Measuring the Impacts of the Tangelo Park Project on Local Residents

December 2010

Lance Lochner

Associate Professor of Economics

University of Western Ontario

I. Introduction

In the late 1980s and early 1990s, Tangelo Park characterized a typical disadvantaged African American urban community. Most of the approximately 2,500 residents were from lower socioeconomic backgrounds, and the community confronted a number of problems, including overt drug dealing and use, poor school attendance, declining test scores, and high dropout rates. Then, in the early 1990s, philanthropist and hotelier Harris Rosen, met with Tangelo Park community residents and, together, they laid the groundwork for the Tangelo Park Project (TPP) in an effort to turn the community around.

TPP is a community-based program designed to support the educational achievement of Tangelo Park residents from ages 2 to 22. Most notably, the program currently offers pre-school opportunities for all children ages 2-4, parenting classes and vocational opportunities for parents with children in school, and full tuition, room, board, and living expenses for all Tangelo Park high school graduates that are accepted by a vocational school, community college, or university in Florida. In short, it provides the foundation for early success and the financial resources to carry benefits through college.

II. Impacts of the Tangelo Park Program

This study estimates the impacts of the college subsidy component of the TPP on Tangelo Park residents and translates those impacts, to the extent that this is possible, into dollars and cents.

Specifically, it measures the effects of the program on schooling decisions, subsequent earnings, and local crime rates. These impacts are directly estimated for older cohorts who have benefited from the scholarship program. The first cohort of youth to benefit from this program was the high school class of 1994.

First, we estimate changes in high school graduation and college attendance rates over time in Tangelo Park, comparing educational attainment for the high school classes of 1991-93 (who would have graduated before the introduction of the program) with those of later cohorts (who stood to benefit from the program). The economic benefits from the increases in high school graduation rates and college attendance rates are calculated from estimates of the increase in lifetime earnings associated with higher educational attainment. Second, we compare changes in crime rates from 1993-94 to 1996-2003 in Tangelo Park with a number of other comparison communities to estimate the effects of the program on local crime rates. The economic benefit from reduced criminal activity is then calculated by combining the estimated local crime reduction with estimates of the social costs per crime as reported by Lochner and Moretti (2004).

A. Effects on Schooling and Earnings

Before discussing changes in educational attainment in Tangelo Park, it is useful to describe patterns in high school completion/dropout and college attendance in Florida as a whole. Using data from the 1992-2007 March Current Population Surveys (CPS), it is possible to examine how educational attainment changed for cohorts of Floridians turning age 18 in the years 1991-93 vs. 1994-2000. When analyzing high school completion rates, we restrict our sample to those ages 20-25 at the time of the survey. We restrict our sample to those ages 22-27 when studying college attendance. Our estimates suggest that high school completion rates for all Floridians increased by about 1 percent over this period, while college attendance rates declined negligibly. Focusing only on non-whites (including Hispanics), the estimates suggest a less than 1 percent increase in high school completion rates and a 5 percent decline in college attendance rates. The estimates for high school completion are largely consistent with official Florida Department of Education (FDOE) calculations based on measures of student enrollment in public high schools (such data are not available for measuring college attendance rates). These official measures

suggest that public high school graduation rates in Florida (for all races) declined by slightly less than 5% from the classes of 1991-93 to 1994-98. While both sets of estimates are imperfect – the CPS-based estimates measure educational attainment for persons living in Florida, which may differ from those attending school in Florida, while the FDOE measures only include public high school students and cannot account for students leaving or entering the public school system or Florida — they both suggest that there has been little change in educational attainment among cohorts that should have graduated from high school throughout the 1990s. In the absence of the TPP, there is little reason to have expected any major changes in schooling within the Tangelo Park community.

We now turn our attention to Tangelo Park. Table 1 reports the changes in high school graduation and college attendance rates in Tangelo Park over the 1991-93, 1994-97, and 1998-2003 periods. The gains in schooling came over the early years of the program and have been maintained since. Given the lack of any systematic change in educational attainment in Florida over this period, we use changes in schooling attainment within Tangelo Park before and after the introduction of the scholarship program to estimate the impact of the TPP on educational outcomes. From the 1991-93 period to the 1998-2003 period, high school graduation rates among Tangelo Park students increased by about 17% while college attendance rates increased by 31%.

To estimate the impacts of the program on expected lifetime earnings for Tangelo Park students, we combine these impacts on educational attainment with the expected increase in lifetime earnings associated with more schooling. Changes in the distribution of educational attainment can, therefore, be mapped into expected changes in lifetime earnings. For representative earnings measures by educational attainment, we use data from the 5% sample of the 2000 US Census for all blacks in Florida. To correspond with educational outcome measures for Tangelo Park, we categorize individuals in the Census by their educational achievement as follows: those with less than 12 years of completed school, those with exactly 12 years of completed school, and those with more than 12 years of school. Using the Census data, we estimate expected earnings by age and education category for all Florida blacks ages 18-65. These average earnings profiles are shown in Figure 1. For each education classification, we then calculate the

expected discounted present value (DPV) of lifetime earnings from ages 18-65 using a discount rate of 5%.[1] In terms of discounted lifetime earnings, these estimates suggest that a black high school dropout in Florida earns, on average, slightly less than $170,000 over his/her lifetime, while a high school graduate earns about $250,000, and a college attendee earns about $370,000. The implied "rates of return" from these estimates are consistent with the voluminous economics literature on returns to education.

Using these DPV earnings estimates and the fraction of Tangelo Park students with each level of educational attainment, it is possible to calculate expected DPV of lifetime earnings for a typical Tangelo Park student for the periods 1991-93, 1994-97, and 1998-2003. The changes in these expected DPV of lifetime earnings for different sub-periods are reported in the fourth row of Table 1. Here, we see that, on average, students from the high school classes of 1998-2003 are expected to earn about $51,400 more over their lifetimes than students from the classes of 1991-93. This gain is, by construction, entirely due to their higher educational achievement among the later cohorts. (Note that these gains are not distributed equally across all students—those who attend more schooling in response to the Tangelo Park Project subsidies for higher education account for all of the gains.) Finally, we multiply the average gain in the DPV of earnings by the average number of Tangelo Park students in the later cohorts to produce an estimate of the total expected gain in lifetime earnings caused by the program. As shown in the bottom row of Table 1, the estimated effects of the program on high school graduation and college attendance (comparing the 1991-93 period with the 1998-2003 period) imply a total annual benefit to Tangelo Park students of $1.05 million.

A few important assumptions have been made in computing these estimates. First, we categorize Tangelo Park students receiving either a high school diploma or a certificate of completion (the latter met some but not all of the requirements to receive a degree) as high school graduates. Alternatively, we could have categorized those receiving certificates of completion with high school dropouts. Doing so produces estimated TPP impacts that are about 10% smaller. Second, we have assumed that the expected earnings of Tangelo Park students (by educational attainment) are well-approximated by the observed earnings for blacks living in Florida. Using

---

[1] We discount back to age 18, since this is when the TPP costs begin to accrue.

blacks from the Orange County area (specifically, blacks from Super PUMAs 12092 and 12093, which contain Orange County) to calculate lifetime earnings produces very similar effects of the program. Third, our earnings estimates use all black men and women; however, many black women may choose to stay at home rather than work. These non-working women have zero reported earnings, yet they contribute to families through such activities as child-rearing and household production. One way to address this is to assume that these women provide the same value to families as women who choose to work. To explore how this assumption affects our results, we estimate the average DPV of lifetime earnings on a sample of all men and working women (excluding all women who do not work from the calculation of average earnings). This produces nearly identical estimated effects of the program. Finally, we have used a discount rate of 5% per year to discount future earnings gains associated with increased schooling. This assumes that individuals can earn a real rate of return on savings of about 5% per year, so that giving someone a dollar this year provides the same value as giving them $1.05 next year (since they can put today's dollar in the bank for a year earning 5 cents in interest) . Using a discount rate of 8% instead of 5% reduces the estimated effects of the project by about by about 40% (the total benefit is estimated to be $623,088), since a sizeable fraction of the gains in earnings come years after individuals finish their schooling. On the other hand, using a lower discount rate of 3% (commonly used in cost-benefit studies of early childhood programs) implies benefits of $1.59 million (roughly 50% higher than our baseline estimate).

B. Effects on Local Crime Rates

To measure the effects of the TPP on crime rates in Tangelo Park, we compare changes in average annual crime rates from 1993-94 to 1996-2003 in Tangelo Park with changes over the same period in other comparison communities. This is commonly referred to as a differences-in-differences approach and is based on the assumption that crime rates in Tangelo Park would have behaved as they did in these comparison communities in the absence of the TPP.

The Orange County Sheriff's Office (OCSO) provided a variety of measures of crime in Tangelo Park over different time periods. Our main analysis will use data on the number of motor vehicle

thefts, burglaries, and robberies reported each year in Tangelo Park for 1993-2003. Annual assault incidents for 1994-1997 were also provided.

A secondary set of data that reports all "calls for service" in Tangelo Park over the 1993-97 period was also provided by the OSCO. These data record any calls to the police, the location of the reported incident, and the initial reason for the call. These calls need not reflect actual crimes, and their initial reported types do not always correspond with their final designation. However, they serve as a useful check on our main results. Based on the initial reported reason for each call, we study the crimes of motor vehicle theft, burglary, robbery, assault, and larceny. Thus, these data allow us to study the effects of the TPP on larceny in addition to the other crimes in our primary data source. Analysis of this secondary data follows that of our main analysis presented here and is reported in Appendix Table A-2.

Since we compare changes in Tangelo Park crime with changes in other communities of different sizes and which experienced different amounts of population growth, we convert all measures of crime into crime rates per 100,000 persons. While we compare changes in crime rates from 1993-94 to 1996-2003 for motor vehicle theft, burglary, and robbery, we are forced by our data limitations to examine comparisons for 1994-95 to 1996-97 when we analyze assault. We use the following comparison communities (UCR represents official crimes as reported in the Uniform Crime Reports while OCSO represents crime reports provided directly by the OCSO):

- Zones 43 & 44 UCR crimes
- Sector 4 UCR crimes
- Sector 4 (excluding Tangelo Park) OCSO reported crimes
- Orange County OCSO reported crimes
- Orange County UCR
- Florida UCR

We note that Tangelo Park is a community within Zones 43 and 44, which in turn lies within the larger Sector 4 area of Orange County. We do not have measures of assault from the OCSO for Zones 43 & 44 and Sector 4, but measures for the other three crimes are directly comparable to

the measures for Tangelo Park. The preferred comparisons are those communities most closely related to Tangelo Park, which would suggest that the first three are best.

Figures 2a-2d shows how crime rates have changed over time in Tangelo Park and each of the comparison communities. The figures show the changes in log crime rates (relative to 1993), which can be read as approximate percentage changes. Table 2 reports the percentage change in annual crime rates for each of these communities along with the change in Tangelo Park less the change in each of the comparison communities. In Tangelo Park, motor vehicle theft rates declined by 25.6%, burglary rates by 45.5%, and assault rates by 20.5%. Robbery rates increased by 20.2%. In Zones 43 & 44, auto theft rates increased by 20.3%, burglary rates declined by only 10.3%, robbery rates increased by 2.2% and assault rates by .3%. Taking the difference between Tangelo Park and this comparison community shows that auto theft rates declined by 46% more in Tangelo Park than in Zones 43 and 44 as a whole; burglary rates declined by 35% more, while robbery rates increased by 18% more. Assault rates declined by 21% more in Tangelo Park. Similar comparisons are shown for the other communities. In general, motor vehicle theft, burglary, and assault rates declined more in Tangelo Park than most other communities. Robbery rates tended to increase in Tangelo Park relative to other areas. (Incidentally, robbery and rape are the only crimes found to increase with education in Lochner and Moretti, 2004.) The entire state of Florida experienced rather large declines in most crime rates over this period, so comparisons with Florida show the worst-case scenario for the TPP.

Table 3 translates the results from Table 2 into savings (deflated to year 2003 dollars) for each of the crimes and comparison cities. First, we take costs per crime from Lochner and Moretti (2004) as reported in row 1 of Table 3. Second, we translate the estimated change in log crime rates in Tangelo Park relative to each comparison community into the number of crimes hypothetically prevented (using the average annual number of crimes reported in Tangelo Park in the later years). These correspond to reductions in reported crimes and must be inflated to account for the fact that many crimes are not reported to the police. We adjust for non-reporting using police reporting rates for 2002 from the Sourcebook of Criminal Justice Statistics, 2003. Combining the crime reduction figures with costs per crime yields the annual savings from crime reduction. Looking across the columns, we note that the benefits from reduced motor vehicle

theft are relatively small, largely due to the low measured social costs associated with this type of crime. Benefits from reductions in burglary are large -- $50,000 or more for the Zone 43 and 44 and the geographically larger Sector 4 comparisons. Additional costs from estimated increases in robbery are of a similar order of magnitude. While the estimates suggest that only a few additional robberies occur each year, robbery is a costly crime. Finally, the estimate benefits from reductions in assault are enormous. This is due to both the large estimated reduction in the number of assaults and the high social costs associated with assault. Estimated benefits from assault range from a low of $160,000 when using Florida UCR as the comparison to a high of $270,000 when using Sector 4 UCR crime rates to compare with Tangelo Park. Across all comparisons with estimates for assault, a large fraction of the total benefits from reduced crime come from reductions in assault.

The bottom two rows of Table 3 take an average of all reported comparison community measures. This should not be taken as a "best estimate"; rather, it provides a simple summary of the results from all 6 comparison communities. Because assault data are not available for the Sector 4 OCSO and Orange County OCSO comparisons, their assault figures are not included in the total column or average row. Thus, total savings comparisons with Sector 4 OCSO and Orange County OCSO are likely to be substantially underestimated to the extent that sizeable benefits come from reductions in assaults (as all other comparison communities suggest).   For Zones 43 and 44, Sector 4 UCR, and Orange County UCR comparisons, the total estimated annual savings are of similar magnitude and quite large, ranging from $220,000-312,000. Estimated annual savings from a comparison with all of Florida is much smaller but still quite large at more than $100,000 per year.

In Appendix Tables A-1 and A-2, we report the results from two alternative approaches. First, we report the estimated benefits when comparing changes in crime rates over the 1993-94 and 1996-97 periods (note the shorter post-program period). For all comparisons, the estimated effects of the TPP on crime are larger than our baseline estimates reported in Table 3, ranging from a total savings of $200,000-400,000 for the four comparison communities with measures of assault. Second, we conduct an analogous analysis using the "calls for service" data. Here, we analyze the program's effects on the four crimes above as well as on larceny. Again, the total

savings estimates are substantially larger than our baseline estimates reported in Table 3. Social savings range from a low of $216,000 to a high of $528,000 for comparison communities with measures for assault. While the savings for motor vehicle theft and burglary across communities are typically within $10,000 of the baseline estimates, the "calls for service" data suggests that the TPP reduced robbery rates, leading to substantial savings. Benefits from reduced assault rates are also substantially larger than for the baseline results. Estimated benefits from reduced larceny rates are relatively small (less than $10,000) due to the small costs associated with this type of crime.

III. Summary and Conclusions

We estimate the total benefits of the TPP on local residents in terms of increased lifetime labor market earnings and reductions in social costs associated with local crime. The estimates suggest that the introduction of the TPP lead to roughly 15% and 30% increases in high school completion and college attendance rates, respectively. Based on estimated education-earnings relationships for Florida blacks, these education gains imply an average increase in lifetime earnings of $50,000 per Tangelo Park student, with a total benefit to Tangelo Park residents of $1.05 million per year.

Benefits to Tangelo Park from reduced crime are estimated by comparing changes in crime rates in Tangelo Park with changes in other communities before and after the introduction of the TPP. Our preferred estimates compare Tangelo Park with Zones 43 and 44 or Sector 4 (small geographic areas in Orlando that encompass Tangelo Park). These estimates reveal much larger reductions in motor vehicle theft, burglary, and assault rates in Tangelo Park. (Estimated effects on robbery are mixed.) The annual social benefits from crime reduction are estimated to be around $220,000-300,000 (using preferred comparisons). Thus, the estimated gains from crime reduction are on the order of one-fourth to one-third the benefits achieved through increased lifetime earnings, consistent with the findings of Lochner and Moretti (2004). Combining the benefits from both increased earnings and reduced crime suggest that the TPP offers benefits to Tangelo Park residents amounting to around $1.3 million per year.

It is worth noting that the total benefit calculated from these two sources (increased earnings and reduced crime) is likely to provide an under-estimate of the true social benefits of the TPP, since many other potential benefits are very difficult to value. For example, some researchers have shown that increased education improves health and lowers mortality, while others have shown that education can improve political and social activity. See Lochner (2010) for a recent review of this literature. The benefits through crime reduction are likely to be under-estimated for two reasons. First, we only use data on a subset of all types of crime; however, our data capture some of the more costly and prevalent types. Second, the estimated costs for the crimes we do observe only incorporate some of the more tangible social costs of crime (e.g. costs to victims, law enforcement costs directly related to the crime, court costs, and incarceration costs). They do not incorporate more difficult costs to measure, like the social costs of people staying home at night to avoid harm.

References

Lochner, L. "Non-Production Benefits of Education: Crime, Health, and Good Citizenship," Working Paper, 2010.

Lochner, L., and E. Moretti, "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports," with E. Moretti, *American Economic Review*, 94(1), 2004.

Table 1: Estimated Effects of Tangelo Park Program on Lifetime Earnings through Schooling Increases

	Change from 1991-93 to 1994-97	Change from 1994-97 to 1998-2003	Change from 1991-93 to 1998-2003
Change in HS Graduation Rates	0.12	0.04	0.17
Change in College Attendance Rates	0.33	-0.02	0.31
Avg. Number of Students in Later Years	22	21	21
Change in Avg. DPV of Lifetime Earnings (per student)	$50,264	$1,135	$51,398
Total Annual Benefits (year 2000 dollars)	$1,118,365	$23,262	**$1,053,665**

Notes: Earnings based on average by education classification (HS dropout, 12 years of school with HS degree/GED, at least some college) for Florida blacks from the 2000 Census. A 5% discount rate is used to compute the discounted present value (DPV) of lifetime earnings. High school graduation status for Tangelo Park residents required only sufficient credits.

Table 2: Annual Percent Changes in Log Crime Rates for Tangelo Park and Comparison Communities
(Log Changes from averages over years 1993-94 to 1996-2003 multiplied by 100)

Community/Area	Motor Vehicle Theft	Burglary	Robbery	Assault*
Tangelo Park	-25.6	-45.5	20.2	-20.5
Zone 43 & 44**	20.3	-10.3	2.2	0.3
TP - Zone 43 & 44**	-45.9	-35.3	18.0	-20.8
Sector 4 UCR	19.2	-14.6	2.9	4.8
TP - Sector 4 UCR	-44.8	-30.9	17.3	-25.3
Sector 4 OCSO (excl. TP)	3.3	-6.9	21.0	N/A
TP - Sector 4 OCSO	-28.9	-38.6	-0.8	N/A
Orange County UCR	-2.8	-25.2	-13.1	1.1
TP - Orange County UCR	-22.8	-20.3	33.3	-21.7
Orange County OCSO	-25.8	-25.2	-0.6	N/A
TP - Orange County OCSO	0.2	-20.3	20.8	N/A
Florida UCR	-35.2	-36.1	-41.3	-4.5
TP - Florida UCR	9.6	-9.4	61.5	-16.0

* Assault comparisons use average changes in crime rates from 1994-95 to 1996-97
** Population unavailable for Zones 43 & 44, so it is assumed to remain constant over this time period

Table 3: Estimated Annual Crime Reduction and Social Savings for Tangelo Park Project

Community/Area	Motor Vehicle Theft	Burglary	Robbery	Assault	Total
Cost per crime:	$1,585	$1,257	$11,950	$12,628	
Crime reporting rate	0.861	0.579	0.712	0.457	
Zone 43 & 44:					
Crime reduction	11.7	45.1	-2.1	17.2	**71.8**
Savings	$18,522	$56,670	-$25,573	$217,007	**$266,626**
Sector 4 UCR					
Crime reduction	11.3	38.6	-2.1	21.4	**69.3**
Savings	$17,954	$48,506	-$24,701	$270,316	**$312,075**
Sector 4 OCSO (excl. TP)					
Crime reduction	6.7	50.3	0.1	N/A	**57.1**
Savings	$10,627	$63,163	$1,184	N/A	**$74,973**
Orange County UCR					
Crime reduction	5.1	24.0	-3.7	18.0	**43.5**
Savings	$8,122	$30,190	-$44,015	$227,277	**$221,574**
Orange County OCSO					
Crime reduction	0.0	24.0	-2.4	N/A	**21.5**
Savings	-$75	$30,165	-$29,149	N/A	**$941**
Florida UCR					
Crime reduction	-1.8	10.5	-6.0	12.9	**15.7**
Savings	-$2,899	$13,231	-$71,340	$163,283	**$102,275**
Average					
Crime reduction	5.5	32.1	-2.7	17.4	**50.0**
Savings	$8,709	$40,321	-$32,266	$219,471	**$225,638**

Notes:

1) Estimated crime reduction based on differences in log changes in crime from 1993-94 to 1996-2003 and average number of crimes in Tangelo Park for 1996-2003.
2) Social costs of crime taken from Lochner and Moretti (2004)
3) All dollar values in 2003 dollars (deflated using CPI-U)
4) Totals based on available crime measures for that comparison.

5) Averages for total crime reduction/savings and assault crime reduction/savings do not include Sector 4 OCSO and Orange County OCSO given their absence of assault measures.

6) Crime reductions adjusted for non-reporting to police using reporting rates for 2002 taken from Sourcebook of Criminal Justice Statistics 2003, Table 3.33.

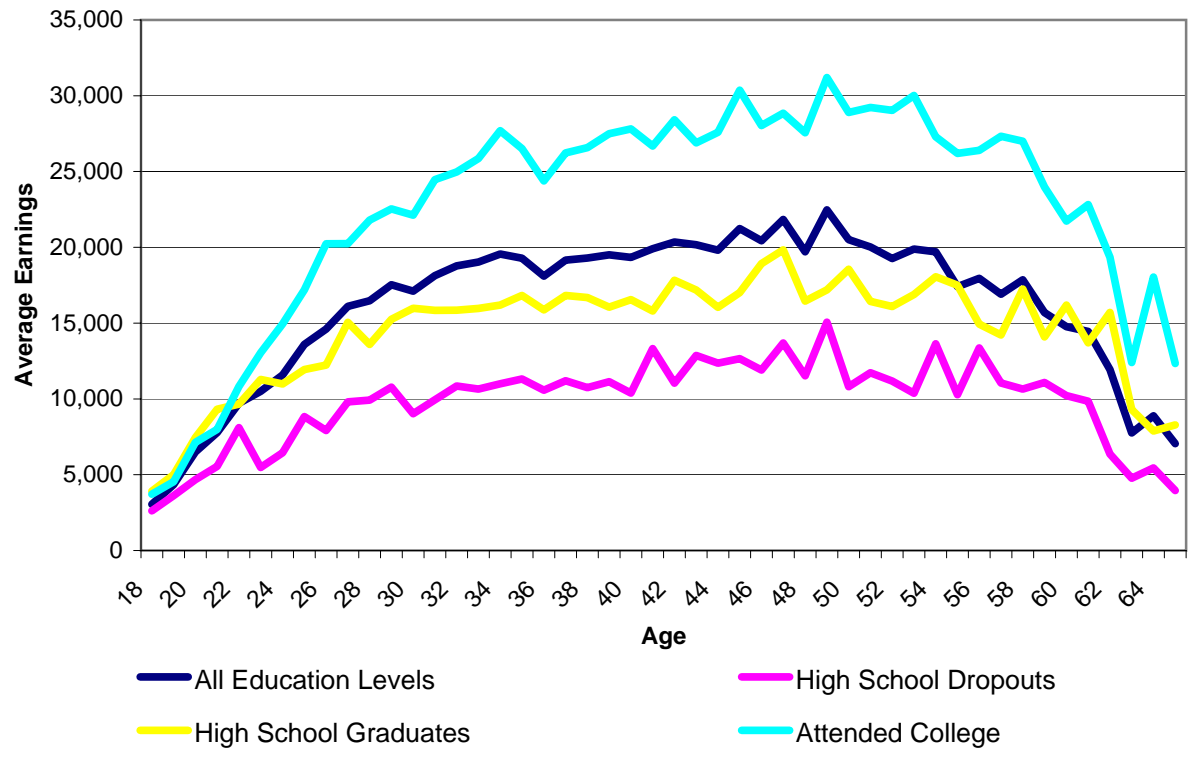**Figure 1: Average Earnings Profiles by Educational Attainment for Florida Blacks (US Census, 2000)**

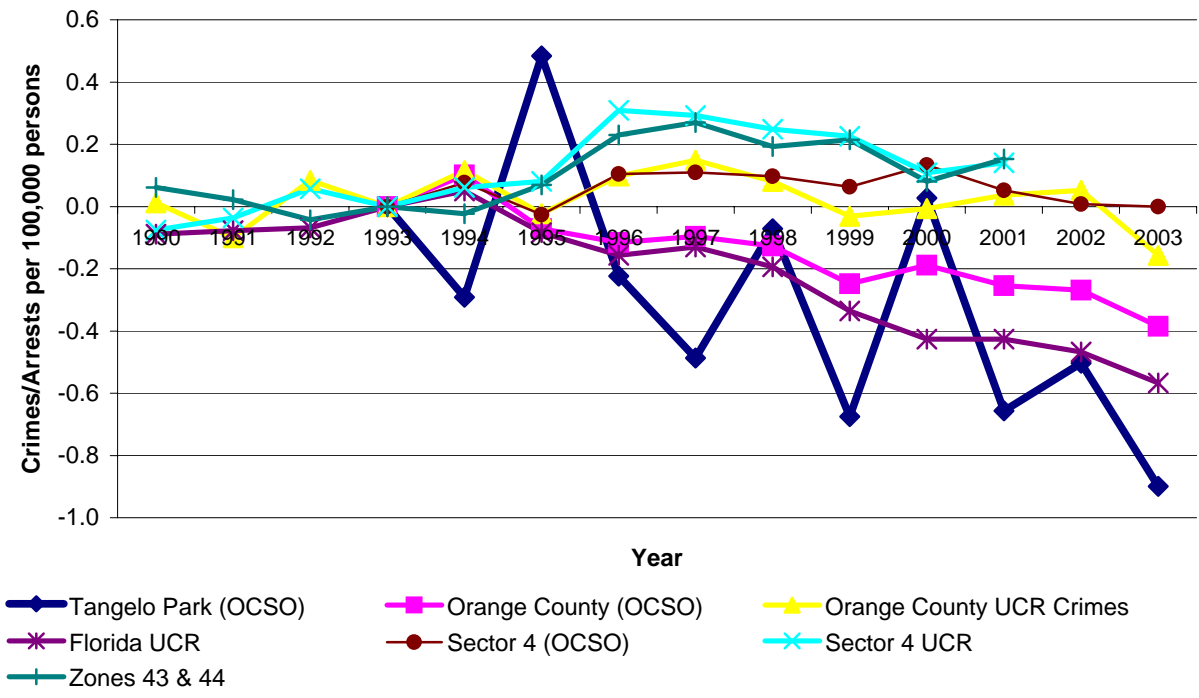**Figure 2a: Changes in Log Crime Rates for Auto Theft (Relative to 1993)**

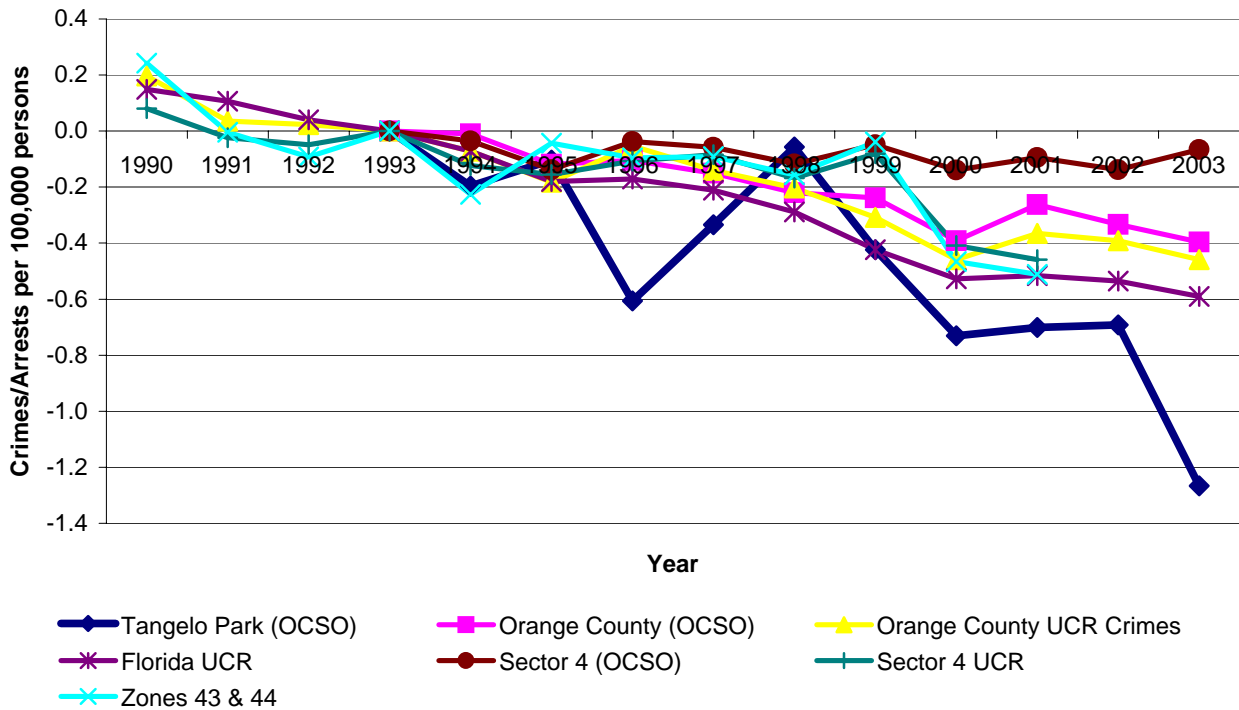**Figure 2b: Changes in Log Crime Rates for Burglary (Relative to 1993)**

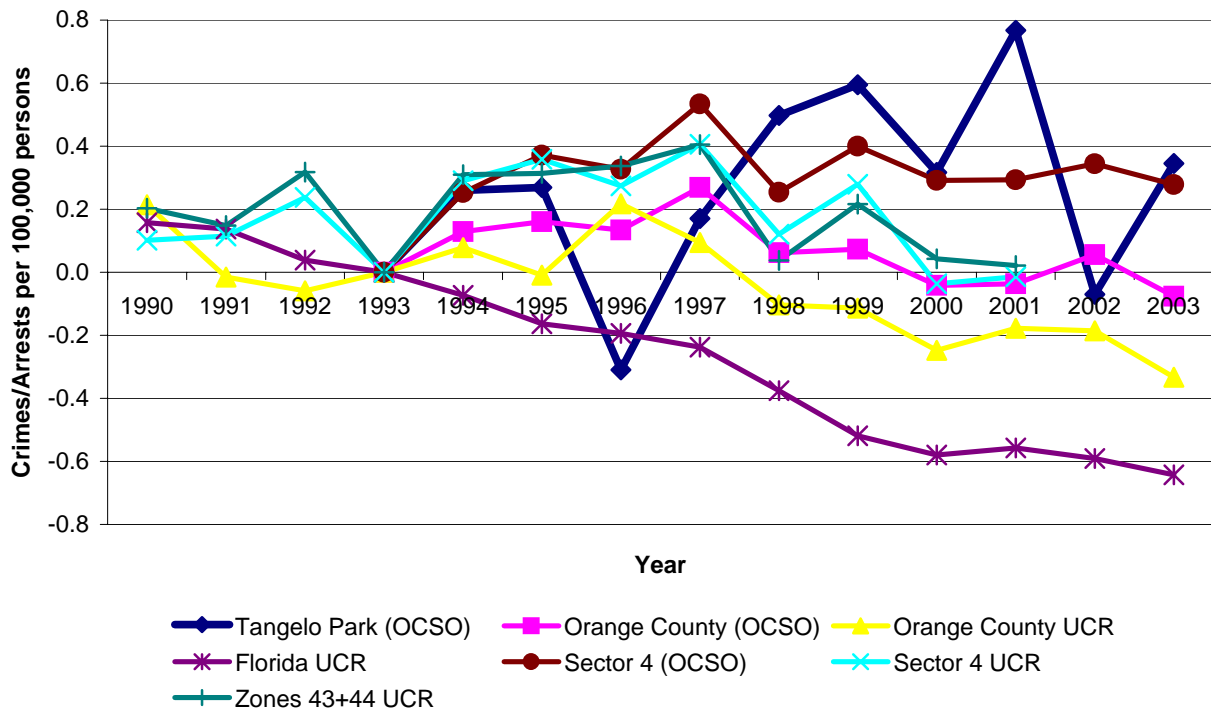**Figure 2c: Changes in Log Crime Rates for Robbery (Relative to 1993)**

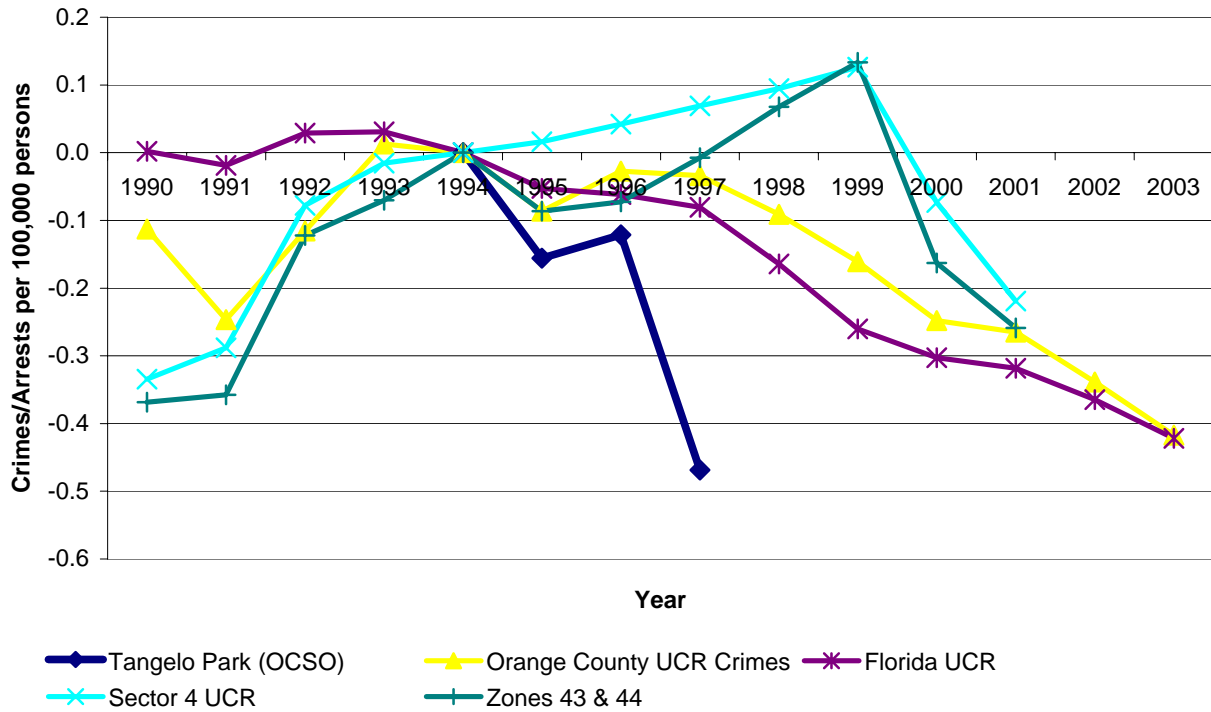**Figure 2d: Changes in Log Crime Rates for Assault (Relative to 1993)**

Table A-1: Estimated Annual Crime Reduction and Social Savings for Tangelo Park Project
(Primary Data, Changes in Crime from 1993-94 to 1996-97)

Community/Area	Motor Vehicle Theft	Burglary	Robbery	Assault	Total
Cost per crime:	$1,585	$1,257	$11,950	$12,628	
Crime reporting rate	0.861	0.579	0.712	0.457	
Zone 43 & 44:					
Crime reduction	13.0	55.2	4.3	17.2	**89.7**
Savings	$20,621	$69,351	$51,233	$217,007	**$358,212**
Sector 4 UCR					
Crime reduction	13.3	46.9	4.0	21.4	**85.6**
Savings	$21,051	$58,881	$48,265	$270,316	**$398,514**
Sector 4 OCSO (excl. TP)					
Crime reduction	6.9	47.8	5.6	N/A	**60.4**
Savings	$10,975	$60,085	$67,428	N/A	**$138,488**
Orange County UCR					
Crime reduction	6.8	42.7	3.2	18.0	**70.7**
Savings	$10,821	$53,664	$37,770	$227,277	**$329,532**
Orange County OCSO					
Crime reduction	1.2	33.0	3.4	N/A	**37.6**
Savings	$1,892	$41,521	$40,730	N/A	**$84,143**
Florida UCR					
Crime reduction	1.0	28.1	0.0	12.9	**42.0**
Savings	$1,516	$35,334	-$2	$163,283	**$200,132**
Average					
Crime reduction	7.0	42.3	3.4	17.4	**72.0**
Savings	$11,146	$53,139	$40,904	$219,471	**$321,597**

Notes:

1) Estimated crime reduction based on differences in log changes in crime from 1993-94 to 1996-97 and average number of crimes in Tangelo Park for 1996-97.
2) Social costs of crime taken from Lochner and Moretti (2004)
3) All dollar values in 2003 dollars (deflated using CPI-U)
4) Totals based on available crime measures for that comparison.
5) Averages for total crime reduction/savings and assault crime reduction/savings do not include Sector 4 OCSO and Orange County OCSO given their absence of assault measures.
6) Crime reductions adjusted for non-reporting to police using reporting rates for 2002 taken from Sourcebook of Criminal Justice Statistics 2003, Table 3.33.

Table A-2: Estimated Annual Crime Reduction and Social Savings for Tangelo Park Project
("Calls for Service" Data, Changes in Crime from 1993-94 to 1996-97)

Community/Area	Motor Vehicle Theft	Burglary	Robbery	Assault	Larceny	Total
Cost per crime:	$1,585	$1,257	$11,950	$12,628	$252	
Crime reporting rate	0.861	0.579	0.712	0.457	0.328	
Zone 43 & 44:						
Crime reduction	7.6	54.0	4.5	24.8	N/A	**90.8**
Savings	$11,976	$67,849	$53,353	$313,188	N/A	**$446,366**
Sector 4 UCR						
Crime reduction	8.1	44.1	4.3	32.9	-27.4	**89.4**
Savings	$12,772	$55,481	$51,123	$415,154	-$6,903	**$527,625**
Sector 4 OCSO (excl. TP)						
Crime reduction	-3.7	45.3	5.5	N/A	N/A	**47.0**
Savings	-$5,890	$56,903	$65,524	N/A	N/A	**$116,537**
Orange County UCR						
Crime reduction	-3.9	39.2	3.6	21.2	23.1	**60.2**
Savings	-$6,174	$49,316	$43,235	$268,043	$5,814	**$360,234**
Orange County OCSO						
Crime reduction	-14.3	27.8	3.8	N/A	N/A	**17.3**
Savings	-$22,710	$34,971	$45,460	N/A	N/A	**$57,720**
Florida UCR						
Crime reduction	-14.8	22.0	1.2	15.9	-16.4	**24.4**
Savings	-$23,407	$27,663	$14,849	$201,288	-$4,146	**$216,247**
Average						
Crime reduction	-3.5	38.7	3.8	23.7	-6.9	**66.2**
Savings	-$5,572	$48,697	$45,590	$299,418	-$1,745	**$387,618**

Notes:

1) Estimated crime reduction based on differences in log changes in crime from 1993-94 to 1996-97 and average number of crimes in Tangelo Park for 1996-97.

2) Social costs of crime taken from Lochner and Moretti (2004)

3) All dollar values in 2003 dollars (deflated using CPI-U)

4) Totals based on available crime measures for that comparison.

5) Averages for total crime reduction/savings and assault crime reduction/savings do not include Sector 4 OCSO and Orange County OCSO given their absence of assault measures.

6) Crime reductions adjusted for non-reporting to police using reporting rates for 2002 taken from Sourcebook of Criminal Justice Statistics 2003, Table 3.33.