1/2 of Expenses =	225
2/3 of Equipment =	<u>267</u>
	\$8,358
State's Costs: \$16,850 - \$8,492 =	\$8,358

II. Proposed Budget--City Treasurer

Compensation of City Treasurer	\$13,500
Compensation of Clerical Help.	20,000
Extra Help	1,000
Office Supplies, Telephone, Postage, etc.	<u>10,000</u>
Total Cost.	\$44,500
City's Costs: 1/2 of Total Cost =	\$22,250
State's Costs: 1/2 of Total Cost =	\$22,250

III. Proposed Budget--Commissioner of
the Revenue

Compensation of Commissioner of Revenue	\$13,500
Compensation of Deputy	6,500
Extra Help	2,500
Office Supplies, Postage, Telephone, etc.	1,300
Office Equipment	2,000
	<hr/>
Total Cost	\$25,850

City's Costs: 1/2 of Salaries = \$11,250

1/3 of Office
Supplies and
Equipment 1,767
\$13,017

State's Costs: 25,850 - 13,017 = \$12,843

IV. Proposed Budget--Office of City Sergeant

Compensation of City Sergeant.	\$ 4,000 ^a
Travel Expense, Office Supplies, Postage, etc.	3,000
Clothing	400
Miscellaneous.	75
Equipment--Automobile, Mobile Unit, Defense Weapon	2,850
Office Equipment	500
	<hr/>
	\$10,825

City's Costs: Equipment \$2,850

1/3 of Remaining Costs = 2,992

\$5,842

State's Share: \$10,825 - \$5,842 = \$4,983

^aNeeded only part-time.

CHAPTER V

FUTURE CONSIDERATIONS

The previous chapters have dealt with an issue which is, for all its relevance, totally hypothetical. Blacksburg was not in the past, is not presently, and cannot be--at least until January 1, 1976--an independent city. A State-enacted moratorium exists until that date on the granting of city charters.¹ Additionally, one of the particular provisions of the January 1, 1973 annexation settlement with Montgomery County is that, in the event Blacksburg assumes city status before January 1, 1978, the Annexation Court could be reconvened, at the County's discretion, to perhaps alter the annexation settlement.² Alterations of the settlement might take the form of changes in the amount of compensation which the Town is currently paying the County for loss of revenue, or possibly even a deannexation of a part of the Town itself.

While the previous analysis suggests that it would otherwise probably be in Blacksburg's best

¹Va. Code § 15.1-1032.1, 362.

²County of Montgomery vs. Town of Blacksburg, Record No. 7627, Circuit Court of Montgomery County.

interests to assume city status, the temporary legal restrictions cannot be summarily dismissed. Nonetheless, the course taken by events of the recent past suggests that strong consideration should be given to the possibility of assuming city status sometime in the future. The conclusion that Blacksburg might still find it advantageous to become a city, once these legal restrictions are lifted, is based on the following argument.

Table 13 shows that, in the 1973 reassessment of property in Montgomery County more than 55.2 per cent of the increased assessed valuation is attributable to increases in assessment of property located in Blacksburg. Before this recent reassessment of property, Blacksburg's share of the total County assessment was 28.94 per cent. After the reassessment it is estimated that Blacksburg's share of the total County assessment is 35.13 per cent. The assessed valuation of property located in Blacksburg increased by an average of 54.9 per cent while the assessed valuation of all non-Blacksburg property increased by an average rate of only 18.2 per cent--all increases occurring overnight (January 1, 1973) when the new assessments became effective. It is obvious that, if such differential increases in relative value occur after each reassessment, then the longer Blacksburg delays in becoming a

TABLE 13

A Comparison of Assessed Valuation of Property in Blacksburg and Non-Blacksburg Areas of Montgomery County, 1972 and 1973

	Blacksburg Assessment	% of Total	Non-Blacksburg Assessment	% of Total	Total Assessment
1972 Assessed Valuation	\$15,050,700	28.94	\$36,949,300	61.6	\$52,000,000
1973 Assessed Valuation	23,336,320 ^a	34.83	43,663,680	55.17	67,000,000
Net Change	+ 8,285,620	+5.31	+ 6,714,380	-5.31	+15,000,000
Average Rate of Increase in Assessed Valuation of Blacksburg Property.				54.9%	
Average Rate of Increase in Assessed Valuation of Non-Blacksburg Property.				18.2%	

^aContains an estimated \$900,000 for public service corporations. Such corporations accounted for an estimated \$871,438 of the 1972 assessed valuation of Blacksburg property.

Source: Based on estimates received by A. J. Walrath, Blacksburg Town Councilman, from Town and County officials.

city, the worse off its relative position becomes from a tax burden standpoint.

However, consider the following. Because Blacksburg's proportion of the assessed valuation of property increased from 28.94 per cent to approximately 35.13 per cent when the new assessment was effected, were it to become a city now it would have to assume 35.13 per cent of the gross County debt, rather than the previous 28.94 per cent. It should be remembered, however, that in such a case it would also be credited with 35.13 per cent of the relevant County assets (i.e. school properties, fund balances, etc.). If the County assets on which the City would be credited are substantially larger than the County debt, this factor appears to have a significant influence. To better appreciate this fact, consider the following scenario.

Let us assume some omniscient consultant who knows that, after the reassessment of property took place last year, Blacksburg's proportionate share of the total County assessed valuation of property would be substantially increased. Knowing this, he persuaded the Town Fathers to postpone seeking city status for one year--that is, until July 1, 1973. How would this postponement have changed Blacksburg's debt assumption? To find out how, we will apply the same analysis that was used in calculating Blacksburg's debt assumption for

July 1, 1972, as presented earlier in Table 7. The new results are presented in Table 14. To say the least, they are interesting.

The analysis clearly reveals that if Blacksburg did heed the consultant's advice, it would be required to assume a smaller net debt, despite the fact that it would be required to assume a larger proportionate share of the gross County debt, which we might add increased substantially--from 10.8 million dollars to 15 million dollars--during the year. This seems to be a paradoxical finding. However, it can all be understood very easily if one but remembers the manner in which the Spratley Decision works.

There are two forces at work here. One, the debit side, is quite easy to comprehend. It is simply the amount which is owed. If the gross debt is some amount X and one's proportionate share of the gross debt increases, then one simply assumes a larger amount of the gross debt. If, however, the assets of the firm are also substantial, one's equity in these assets serves as a counterbalancing force on the debit account. Surely, if as in the Blacksburg case, one's proportionate share of the debt increases but his proportionate share of the assets increase also, and the assets are greater than the liabilities, one experiences a net gain. In the above example, assuming a fixed tax budget, \bar{B} ,

TABLE 14

Estimated Amount of County Debt to be Assumed by
Blacksburg Had It Become a City July 1, 1973

<u>Line</u>		
(1)	1973 Assessed Valuation of Property in Blacksburg (est.)	\$23,336,320
(2)	1973 Total Assessed Valuation of Property in Montgomery County (est.)	67,000,000
(3)	Blacksburg's Proportion of Assessed Property Values:	
	$\frac{\$23,336,320}{\$67,000,000} = 35.129\%$	
(4)	Total County Debt Outstanding (July 1, 1973)	\$15,001,050
(5)	Blacksburg's Portion of County Debt (35.129%)	\$ 5,269,719
(6)	Fair Value of Schools Located in Blacksburg (est.)	<u>10,831,000</u>
(7)	Gross Blacksburg Debt.	<u>\$16,100,719</u>
(8)	Fair Value of <u>All</u> Schools in Both Montgomery County and Proposed City of Blacksburg.	\$28,511,000
(9)	Blacksburg's Equity in Total School Properties (35.129% of Fair Value of <u>All</u> Schools).	\$10,015,630
(10)	Fund Balances:	
	(a) County Funds.	\$ 1,158,616
	(b) Other Funds	363,412
(11)	Blacksburg's Proportion of Fund Balances:	
	(a) 35.129% of County Funds.	\$ 407,010
	(b) 46% of Other Funds	167,170
(12)	Sale of Mobile Classroom Units at Blacksburg Schools.	<u>99,000</u>
(13)	Net Debt Assumption by Blacksburg, <u>July 1, 1973</u>	\$ <u>5,412,709</u>

Blacksburg's tax payments to the County would increase by $(a_{73} - a_{72}) * \bar{B}$, or $.06186 * \bar{B}$, where a_t is the proportion of the tax budget which Blacksburg citizens are responsible for in each of the two years, $t = 1972$ and 1973 . The actual values are: $a_{72} = .28943$ and $a_{73} = .35129$. At the same time, the debt assumption for Blacksburg decreased by \$87,029. As long as the increased tax load for Blacksburg citizens did not increase by more than \$87,029, ceteris paribus, then the decision to delay the assumption of city status for one year was an economically efficient move. The above situation can be very neatly expressed in a model such as the one below.

- Let, (i) a_t = the proportion of the assessed valuation of property to be assumed by Blacksburg citizens in year t , where a increases in each time period
- (ii) S_{MB} = the total value of all school properties in the County and the proposed city, where S_{MB} remains constant for simplicity
- (iii) D_t = the total debt outstanding in year t , which decreases each year, assuming no new debt assumption
- (iv) $B = \bar{B}$ = the total County tax budget, which also remains constant in each time period.

Then,

- (1) TAX PAYMENTS TO THE COUNTY = $a_t \bar{B}$, which clearly rise as a_t rises

(2) COMPENSATION TO THE COUNTY UPON TRANSITION TO CITY

$$= a_t D_t - a_t \bar{S}_{MB} + \bar{S}_B, \text{ or}$$

$$= a_t (D_t - \bar{S}_{MB}) + \bar{S}_B, \text{ which clearly falls in}$$

each time period assuming no new debt is
encountered.

Keeping in mind the special assumptions made above concerning: (a) the constancy of the tax budget and the school properties in the County and the proposed City; (b) no new debt assumption in the area; and (c) the fact that the total assets in the system far exceed the total debt outstanding, it is obvious that the optimum time to become a city, under these specialized assumptions, would be when the increase in tax payments to the County exactly equals the decrease in the net debt assumption which the City would assume. Any time before that point would be suboptimal, from a financial standpoint.

Applying this finding to the Blacksburg case, it would appear that the Town should defer making the transition to City status until its decreased debt assumption exactly offsets its increased tax responsibilities to the County. Of course, this analysis presumes that the overriding consideration that the Town faces in deciding when to make the transition is its net debt assumption.

In fact, however, previous analysis indicates that it is not the financial issues but the preference satisfaction issues which loom as the most important considerations in this case. From a financial standpoint it was determined that, in the short-run, a City of Blacksburg could probably provide at lower cost the same level of services to its citizens as are currently provided under the collective arrangement with the County, but that the savings would be minimal. Indeed, if the estimated expenditures increased by as little as three per cent, the cost to Blacksburg citizens would be, for all practical purposes, the same under either arrangement. It must be remembered, however, that much of the cost to the City would result from the necessity to purchase school properties located in the City from the County. These capital expenses would serve to keep property tax rates at about the same level as are now prevalent.

A critical point in the above analysis, then, is that the total County debt outstanding does not increase appreciably during the relevant time periods. This is a very important consideration. For if the total County debt does increase substantially from one assessment period to the next, much of the financial gain which Blacksburg citizens would otherwise realize were city status assumed just after a reassessment would be quickly

dissipated, because of the necessity to assume a larger amount of the gross County debt.

Thus it appears that if there are also other important considerations--and there are many in the Blacksburg case--the decision of when to make the transition depends upon the relative priorities of the Town's citizens. Are the preference satisfaction considerations of sufficient magnitude to offset the magnitude of the financial considerations? Does the Town dare risk improving its strategic position by postponing the decision to make the transition to city status until just after the next reassessment, knowing that a considerable amount of additional County debt might be incurred before that time? Do Blacksburg citizens so despair of the current arrangement that they desire that a change be made at the earliest possible date? The issues have been presented. However, that final decision as to when, and if, to make the transition to city status is a decision which the citizens must really make for themselves.

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VITA

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He entered Virginia Polytechnic Institute in September 1968, receiving his Bachelor of Arts degree in Economics there in June 1972, whereupon he immediately commenced graduate studies in Economics.

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Theodore E. King, Jr.

SOME ECONOMIC IMPLICATIONS OF CITY
STATUS FOR BLACKSBURG, VIRGINIA

by

Theodore Elvin King, Jr.

(ABSTRACT)

Much discussion has taken place among local citizens in recent years about the possibility of the Town of Blacksburg, Virginia assuming city status. Many of the issues surrounding such a change in government form, however, appear unclear.

This study explores some of the economic issues surrounding such a transition in an effort to: (1) clarify some of the arguments which are frequently encountered, and, (2) determine if there is economic rationale for the assumption of city status.

The findings suggest that Blacksburg does indeed have considerable economic bases for assuming cityhood. This conclusion was reached after analysis of some of the economic issues involved--both preference-wise and finance-wise--was conducted.