THE PUBLIC FINANCE IMPACTS
OF THE GOLF COURSE ANNEXATION
IN WILMINGTON, OHIO

by

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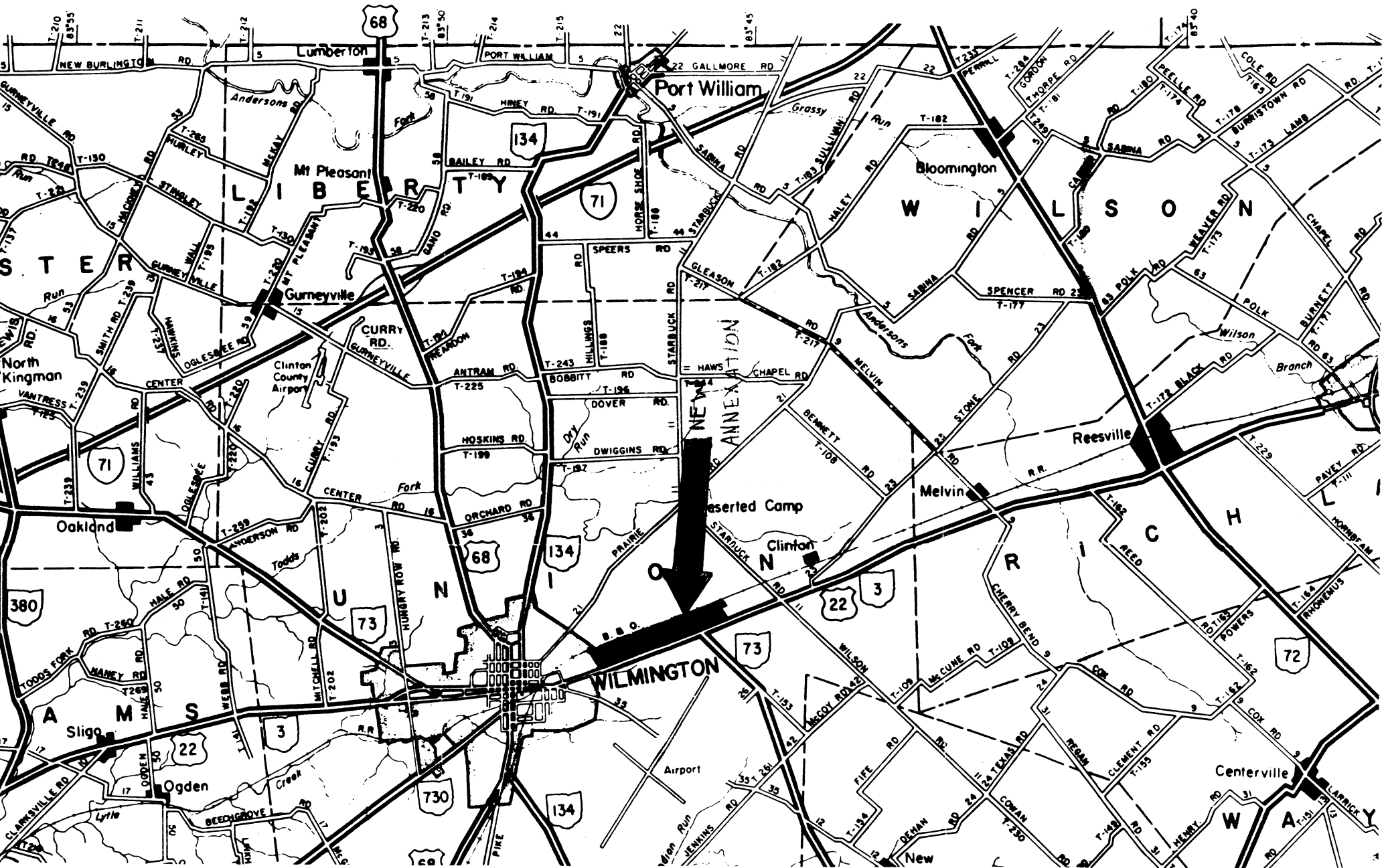IN WILMINGTON, OHIO

I. Introduction

This report provides preliminary estimates of the changes in revenues and

expenditures which the City of Wilmington will experience as a result of the

annexation of a 160 acre area located along U.S. Route 22, east of the city

(see Figure 1).

The objective of this project was to demonstrate how the Ohio Job Impact

Model can be used to estimate the public finance impacts of annexation for the

city and to provide city officials with an opportunity to become familiar with

the model's data requirements and results. This applied research project was

done at the request of James Hasler, Councilman, through the Ohio Cooperative

Extension Service, the Ohio State University.

The local data on the future development was provided by Robert Holmes,

City Service Director, Mayor Robert Moyer, and Councilman James Hasler. Data

on tax rates and local government expenditures were collected Bill Fyffe,

Clinton County Auditor and from the State Auditor's reports by Mike

McCullough, Research Associate, Department of Agricultural Economics and Rural

Sociology, The Ohio State University. Kaye Bartlett, Area Agent for Community

and Natural Resource Development, provided background information on

Wilmington and assisted in developing the scenarios studied. George Morse

supervised the project, conducted the analysis, and wrote this report.

No recommendations are made in this report about future annexations. This

report demonstrates the type of information which can be developed for pending

annexation issues. Each case must be studied independently, however. While

CLINTON COUNTY

Lumberton
Port William
GALLMORE RD
PORT WILLIAM
NEW BURLINGTON RD
Andersons Fork
Grassy Run
Bloomington
Mt Pleasant
BAILEY RD
LIBERTY
WILSON
HURLEY
Gurneyville
CURRY RD.
SPEERS RD
GLEASON
SPENCER RD
Andersons Fork
Clinton County Airport
ANTRAM RD
BOBBITT RD
HAWS
CHAPEL RD
DOVER RD
North Kingman
HOSKINS RD
Dry Run
DWIGGINS RD
NEW ANNEXATION
BENNETT RD
Reesville
STER
Run
CENTER
Fork
ORCHARD RD
PRAIRIE
Deserted Camp
Clinton
Melvin
RICH
Oakland
Todds
COUNTY
STARBUCK
Wilson Branch
U N I O N
Sligo
Ogden
Creek
WILMINGTON
Airport
Centerville
WAY
ADAMS
Clarksville
BEECHGROVE
PIKE
New

results from the Job Impact Model provide insights on potential impacts, city council and other local decision-makers must consider local needs and institutions before making their decisions.

In the second section the annexed area is briefly described. Next, alternative development scenarios are outlined. In the fourth section the estimates for changes in city expenditures are explained. The fifth section reports the estimated impacts for the City of Wilmington. Brief attention is also given to the impacts on the county, the school, and Union Township. The sixth section suggests means of doing future annexation case studies. A brief summary is given in the final section. The appendices include all of the data used in this analysis.

II. Description of Annexed Area

Currently this area includes 134 acres of golf course and 25 acres of commercial land. There is one residential property and one commercial establishment, Production Credit Association. The characteristics of the current development in the annexed area are shown in Table 1. The land adds approximately $1.8 million (market value) to the city's tax base, while the remaining properties was estimated to add just over one million (market value) to the base. Only 3 employees at the PCA are assumed to be added to the city's income tax base. An average gross salary of $18,000 was assumed for these workers.

A planned unit development has been proposed for this area which would consist of 263 housing units on 45.27 acres, commercial development on 51.48 acres, and 62.81 acres of golf course. The characteristics of the residential population are shown in Table 2.

Table 1

Characteristics of the Current Development
in the Golf Course Annexation

Development Type	Units	Market Value Per Unit ($000)	Employee Per Unit	Annual Wage Per Employee ($000)	New City Residents	New School Children
Industrial	0	--	--	--	--	--
Commercial	1	1,028.	3*	18.	5	2
Residential	1	**	--	*	3	0
Land (acres)	160	11.25	--	--	--	--

*Assumed that only ½ of the estimated 6 workers did not already live in the city.

**Included in the commercial estimates to avoid disclosure of data on an individual residence.

Two hundred and sixty-three residential units are proposed for this area
with 41 three-bedroom homes, 46 two-bedroom duplexes, 175 apartments, and one
four-bedroom home. The average market value per unit is approximately $47,000
or a total of over $12 million.

The residential population was estimated using 1977 demographic multipliers
reported by Burchell and Listokin (page 64) for the North Central Region
(Table 2). Based on these regional averages, it is estimated that full
development of this residential complex would house 776 persons with 143 being
school-aged children.[1]/ The school-age children estimates shown in Table 2
may overstate the number of children attending school since these estimates do
not consider attendance rates.

If the residents to the proposed residential development were in-migrants
to the county, presumably to take expanded job opportunities at Wilmington
Industrial Air Park, then this would add to the city income tax and county
sales tax. The estimated incomes shown in Table 2 assumes the market value of
the units are 1.87 times the family gross income.

A proposed shopping mall was estimated to add $6.4 million (market value)
to the tax base and to employ 400 persons. It was assumed that only 200 of
these workers are net additions as a result of the annexation and that only 25
percent of these are new employees for the city. These are rough guesses that
may merit further refinement, depending on the use of these results.

III. Alternative Development Scenarios

Since neither the residential nor the commercial development has occurred
in the annexed area, several assumptions must be made about the actual future
development. Further, the change in city revenues and expenditures must

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1/ Appendix A shows the demographic multipliers used to estimate population of
   school-aged children.

Table 2

Characteristics of the Proposed Development
in the Golf Course Annexation

Development Type	Units	Market Value Per Unit ($000)	Estimated Residents	Estimated School Children	Family[*] Income Per Unit ($000)
Residential:					
Single Family Homes					
Three bedrooms	41	70	145	41	37
Four bedrooms	1	100	4	2	53
Two Family Homes					
Two bedrooms	46	50	97	7	26
Multi-Family Apartments	175	40	530	93	21
Total	263	12,270	776	143	6,500
Average	n.a.	46.7	2.9	.54	25.
Commercial	1	6,393.5	148	27	7.3

[*]These estimates are rounded off to 2 digits to facilitate the reading.
This practice is followed throughout the report.

consider the development that might have occurred elsewhere within city limits
if the annexation had not occurred. The two key questions are:

(1) How many of the housing units would have been built somewhere within city
limits if the annexation had not been approved?

(2) How many of the future residents in the annexed area will be in-migrants
to the community and county?

New Housing

If 100 percent of the housing units planned for the annexed area would have
been built within the city, provided the annexation had not been approved,
then the city gains no additional property taxes nor income taxes as a result
of the annexation. But the city would pick up some additional expenditures
for police and fire protection and street maintenance as a result of the
annexation.

Based on discussions with the local committee, it was assumed that between
25 and 50 percent of the 263 housing units would have been built within the
city without the proposed development. However, it was felt that there were
probably no locations within the old city limits that would have accommodated
the complete residential and commercial development. Further, the golf course
setting and location near the airport road provides a different type of devel-
opment than in other locations within the previous city limits.

The assumption that 25 to 50 percent of the houses would have been built
within the city suggests that between 50 and 75 percent of the development
would be a net addition to the city.

In-migrants to County

The second assumption relates to the percentage of the estimated 776 resi-
dents that would be in-migrants to the county. Assuming that a large number

of employees at the industrial park commute into the county and that future expansions in the air transport business will further expand employment, it was assumed that between 50 and 80 percent of the residents would be inmigrants to the county.

Given these assumptions, the estimates were made for 50 and 75 percent of the 263 units and 776 residents. In other words, we assumed that the city's population might grow by 388 (776 x .50) or by 582 (776 x .50).

Development Scenarios Studied

Five development scenarios were studied since there is uncertainty about the actual rate and type of development that will occur in this area. The first scenario, labeled "Current Development," assumes no additional growth will occur in the annexed area. Changes in revenues and expenditures are estimated for only the existing commercial establishment and homes in the area. Development Scenario A adds the impacts of a new shopping mall with 400 employees. Scenarios B and C omit the new shopping mall but add in the proposed residential development. Scenarios B and C, respectively, assume only 50 and 75 percent of the residential units would have built outside the city if the annexation had not occurred. Scenario D adds the shopping mall back to Scenario C. To summarize these five scenarios, the current development scenario assumes no additional development occurs because of the annexation while Scenario D assumes considerable change as a result of the annexation. This study does not evaluate the relative probability of these alternative scenarios actually developing.

IV. Estimation Procedures for Expenditures

Capital Expenditures

Since the developer has agreed to put in water and sewer extensions and to provide all other improvements including streets, curbs and lights, the city only needs to consider the adequacy of its treatment plants.

The sewerage treatment plant is estimated to have an effective capacity of 1.5 to 1.6 million gallons per day. The average daily volume is 1.25 million gallons per day with peak loads running close to capacity. A current improvement project will expand capacity to 2 million gallons per day.

After the improvement in effective capacity to 2 million gallons per day there would be sufficient excess capacity to handle the residential demand in the new area. This conclusion is based on the assumption of 120 gallons per day for each person with a peak load of 124,000 gallons per day.

It could be argued that the improvement in the sewerage treatment plant would not be required without this additional growth. But if 25 to 50 percent of the homes would have been built within city limits anyway, then some improvement would have been needed even without the annexation.

The water treatment plant has an effective capacity of 2 million gallons per day with the peak demand load running about 1.5 to 1.6 mgpd. Consequently, no additional capacity or cost is required.

Operational Expenditures

City services expected to increase were police protection, fire protection, and street maintenance. It was assumed that water and sewerage operational expenditures would be covered by the user fees.

The per capita expenditure method and the service standards method were used for estimating changes in expenditures for police, fire and streets due

to residential development. The employment anticipation method was used to evaluate the commercial development in the area. None of the methods used is entirely adequate for estimating the additional costs as a result of this policy. A third approach, the service budget, should be used if the results are controversial. The advantages and disadvantages of these alternative approaches are described in Growth Impacts on Local Government Revenues and Expenditures (Morse and McDowell).

The per capita expenditure method assumes the cost of serving new residents will be the same as for current ones. The current average expenditure per person in Wilmington was multiplied times the number of new people in the annexation area. The city's previous expenditures per person for police, fire and street maintenance were $36.89, $27.15, and $23.58 respectively. It was assumed that these expenditures would increase at an annual rate of 7 percent.

The service standards method assumes standard manpower requirements for cities of the same size and within the same region. Since the 1980 population for Wilmington is 10,431, the manpower coefficients were averaged for cities in the 5,000 to 9,999 and 10,000 to 24,999 population categories. These are shown in column 1 of Table 3. The estimates are now described for each service.

Police: Currently there are 16 patrol officers, 4 dispatchers, and a janitor in the Wilmington police department. This is equivalent to 2.01 police employees per thousand persons. If the North Central average of 1.80 per 1,000 persons is used, the city currently needs 18.7 police employees or has an excess capacity of 2 employees.

However, this comparison can be misleading since the averages do not account for the characteristics and desires of individual communities.

Table 3

Additional Expenditures in Year 1
Based on Service Standards Method,
Wilmington Golf Course Annexation

	Employees[a] Per 1000 Population	New[b] Population	Expenditure[c] Per Employee ($000)	Additional[d] Expenditures ($000)	
				"B"	"C"
Police	1.80	776	$18	$13	$19
Fire	0.8	776	20	6	9
Streets	0.90	776	61	21	32

a) Average number of employees per 1,000 in North Central cities with populations between 5,000 and 24,999.

b) See Table 2.

c) Total expenditures for the department divided by the number of non-administrative personnel.

d) Scenario B is 50% of the product of columns one, two and three while scenario C is 75% of this product.

Assuming that the current police department does not actually have any excess capacity, the service standards method is shown in Table 3.

Fire Protection: The fire department has 14 permanent employees and 13 volunteer employees, or the equivalent of 1.34 permanent employees per thousand persons in the city. While this is high compared to the north central average of 0.8 per thousand it does not reflect the responsibilities for fire protection in townships surrounding Wilmington. The per capita expenditure estimate shown in Table 5 probably overstates the actual cost per person in the city of Wilmington since the township population is not included.

Streets: The Wilmington City Street and Sewer Department has 12 employees that work on streets, at the sewer plant, and on sewer line maintainance. Since their responsibilities shift between these areas it is difficult to use the service standard procedure accurately. The results in Table 3 are based on estimate of 4 full time employees working on streets.

The employment anticipation method is shown in Table 4 for a commercial development adding 400 workers. Table 5 provides the estimated changes in residential expenditures based on both the per capita method and the service standards method and changes in expenditures for the commercial development based on the employment anticipation. The average of the two residential estimates shown in Table 5 are added to the commercial estimate in Table 5 for the totals shown.

V. Estimated Impacts

Net Revenues for the City of Wilmington

Table 6 reports the additional net revenues accruing to the City of Wilmington for each development scenario. These results are estimated impacts

Table 4

Employment Anticipation Expenditure Estimates*

1) Per Capita Expenditures

        Police $36.89
        Fire   27.15
        Streets 23.58

2) New Commercial Workers = 400

3) Percentage Increase Per Worker

        Police   .0000554**
        Fire   .0000554
        Streets .0000151

4) Total Percent Increase for Each Service = New Commercial Workers x
                                              Percent Increase/Worker

        Police: 2.2% = 400 x .0000554
        Fire: 2.2% = 400 x .0000554
        Streets: 0.6% = 400 x .0000151

5) Dollar Increase Per Capita = #1 x #4

        Police: $0.81 = 36.89 x .022
        Fire: 0.60 = 27.15 x .022
        Streets: 0.14 = 23.58 x .006

6) Additional Expenditures = City Population x #5

        Police: $8449 = 10431 x .81
        Fire: 6258 = 10431 x .60
        Streets: 1460 = 10431 x .14

*For a complete discussion of this procedure see Burchell and Listokin, 1978, pp. 135-147.

**These numbers are read as follows:

    .00001 = one thousandth of one percent
  .0000554 = one thousandth of 5.54 percent

Table 5

Estimated Additional Expenditures for
Golf Course Annexation, Wilmington, Ohio

	Development Scenario				
	Current*	A*	B	C	D
			--Thousands of $--		
Police					
Residential	--	--			
Per Capita	--	--	14.3	21.5	21.5
Service Standards			12.6	18.9	18.9
Average			13.4	20.2	20.2
Commercial					
Employment Anticipation	--	8.4	--	--	8.4
Per Capita	.3	--	.3	.3	--
Total	.3	8.4	13.7	20.5	28.6
Fire					
Residential					
Per Capita	--	--	10.6	15.8	15.8
Service Standards	--	--	6.0	9.1	9.1
Average			8.3	12.4	12.4
Commercial					
Employment Anticipation	--	6.3	--	--	6.3
Per Capita	.2	--	.2	.2	--
Total	.2	6.3	8.5	12.6	18.7
Streets					
Residential					
Per Capita	--	--	9.1	13.7	13.7
Service Standards	--	--	21.3	32.0	32.0
Average			15.2	22.8	22.8
Commercial					
Employment Anticipation	--	1.5	--	--	1.9
Per Capita	.5	--	.5	.5	--
Total	.5	1.5	15.7	23.3	24.7

* No additional expenditures are included in these two scenarios.

Table 6

Annual Changes in Revenue Expenditures,
and Net Revenues to City Government
by Development Scenario

		Development Scenario			
	Current	A	B	C	D
		--Thousands of $--			
1. Additional Revenues					
Property Taxes, Land and Commercial	4.5	16.6	4.5	4.5	12.1
Property Taxes, New Homes	.0	.0	8.0	12.0	12.0
Property Taxes, Tangible Property	.4	1.2	.4	.4	0.8
Income Taxes from Wages	.3	8.5	19.3	29.0	36.8
Income Taxes from Firm	.0	0	0	0	.0
State and Federal Aid	1.2	6.7	9.9	14.3	18.6
Misc. Taxes, New Residents	.2	4.4	11.1	16.6	20.6
Total	6.6	37.4	53.2	76.8	100.9
2. Additional Expenditures					
Police	.3	8.4	13.7	20.5	28.3
Fire	.2	6.4	8.5	12.6	18.5
Water	.0	.0	.0	.0	.0
Sewer	.0	.0	.0	.0	.0
Streets	.5	1.5	15.7	23.3	24.2
Other	.0	.0	.0	.0	.0
Capital Expenses	.0	.0	.0	.0	.0
Total	1.0	16.3	37.9	56.4	71.0
3. Net Revenues (1-2)	5.7	21.1	15.3	20.4	29.9

based on the assumptions and methods described earlier in the report. The validity of the assumptions used in this report should be checked before these preliminary results are accepted as valid. While the authors attempted to use realistic data, many unverified assumptions were used to minimize costs. The reader can check all of these assumptions in the Appendices. The major assumptions are highlighted in the report.

Results are rounded off to the nearest thousand dollars to improve the clarity of the report. More detailed results are available upon request from the senior author.

Current Development: If no further growth occurs in the annexed area, the city will pick up several sources of additional revenue, the major ones being property taxes from the land, the PCA building, and state aid. Sixty-four percent of the property taxes comes from the land valued at $1.8 million or $11,000 per acre. The rest is collected from the PCA building and one home. The additional expenditures were estimated to be only $1000 per year, yielding a net revenue of $5700.

All the future developments include the impacts of the current development plus the new growth.

Commercial Development: A shopping center assumed to employee 400 workers and have a market value of $6.2 million is considered in this scenario. The additional expenditures, estimated by the employment anticipation method, are $17,000. If this shopping center would not be built within the current city boundaries without the annexation, then the entire property tax collection can be counted as a benefit of the annexation. This approach was taken here, yielding an additional $12,000 in property taxes. However, it was assumed that only 50 percent of the workers would add to the income tax base of the city, with the rest paying income taxes even if this development occurred outside the city. Income taxes for the 200 workers, assumed to earn an average

of $3.50/hour and to receive an 8 percent annual increase, is about $8500/year.

Additional state and federal aid and user fees are $6700 and $4400, respectively.

The annual net revenues for this assumed commercial development are estimated

to be $21,100.

Residential Development: Scenarios B and C reflect the assumption that

50 and 25 percent, respectively, of the 263 units would have been built

within the city if this area had not been annexed. The annual net gains

for Scenario C are $20,400 or $5100 higher than for Scenario B.[2/]

Commercial and Residential Development: Scenario D includes the

commercial development in A and the residential development in C. Since

both A and C include the current development, it is necessary to subtract

two times the values in column one from the sum of columns two and four.

The annual net revenue is about $29,900.

Cautionary Notes - City Results

The timing of these developments is uncertain but will influence both

revenues and expenditures.

The expenditure estimates could be improved by individual service

case studies.

The number of residential or commercial units that could have been

built within the city is difficult to determine.

Net Revenues for the County and School

The procedures for estimating the changes in county government and

school district expenditures are the same as for the city. These will not

be reviewed again here. (For additional detail on the county and school

estimation procedures see reference number 3 on page 21).

The net gain, shown in Table 7, are positive for both the county and

school district in Scenarios A, B, C and D. If the city school district

already covered this area, there are no changes for either the county or

the schools under the current development scenario.

Table 7

Annual Changes in Revenues, Expenditures
and Net Revenues to the County and School
District by Development Scenario

		Development Scenario			
	Current	A	B	C	D
County Government					
Additional Revenue*	0	26	32	59	85
Additional Expenditures	0	15	20	30	45
Net Revenues	0	11	12	29	40
School District					
Additional Revenue	0	142	160	224	366
Additional Expenditures	0	63	82	124	187
Net Revenues	0	79	78	100	179

*Results reported in thousands of dollars after running to nearest thousand.

Results for the county are rough estimates since only the per capita expenditure method was used. The school results are also only crude estimates since the state aid estimates are based on the current law which is likely to change in a few years.

Net Revenues for Union Township

Union Township will lost some tax revenues from the annexation. The only scenario that is relevant is the current development, unless some of the development would have occurred in this area without the annexation.

The property tax rates for Union Township in 1980 were:

Inside Millage

General Fund	.20 mills
Road & Bridge Fund	1.00 mills
Voted Millage	1.30 mills

The voted millage has a reduction factor of .0978 meaning that the effective tax rate is only 1.172 (1.30 x (1 - .0978)).

Assuming a market value of $2.6 million in real property and $190,000 in tangible property, the township would lose $2100 annually in property tax revenues. This is equivalent to about three percent of the township's property tax receipts and one percent of its total receipts.

It is uncertain whether township expenditures would decline as a result of this annexation. But it appears that the reduction in expenditures is likely to be minor.

The township loss is the same under all scenarios, provided the developments would not occur without the annexation.

This trade-off between the city and township would be larger if there were more current development in the area. Township losses and opposition are likely to be larger if highly developed areas are proposed for annexation. The city might reduce this opposition by finding a means to provide services equivalent to the value of the township's loss or a direct cash transfer to

the township. In this case, such a service or cash transfer would still leave sizeable net gains to the city.

VI. Suggestions for Future Case Studies of Annexation

This case study illustrates the major steps in measuring the local benefits and costs of annexation. Several modifications would be desirable if the Job Impact Model is used prior to an annexation decision. These include (1) interviews with the managers of individual businesses already located in the annexation area, (2) interviews with city department heads for expenditure estimates, and (3) interviews with township trustees and county officials for expenditure estimates.

Data collection forms are available from George Morse

If a highly developed area is annexed, the information from employers will be much more important than in this case study. On the other hand, the uncertainty about the impacts will be reduced since the proportion of impacts from current development will be greater.

The expenditure estimation procedures used in this report provide useful comparisons to those of department heads. If the department head provides an explicit explanation of his estimates, preferences should be given to these over the methods used in this study.

V. Summary and Conclusions

A method of measuring a city's revenue and expenditure impacts are described in this report. Preliminary estimates are made for the golf course annexation on the City of Wilmington.

No conclusions are drawn in this report about the wisdom of the annexation studied. Information is presented on the revenue and expenditure impacts for the city, the county, the school district, and Union Township. Local value judgements must be made about the relative gains and losses. The results of this report provide factual information for these judgements.

The impacts were studied for five different development scenarios. The current scenario assumes no additional growth occurs in the annexed area. The second scenario assumes a $6.4 million shopping mall, employing 400 persons, is built in the area but that no residential development occurs. The third and fourth scenarios look at the impacts of adding 50 and 75 percent of the proposed 263 housing units. The fifth scenario includes both the shopping mall and the larger residential unit.

The major findings are summarized below:

1. The City of Wilmington's additional revenues exceeded their additional expenditures in all five scenarios as shown below:

Scenario	Annual Net Revenue
Current	$ 5700
A - Commercial	21100
B - Residential	15300
C - Residential	20400
D - A and C	29900

2. If the water treatment plant has to be expanded due to the annexation, an annual debt service of between $5700 and $29900 could be handled without raising water rates. At 12 percent interest on a 20 year loan, a capital expenditure of between $42000 and $22300 could be made on the water treatment plant without raising water rates.

3. The impacts on city finances of annexation are less positive if the proposed development could have been built somewhere within the city. For example, if 50 percent of the proposed 263 housing units would have been built within the city without the annexation, the net revenue gains to the city are only $15300 per year versus $20400 if only 25 percent of the units would have been built anyway.

4. The average annual income of new residents is the single most important factor in determining the net revenues for the city in scenarios with residential development. For example, in Scenarios B, C, and D, the income taxes account for 36, 38, and 36 percent of the total revenues. High incomes in growing economic sectors will yield better results.

5. Estimation of expenditures for services is one of the most difficult aspects of impact assessment. Notice the wide variation in results for fire protection and streets for residential development in Table 5. Police expenditure estimates are relatively close, however. This suggests the need for department head estimates and a detailed rationale for their estimates.

6. The county and school district would not benefit unless there is additional development in the area. In contrast, the township loses the same amount under the current scenario and all other scenarios. The estimated net annual increases for the county and school district are:

Scenario	County	School	Township
Current	0	0	$-2100
A	$11000	$79000	-2100
B	12000	78000	-2100
C	29000	100000	-2100
D	40000	179000	-2100

7. Union Township is estimated to lose about $2100 annually in property tax revenues form the golf course annexation.

8. The county government is estimated to benefit from the annexation provided the annexation results in growth that would not have occurred anyway without the annexation. Under Scenarios A to D, the county has net revenues between $11000 and $40000.

9. The school district experiences no gains unless the annexation stimulates growth. Under scenarios A through D the annual net gains range from $78000 to $179,000. While the school gains appear to be very large they reflect the current school aid formula which may be changed in the near future.

These results suggest opposition to annexation by township officials but support from city, county and school officials. Annexation of highly developed areas is likely to increase the losses to the township. If the net gains for the city and county are larger than the net losses for the township, it would pay the city and/or the county to compensate the township for all or part of its losses. In future annexations, it may be possible for the city to assist the township with some services to reduce the losses to the township and their opposition to the proposed annexation. The Local Government Fund or provision of services are two ways of accomplishing this exchange.

Suggestions are made for modifications in the study procedure for future annexation studies. Using the data forms in Appendix C city officials can collect all of the necessary data for this type of analysis. The computer analysis can be performed by the Ohio Cooperative Extension Service for a nominal fee. <u>No recommendations are made in this report about future annexations.</u> Future annexation proposals merit independent study. Results from this type of study can provide factual information on the consequences of annexation. Using these facts and local input, the community's political process and officials must make the final decision about the desirability of annexation proposals.

References

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Appendix A

Estimates of Residential Population and
School-Aged Children in the Residential Development

Residential Properties	Units	Demographic Multipliers[a]		Total Household	School Aged Children
		Household	School Children		
Single Family Homes					
Three bedrooms	41	3.5	1.0	145.	41
Four bedrooms	1	4.6	1.8	4.	2
Two Family Homes					
Two bedrooms	46	2.1	.2	97.	7
Multi-Family Apartments					
Three bedrooms	175	3.0	.5	530.	93
TOTAL	263	N.A.	N.A.	776.	143

a) Burchell, Robert W. and David Listokin, Practitioner's Guide to Fiscal
    Impact Analysis, Center for Urban Policy Research, 1980, pp. 64 and 65.

Appendix B

Data Used in the Analysis

The data shown in Section One are for the Current Development Scenario. The differences in the data for items 3, 4, 5, 6, and 10 for the other scenarios are described in the text of the report. All scenarios have the same data for sections two to six.

DATA USED IN ANALYSIS

SECTION ONE: FIRM AND EMPLOYMENT DATA

1   INDUSTRIAL CLASSIFICATION

A. TYPE OF BUSINESS   ANEX-CUR
B. SIC CODE   9000

2   LOCATION OF NEW FIRM

A. VILLAGE OR CITY   WILMINGTON
B. SCHOOL DISTRICT   WILMINGTON
C. COUNTY   CLINTON

3   NEW JOBS CREATED   3

4   RESIDENTIAL LOCATION OF WORKERS
     (PERCENT OF TOTAL)

A. MUNICIPAL RESIDENTS   0.0
B. REST OF COUNTY RESIDENTS   0.0
C. IN-MIGRANTS TO THE CITY   1.00
D. IN-MIGRANTS TO THE COUNTY   0.0
E. COMMUTERS FROM OUTSIDE COUNTY   0.0

5   AVERAGE ANNUAL WAGES (BEFORE DEDUCTIONS)

A. FOR LOCAL EMPLOYEES   18000.
B. FOR IN-MIGRANTS   18000.
C. ANNUAL RATE OF CHANGE   0.080

6   NEW PLANT'S MARKET VALUE

A. BUILDINGS AND OTHER REAL PROPERTY   2607495.
B. TANGIBLE PERSONAL PROPERTY
    1. MACHINERY AND EQUIPMENT   68340.
    2. INVENTORIES AND SUPPLIES   132660.

7   PERCENTAGE OF WORKERS' INCOMES SPENT IN
     THE MUNICIPALITY AND COUNTY

A. BY MUNICIPAL RESIDENTS IN CITY   0.500
B. BY MUNICIPAL RESIDENTS IN COUNTY   0.600
C. BY REST OF COUNTY RESIDENTS IN CITY   0.350
D. BY REST OF COUNTY RESIDENTS IN COUNTY   0.450
E. BY COMMUTERS IN CITY   0.100
F. BY COMMUTERS IN COUNTY   0.250

8   FAMILY SIZE PER EMPLOYEE   2.950

9   STUDENTS PER EMPLOYEE   0.547

10   RATIO OF HOME VALUES TO INCOME   0.0

11   RATIO OF NET INCOME TO GROSS INCOME   0.800

SECTION TWO: TAX DATA

1   PROPERTY TAX RATES AND REDUCTION FACTORS

A.	COUNTY INSIDE MILLAGE	2.600
B.	COUNTY OUTSIDE MILLAGE	0.0
C.	COUNTY TAX REDUCTION FACTOR	0.0
D.	SCHOOL INSIDE MILLAGE	4.200
E.	SCHOOL OUTSIDE MILLAGE	20.400
F.	SCHOOL TAX REDUCTION FACTOR	0.205570
G.	CITY INSIDE MILLAGE	2.600
H.	CITY OUTSIDE MILLAGE	3.700
I.	CITY TAX REDUCTION FACTOR	0.205570

2   YEAR OF LAST APPRAISAL OR UPDATE   1978

3   EXPECTED ANNUAL RATE OF CHANGE IN
     PROPERTY VALUES   0.120

4   SCHOOL DISTRICT TAX BASE - TAXABLE VALUES

A.	REAL PROPERTY	84819850.
B.	TANGIBLE PERSONAL PROPERTY	24483030.
C.	TANGIBLE PERSONAL PUBLIC UTILITY PROPERTY	11984520.
D.	YEAR TO WHICH VALUATIONS APPLY	1978

SECTION THREE: COUNTY DATA

1   COUNTY PERMISSIVE SALES TAX RATE   0.005

2   STATE AND FEDERAL AID PER CAPITA   5.75

3   MISCELLANEOUS COUNTY REVENUE PER CAPITA   31.37

4   COUNTY OPERATING EXPENSES PER CAPITA

  A. CURRENT OPERATING EXPENSES   51.87

SECTION FOUR: SCHOOL DISTRICT DATA

1   ENROLLMENT

A.	CURRENT AVERAGE DAILY ENROLLMENT	3513
B.	ANNUAL RATE OF CHANGE IN ENROLLMENT	-0.045

2   TOTAL STATE BASIC AID IN YEAR BEFORE STUDY   1469193.

3   EQUALIZED MILLAGE IN YEAR BEFORE STUDY   21.080

4   ANNUAL RATE OF CHANGE IN STATE SUPPORT   0.070

5   TOTAL CURRENT TRANSPORTATION AID   140955.

6   MISCELLANEOUS REVENUE PER PUPIL   94.96

7   SCHOOL OPERATING EXPENDITURES PER PUPIL

  A. CURRENT   1148.00
  B. ANNUAL RATE OF CHANGE   0.070

8   ADDITIONAL CAPITAL COSTS

     YEAR 1   0.0

SECTION FIVE: MUNICIPAL DATA

1   MUNICIPAL POPULATION

   A. CURRENT   10431
   B. ANNUAL RATE OF GROWTH   0.038

2   MUNICIPAL INCOME TAX

   A. RATE   0.005
   B. REVENUE FROM FIRM   0.0

3   YEARS OF TAX ABATEMENT   0

4   STATE AND FEDERAL AID PER CAPITA   19.39

5   MISCELLANEOUS REVENUE PER CAPITA   28.17

6   CURRENT ANNUAL OPERATION COST PER
    PERSON OF MUNICIPAL SERVICES

   A. POLICE   35.15
   B. FIRE   21.52
   C. WATER   0.0
   D. SEWER   0.0
   E. STREETS   51.45
   F. OTHER   0.0

7   CAPITAL INVESTMENTS BY MUNICIPALITY

      YEAR 1   0.0
      YEAR 2   0.0

SECTION SIX: OTHER DATA

1   LENGTH OF ANALYSIS   15

2   DISCOUNT RATE   0.100

3   RATES OF CHANGE
    A.   GENERAL RATE OF INFLATION   0.070
    B.   STATE AND LOCAL GOVERNMENT PRICE DEFLATOR   0.070

4   RATIO OF VALUE ADDED TO SALES
    SERVICE SECTOR   0.120

5   PROPORTION OF NEW HOUSING OUTSIDE
    COMMUNITY REINVESTMENT AREA

   A. IN THE CITY   1.000
   B. IN THE COUNTY   1.000

6   INCOME LEAKAGE FACTOR

   A. IN THE CITY   0.0
   B. IN THE COUNTY   0.0

7   RATE OF DEPRECIATION   0.0

8   ASSESSMENT SALES RATIO
    A.   RESIDENTIAL   0.2800
    B.   INDUSTRIAL   0.2800