



Return on Investment Model for

FR1ENDS of the
CH1LDREN

AGENDA

Introduction to the ROI Model

Comparison Group Summary

Benefits Summary

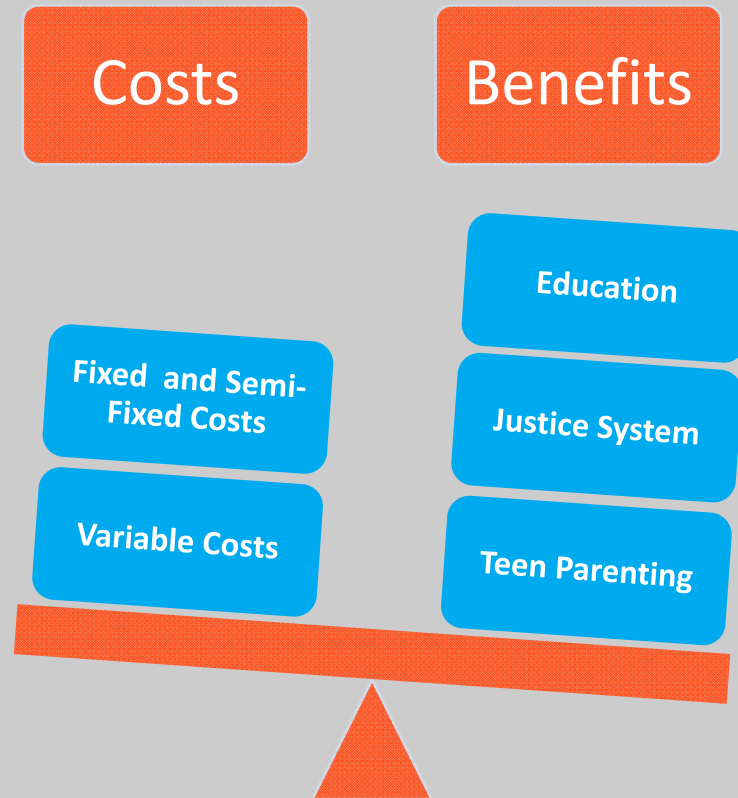
Results

Summary and Conclusions

Appendix: Calculation Methodology

PORTLAND, OREGON
MARCH 2010

THE ROI MODEL IN SUMMARY



*Return on Investment is measured by the Benefit to Cost Ratio =
(Total Benefits per FOTC graduate)/(Total Costs per FOTC graduate)*

COSTS OF FRIENDS OF THE CHILDREN

The ROI Model takes into account
3 categories of costs

Fixed Costs

- Facility space: occupancy-collaboration/rental as program expands
- Technology network
- Administration costs
- Total \$280K/year

Semi-Fixed Costs

- One team leader for every 5-6 Friends
- One Development position for every \$500-700K in revenue
- Additional \$280K/year for every 100 students over the initial 100

Variable Costs

- Friends (one Friend for each 8-14 children)
- Children's activities
- Incremental program and administrative support
- Total \$7,225/year per student

BENEFITS OF FRIENDS

The ROI Model takes into account
3 categories of benefits

Education

- **Metric:** % dropping out of high school in grades 9-12
- **Benefits of a Favorable (Low) Metric:**
 - Higher wages
 - Higher federal and state income taxes
 - Less need for public services

Justice System

- **Metric:** % incarcerated by age 18
- **Benefits of a Favorable (Low) Metric:**
 - Lower criminal justice costs
 - Lower victim costs
 - Less lost wages due to incarceration

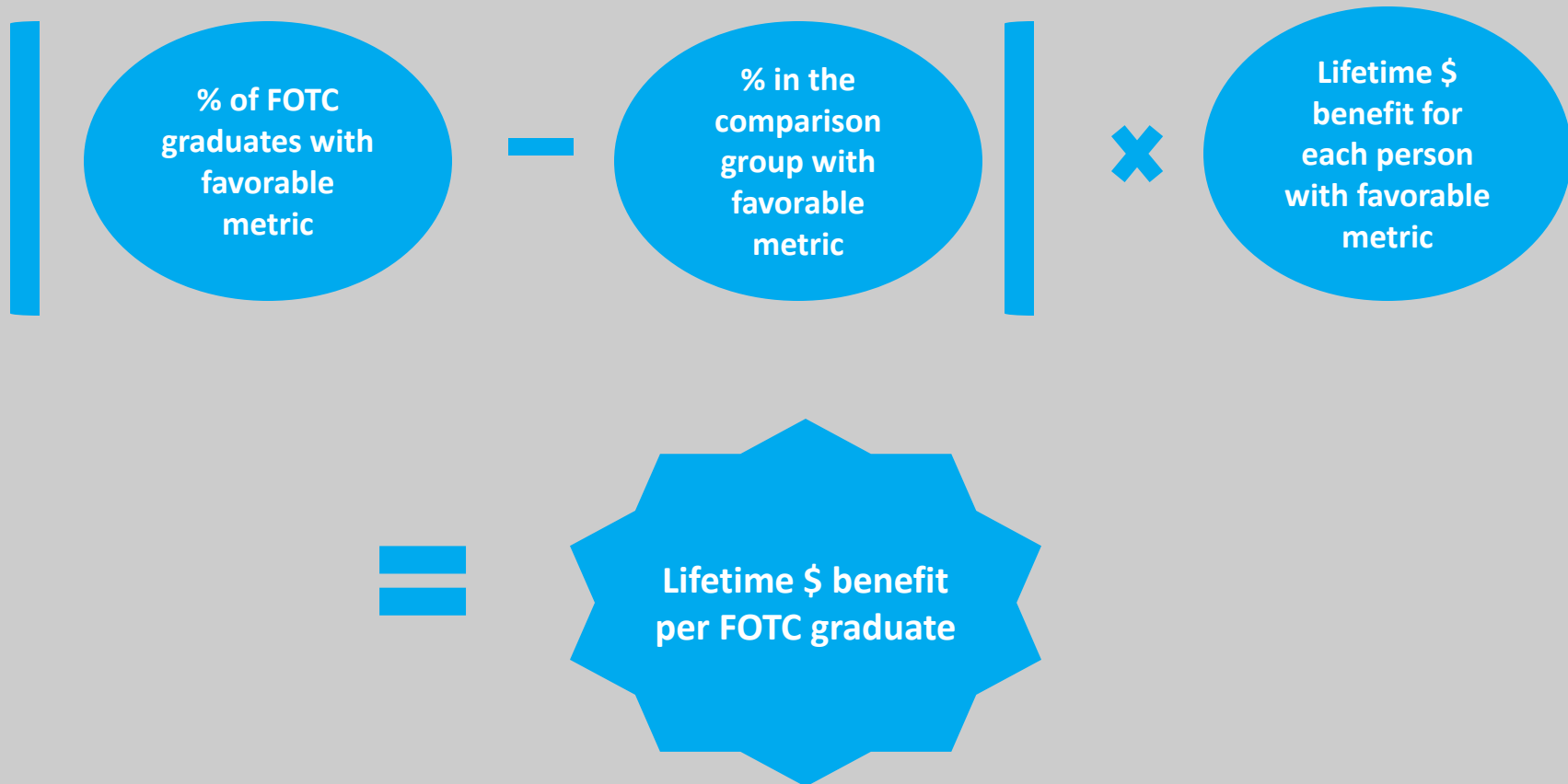
Teen Pregnancy

- **Metric:** % parents by age 18
- **Benefits of a Favorable (Low) Metric:**
 - Lower public health care costs
 - Lower child welfare costs
 - Less lost wages, federal and state income taxes

DEFINITION OF COMPARISON GROUP

Comparison group characteristic	Why this characteristic was selected
18 year olds in Multnomah County	Most FOTC participants finish the program at age 18 and live in Multnomah County
Economically disadvantaged	Low income level is a primary criterion for FOTC participation
70% black, 30% white	FOTC participants are 50% black, 30% white, 20% other minority

CALCULATION OF BENEFITS



This calculation is done for each of the 3 categories of benefits

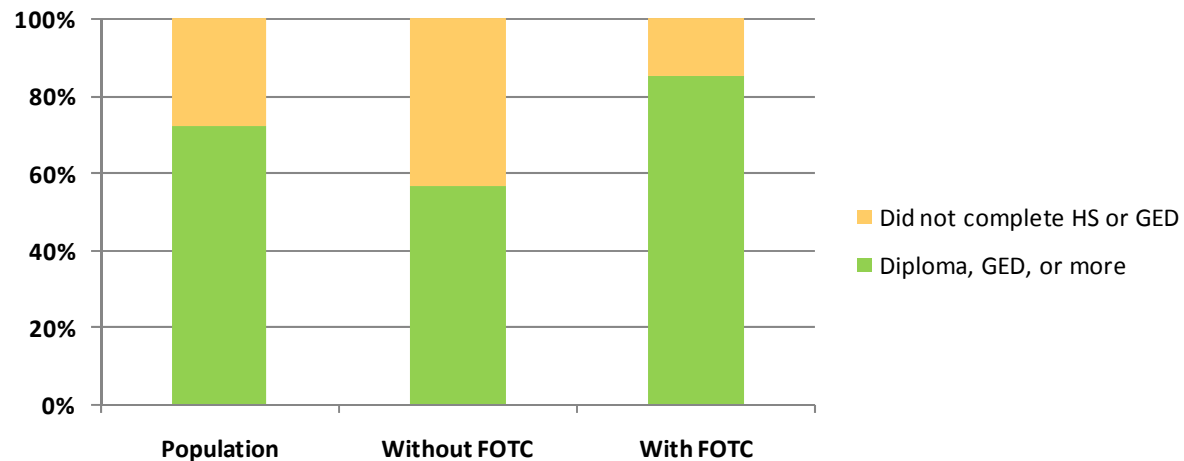
BENEFITS SUMMARY - EDUCATION

FOTC: 85% receive HS diplomas or above

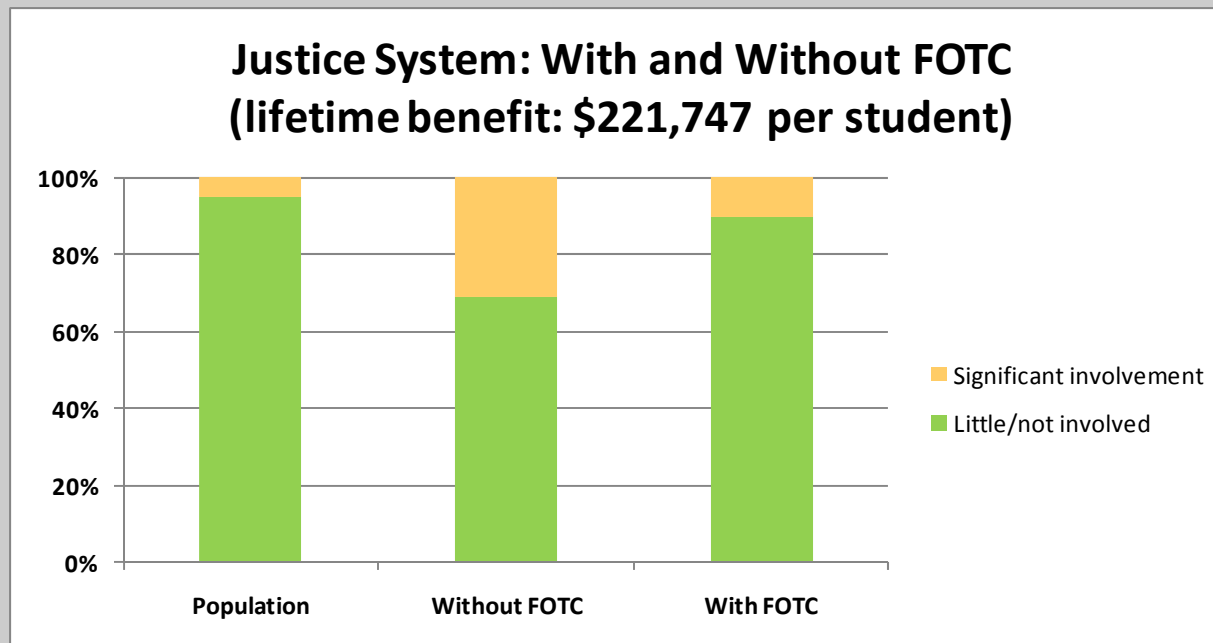
Comparison group: 57% receive HS diplomas or above

Lifetime benefit of a HS diploma or above: \$1,282K per person

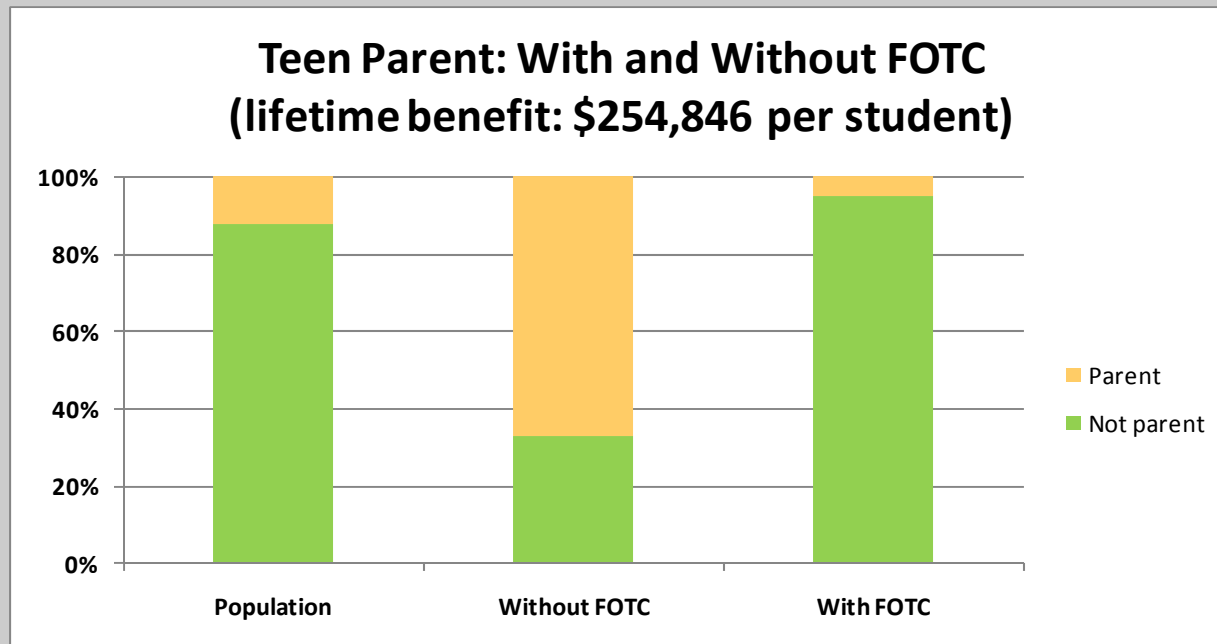
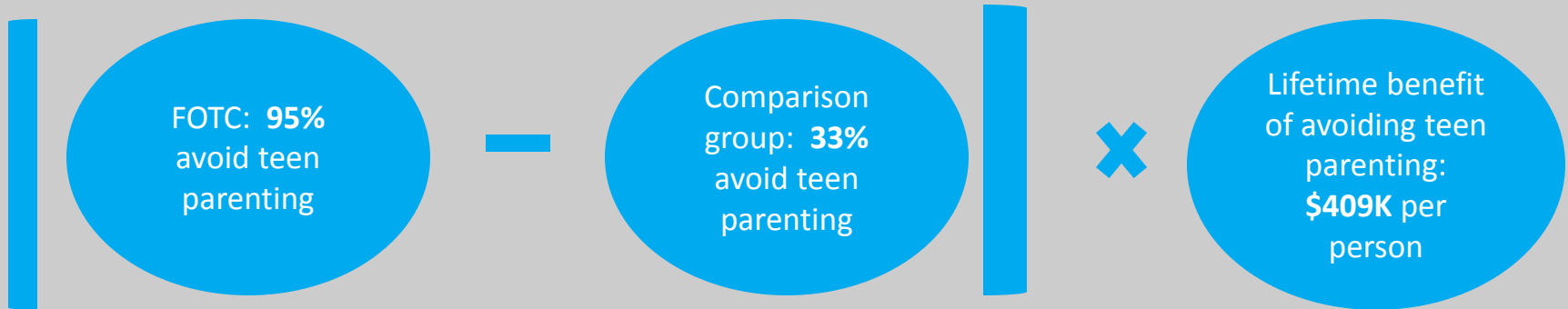
Education: With and Without FOTC
(lifetime benefit: \$361,437 per student)



BENEFITS SUMMARY – JUSTICE SYSTEM

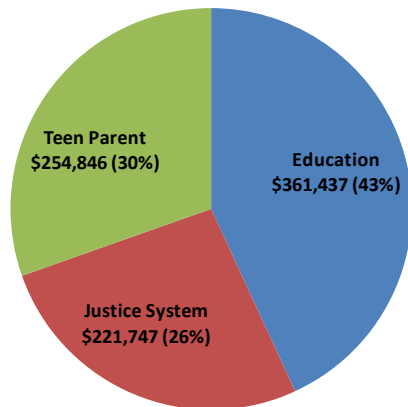


BENEFITS SUMMARY – TEEN PARENTING

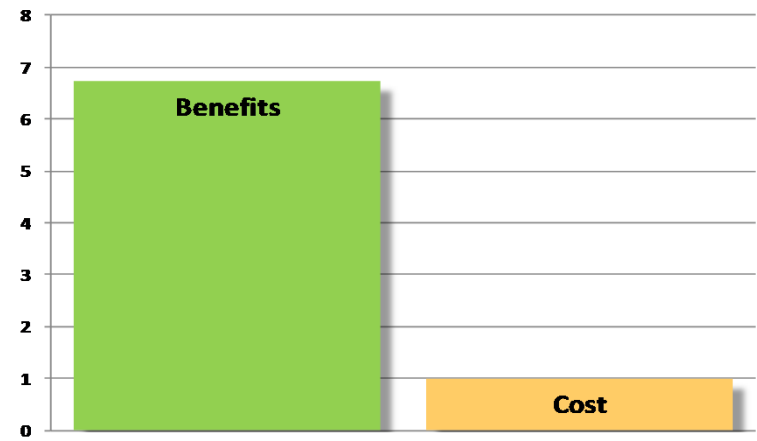


RETURN ON INVESTMENT SUMMARY

**Components of FOTC Lifetime Benefit Per Student
(total: \$838,030)**



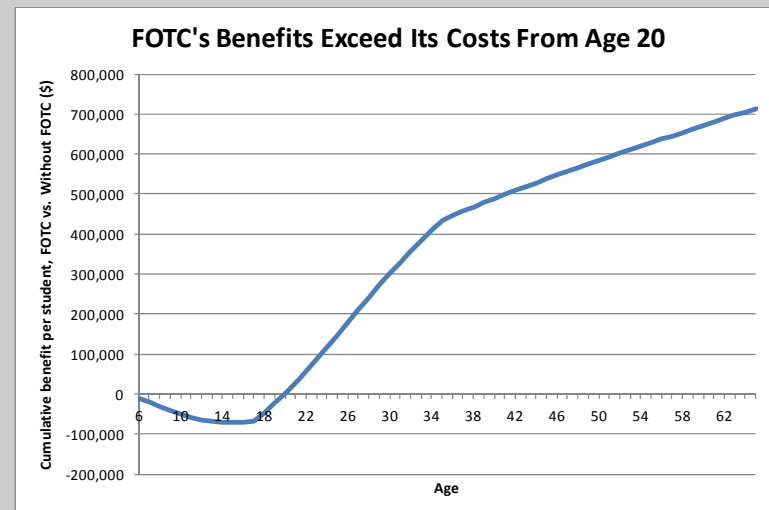
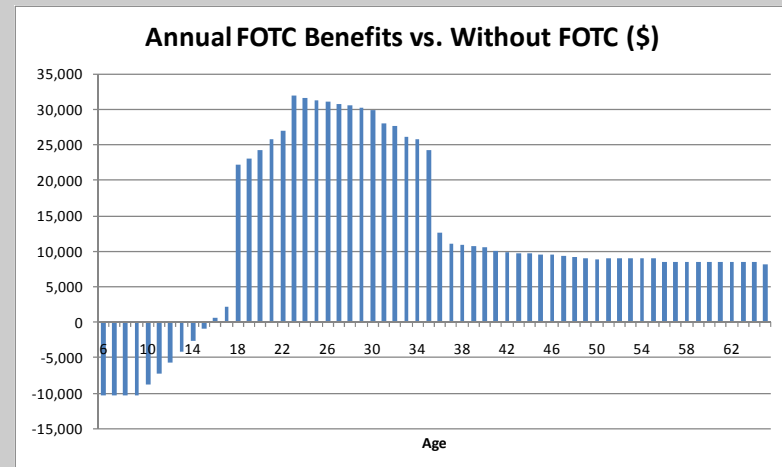
**Benefit/Cost Ratio
of FOTC's Program
(6.7 times its cost per student)**



Total lifetime benefit from FOTC is more than 6 times the cost

RETURN ON INVESTMENT SUMMARY con't.

- Benefits resulting from high school graduation are evenly spread over the student's working lifetime
- Benefits resulting from justice system avoidance mirror the prison age distribution, which drop off considerably after age 40
- Benefits resulting from avoiding teen parenting continue until 15 years after the last child is born



FOTC benefits are heavily loaded in the first 2 decades after graduation

WHY THE ANALYSIS IS CONSERVATIVE

The ROI model uses the best data available. When data are not available, it uses reasonable conservative estimates.

Comparison Data

- Assumes that “Other Minorities” have the same characteristics as blacks, when they are actually worse off in many areas
- FOTC participants are at the lower end of “economically disadvantaged”
- Neglected births to females <age 15, multiple births, and abortions

Benefits Data

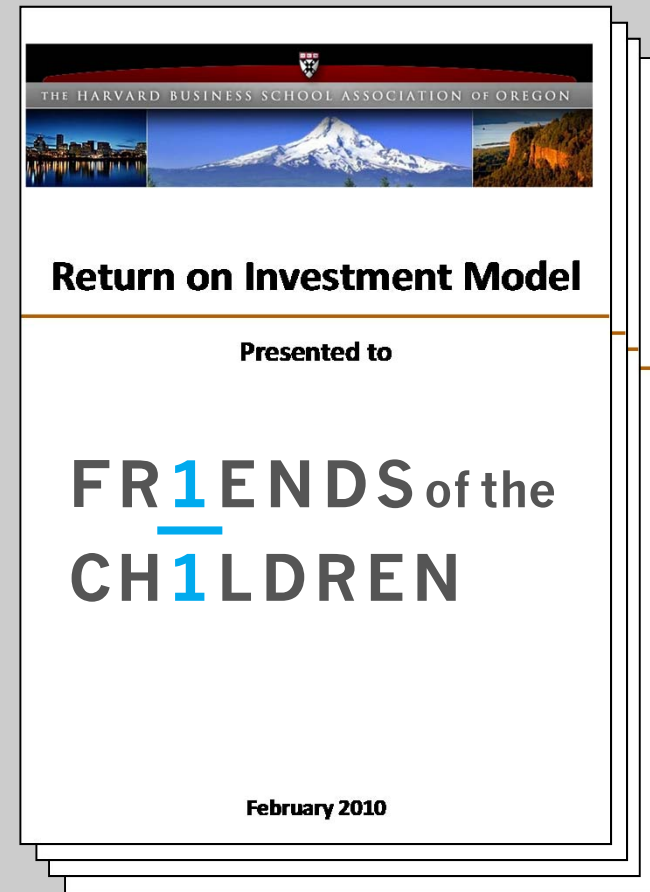
- No possibilities of double counting (e.g., neglected increase in crime resulting from teen parenting)
- Assumed that FOTC HS grads enter college at the same rate as comparison group HS grads
- Assumed that HS grads do not earn salaries or pay taxes while in college

Benefits Categories

- Excludes the multi-generational effects of the cycle of poverty
- Excludes mental health, substance abuse, other costs and issues
- Replicated methodology of other studies as well as possible

FEATURES OF THE ROI MODEL

- MS Excel based
- Contains 11 worksheets, presented in increasing level of detail
- Contains multiple tables and graphs, instructions, and contact information
- FOTC can update results and perform what-if analysis by entering new cost and benefit data
- Fully documented in 25-page Users Guide
- Based on input from FOTC, HBSAO, and numerous outside sources



SUMMARY AND CONCLUSIONS

WHY FRIENDS DEVELOPED THIS MODEL

- To prove the long-term value of FOTC's mentoring program
- To create a link to forthcoming data being developed in the longitudinal study
- To define and be used for future program measurements

CONCLUSIONS FROM THE MODEL

- FOTC's benefits, to mentored children and society, are currently calculated to be **6.7 times** costs
- The break-even age where mentored children's benefits exceed FOTC's program costs is **20**
- Demographics of mentored children approach the general population (significant improvement)
- Each of the three core results contributes an approximately equal part of the 6.7 benefit/cost
- Reductions in births per teen parent break the cycle (compounding effect)

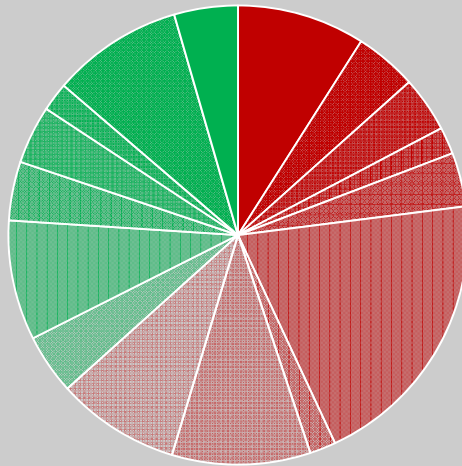
WHY BELIEVE THE CONCLUSIONS

- The calculations are straightforward
- The data and calculations use common methodologies
- The data and calculations are conservative
 - No “double dipping” is just one example
- Most of the data are from studies from government sources, especially Oregon and Multnomah County

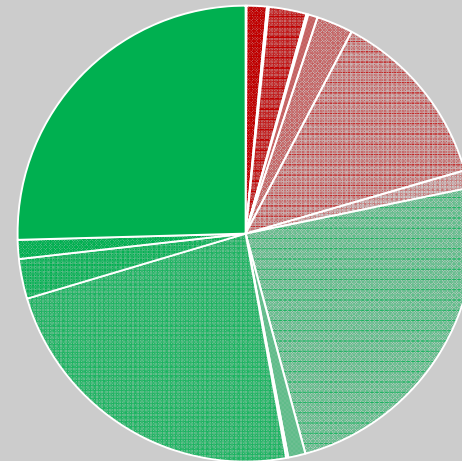
SPINNING THE WHEEL OF FORTUNE

As a philanthropist, which wheel would you rather spin?
As a child of age 5, which wheel would you rather spin?

Without FOTC
37% Achieve Most Positive Outcomes



With FOTC
78% Achieve Most Positive Outcomes



Outcomes for 16 lifetime scenarios are calculated from probabilities for 3 basic metrics

Green shaded areas represent best 7 of 16 outcomes (ranging from \$2.0 to \$3.7 million)

Red shaded areas represent worst 9 of 16 outcomes (ranging from \$0 to \$2.0 million)

THANK YOU FOR YOUR SUPPORT

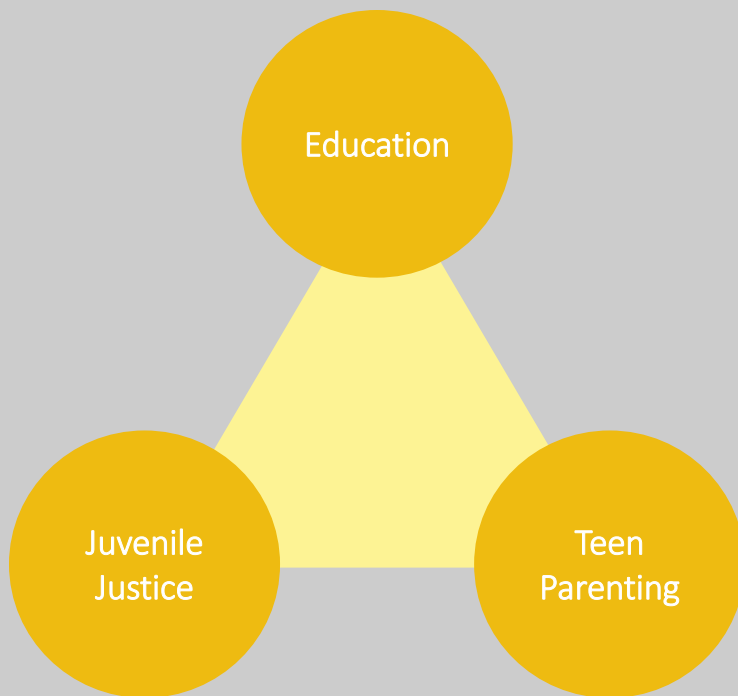
Questions?

APPENDIX – CALCULATION METHODOLOGY

Comparison Group Data

Benefits Data

ASSUMPTIONS – COMPARISON GROUP



Education

- Being eligible for free or reduced lunch equates to being economically disadvantaged
- % Grade 9-12 dropouts has a linear relationship to % economically disadvantaged

Teen Parenting

- 7/1/06 female population equals the 2005-07 average
- There are no females ages 15-19 that gave birth to more than one child in 2005-07
- Neglected any births to females under age 15, multiple births, and abortions
- Teen parenting rate has a linear relationship to % poverty

Justice System

- % of the population that is 14-17 year old is the same in each county regardless of race
- 14-17 year olds are incarcerated no more than once per year
- Youth detention rate has a linear relationship to % poverty

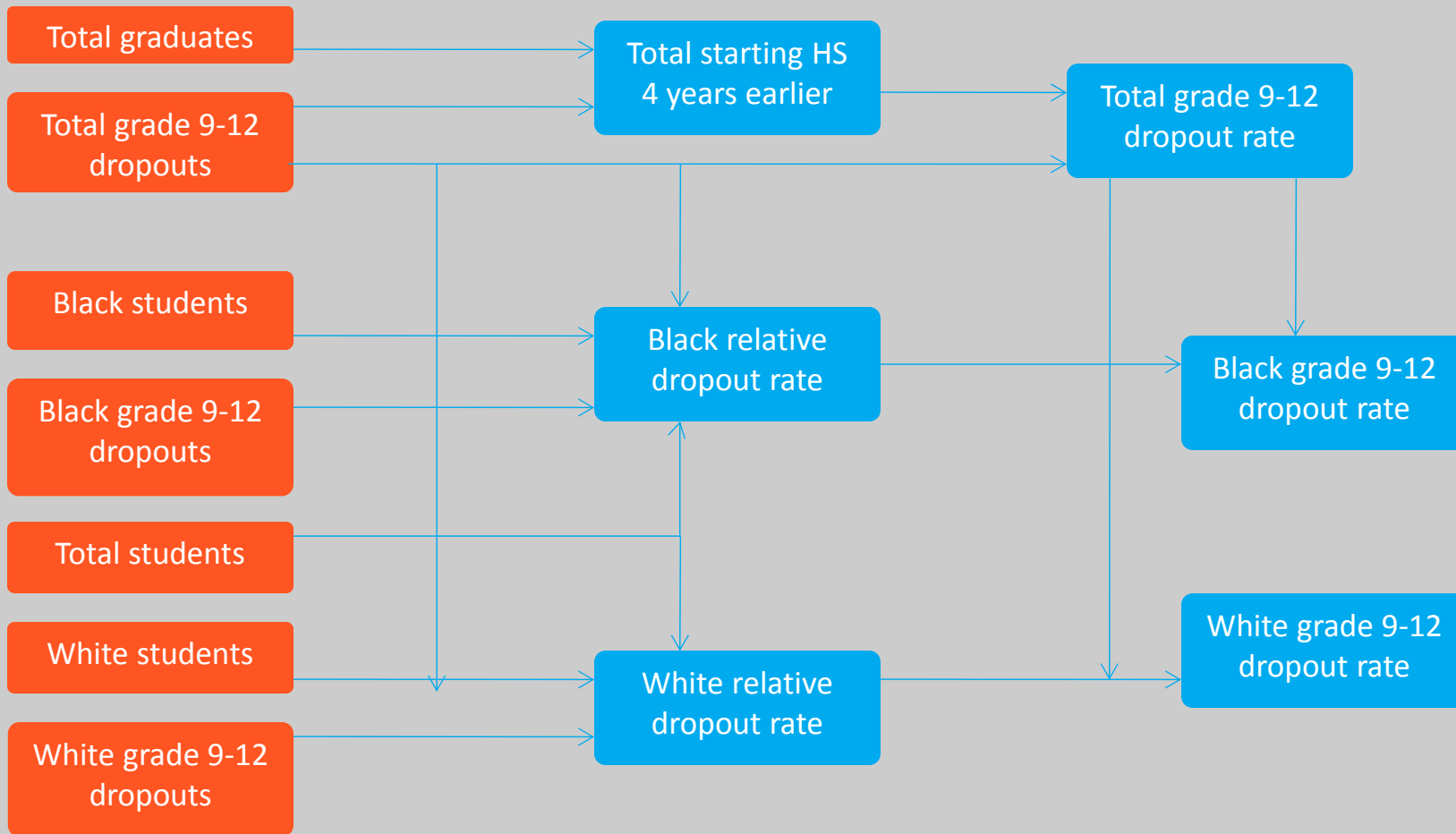
COMPARISON DATA - EDUCATION

- **All primary data is from the Oregon Department of Education web site**
- **For each school district in Multnomah County:**
 - Start with total students and total dropouts for grades 9-12 by race (2007-08 school year)
 - Total starting HS in 2003-04 = 2007-08 graduates + grade 9-12 dropouts
 - Total dropout rate = (total 2007-08 dropouts)/(total starting HS in 2003-04)
 - Black relative dropout rate = (black dropouts/black students)/(total dropouts/total students)
 - White relative dropout rate = (white dropouts/white students)/(total dropouts/total students)
 - Black dropout rate = (total dropout rate)(black relative dropout rate)
 - White dropout rate = (total dropout rate)(white relative dropout rate)
- **Plot the black dropout rate vs. % of students eligible for free or reduced lunch**
- **Plot the white dropout rate vs. % of students eligible for free or reduced lunch**
- **Extrapolate the trend lines to estimate the dropout rates for economically disadvantaged blacks and whites**
- **Comparison group dropout rate = (70% x economically disadvantaged black dropout rate) + (30% x economically disadvantaged white dropout rate)**

COMPARISON DATA - EDUCATION

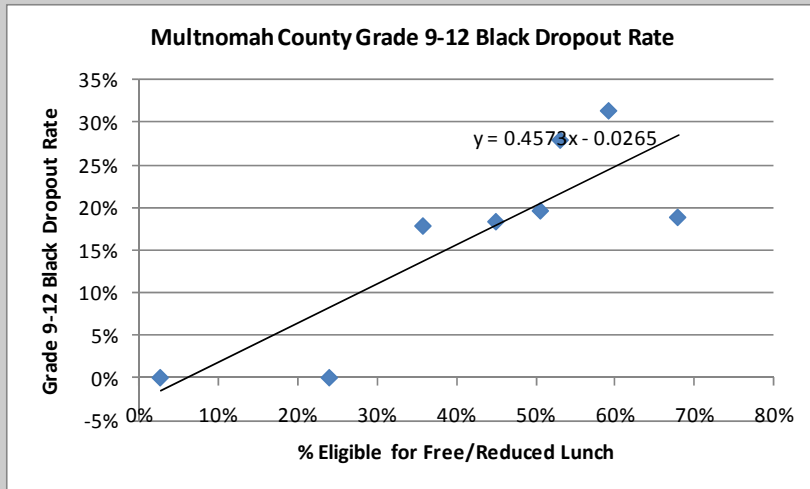
Primary data (from the Oregon Department of Education web site)

Calculated data, for each school district in Multnomah County, 2007-08 school year

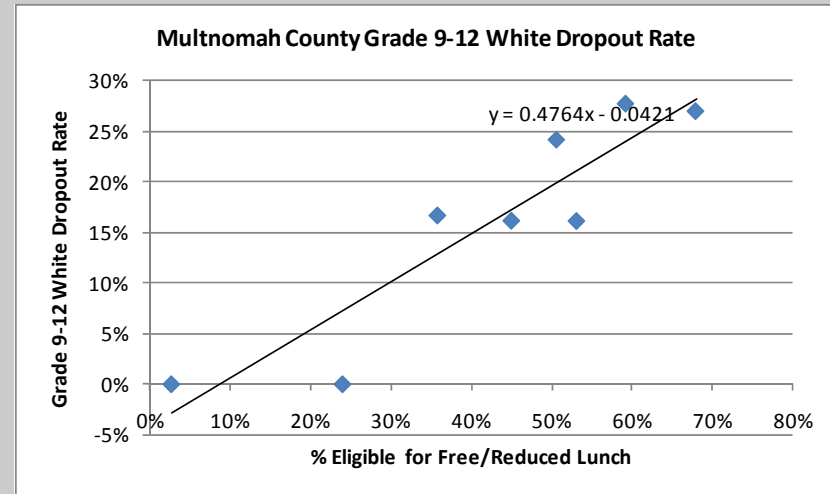


COMPARISON DATA - EDUCATION

Use linear extrapolation to estimate the impact of being economically disadvantaged:



- When $x = 100\%$, then $y = 43\%$
- Grade 9-12 dropout rate for economically disadvantaged blacks = 43%



- When $x = 100\%$, then $y = 43\%$
- Grade 9-12 dropout rate for economically disadvantaged whites = 43%

The Grade 9-12 dropout rate for the comparison group is the 70/30 weighted average of these 2 numbers, or 43%

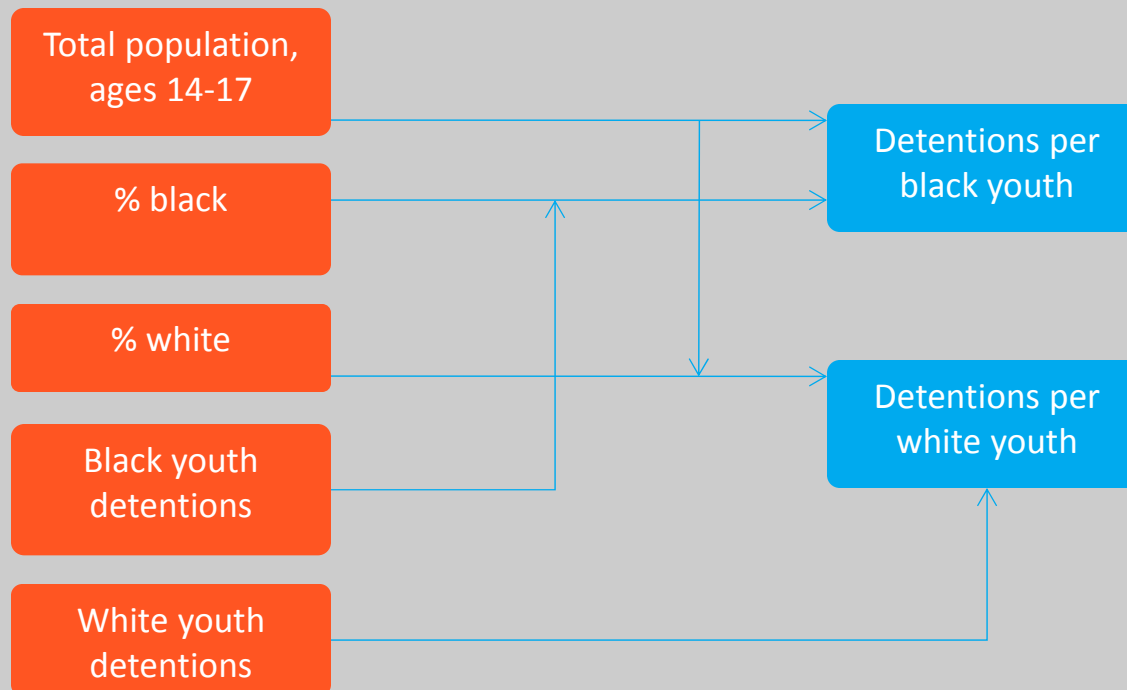
COMPARISON DATA – JUSTICE SYSTEM

- **Primary data is from the Oregon Youth Authority and U.S. Census web sites**
- **For each county in Oregon:**
 - Start with total population ages 14-17, % in poverty, % black, % white, and black and white youth detention admissions in 2008
 - Detentions per black youth = $(\text{black youth detentions}) / (14-17 \text{ population}) / (\% \text{ black})$
 - Detentions per white youth = $(\text{white youth detentions}) / (14-17 \text{ population}) / (\% \text{ white})$
- **Plot the detentions per black youth vs. % in poverty**
- **Plot the detentions per white youth vs. % in poverty**
- **Extrapolate the trend lines to estimate the youth detention rate for economically disadvantaged blacks and whites**
- **Comparison group youth detention rate = (70% x economically disadvantaged black youth detention rate) + (30% x economically disadvantaged white youth detention rate)**

COMPARISON DATA – JUSTICE SYSTEM

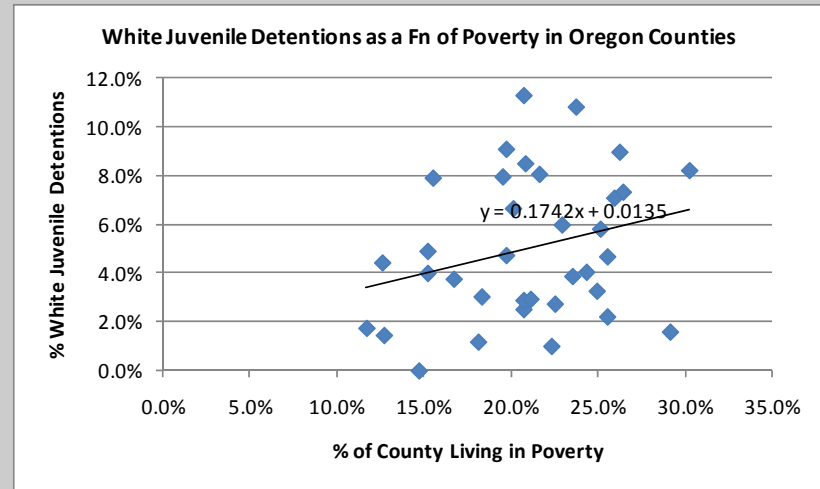
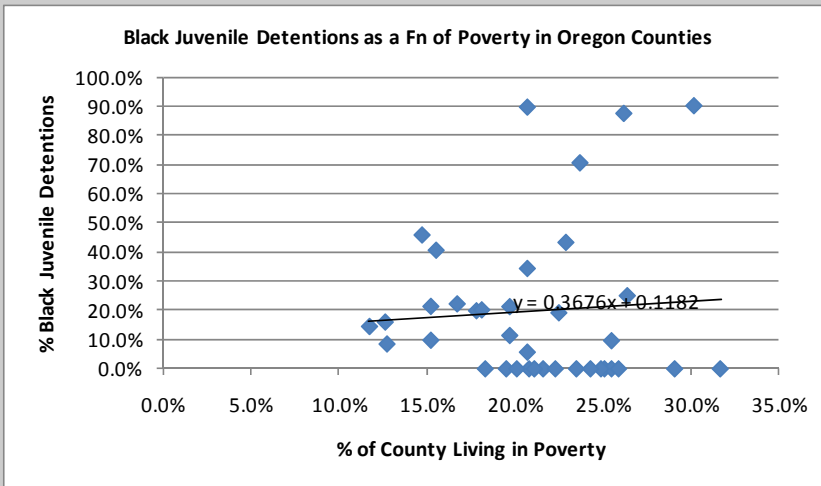
Primary data (from the Oregon Youth Authority
and U.S. Census web sites)

Calculated data,
for each county in Oregon, 2008



COMPARISON DATA – JUSTICE SYSTEM

Use linear extrapolation to estimate the impact of being economically disadvantaged:



- When $x = 100\%$, then $y = 37\%$
- Youth detention rate for economically disadvantaged blacks = 37%

- When $x = 100\%$, then $y = 17\%$
- Youth detention rate for economically disadvantaged whites = 17%

The youth detention rate for the comparison group is the 70/30 weighted average of these 2 numbers, or 31%

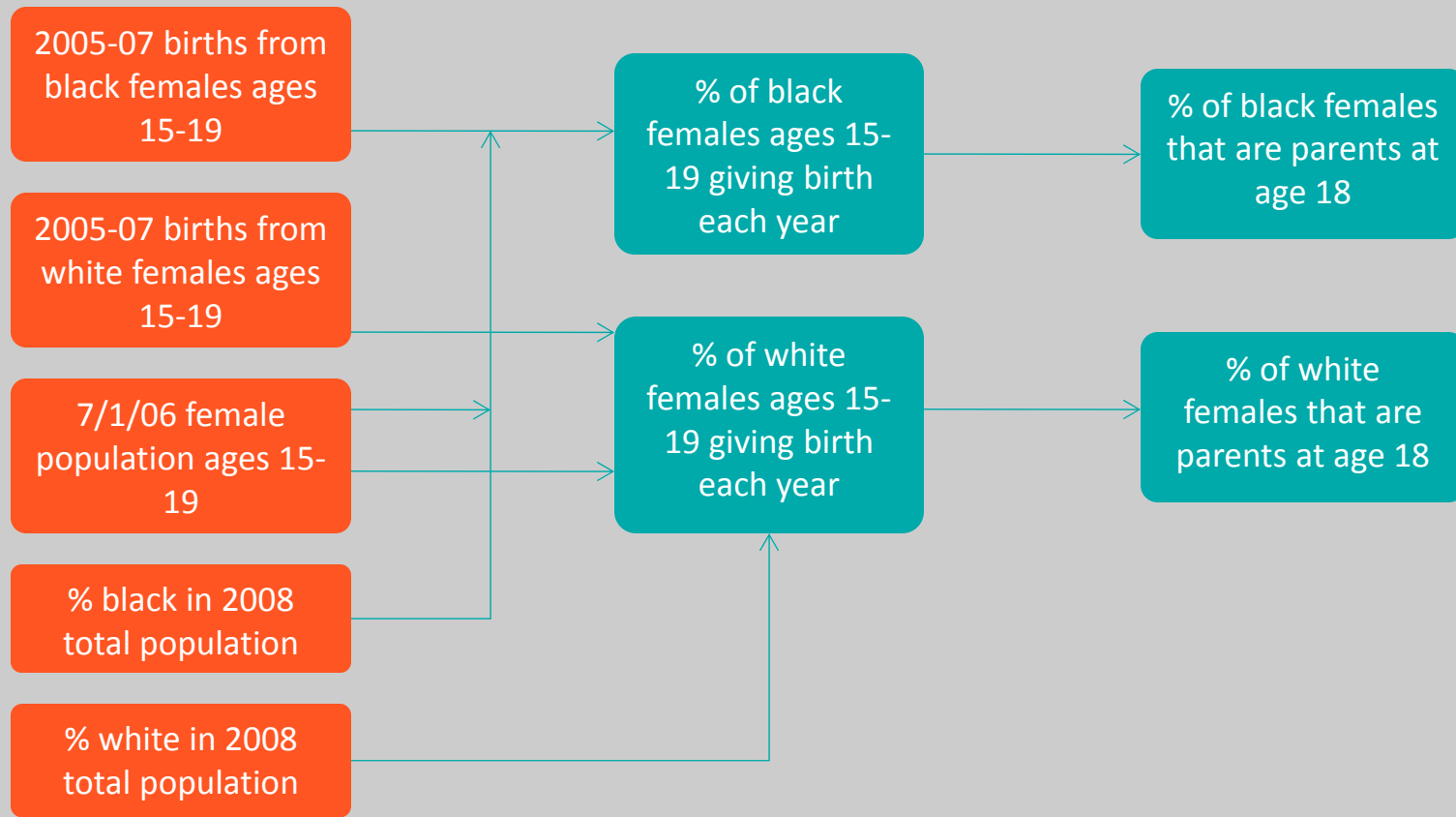
COMPARISON DATA – TEEN PARENTING

- **Primary data is from the OR Department of Human Services and ePodunk web sites**
- **For each county in Oregon:**
 - Start with 2005-07 births, by mother's race and age, 7/1/06 female population by age, % black, % white, and % in poverty
 - % of black females ages 15-19 giving birth per year = $(2005-07 \text{ births from females ages } 15-19) / (7/1/06 \text{ female population}) / (\% \text{ black}) / (3 \text{ years})$
 - % of white females ages 15-19 giving birth per year = $(2005-07 \text{ births from females ages } 15-19) / (7/1/06 \text{ female population}) / (\% \text{ white}) / (3 \text{ years})$
 - % of black females that are parents at age 18 = $(\% \text{ of black females ages } 15-19 \text{ giving birth per year}) (4 \text{ years})$
 - % of white females that are parents at age 18 = $(\% \text{ of white females ages } 15-19 \text{ giving birth per year}) (4 \text{ years})$
- **Plot the % of black females that are parents at age 18 vs. % in poverty**
- **Plot the % of white females that are parents at age 18 vs. % in poverty**
- **Extrapolate the trend lines to estimate the teen parenting rates for economically disadvantaged blacks and whites**
- **Comparison group dropout rate = (70% x economically disadvantaged black teen parenting rate) + (30% x economically disadvantaged white teen parenting rate)**

COMPARISON DATA – TEEN PARENTING

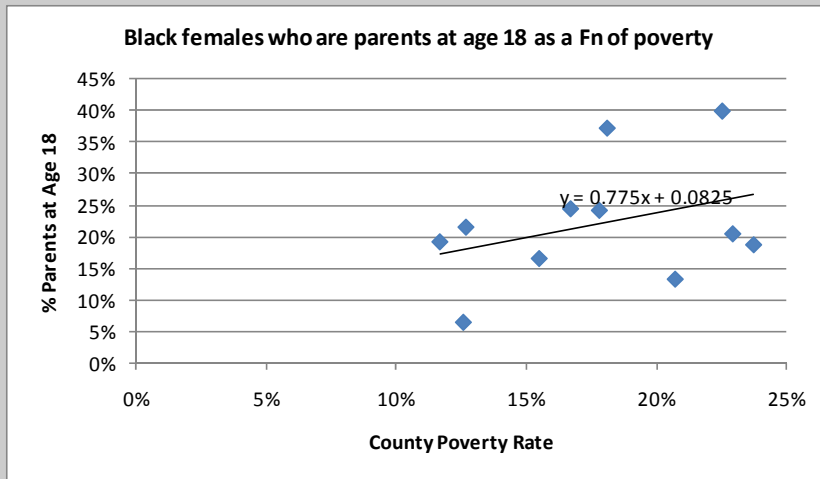
Primary data (from the Oregon Department of Human Services and U.S. Census web sites)

Calculated data, for each county in Oregon

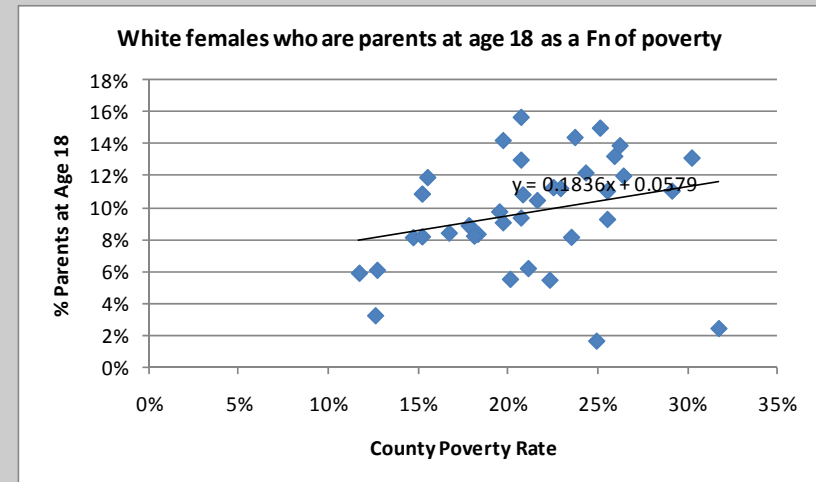


COMPARISON DATA – TEEN PARENTING

Use linear extrapolation to estimate the impact of being economically disadvantaged:



- When $x = 100\%$, then $y = 86\%$
- Teen parenting rate for economically disadvantaged blacks = 86%



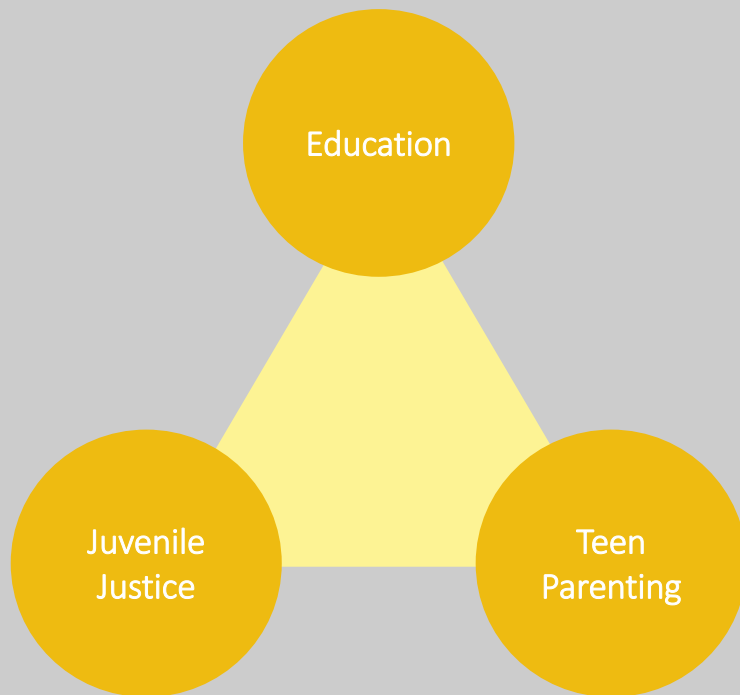
- When $x = 100\%$, then $y = 24\%$
- Teen parenting rate for economically disadvantaged whites = 24%

The teen parenting rate for the comparison group is the 70/30 weighted average of these 2 numbers, or 67%

ASSUMPTIONS - BENEFITS

General Assumption

Discount rate for NPV calculation purposes is equal to inflation



Education

- Outcomes for FOTC HS graduates are the same as outcomes for comparison group HS graduates
- Workers have 70% take-home pay, 21% Federal income tax, 9% Oregon income tax
- Benefits apply for 47 years (ages 19-65) for HS graduates, 45 years for those with some college, 43 years for college grads

Teen Parenting

- Incarceration impacts not incl. in parenting category
- Lost wages and taxes are incremental to reduced wages and taxes in education category
- Each teen parent will have 2.5 children
- Health care and welfare benefits apply for 15 years per child
- Wages and tax benefits apply for $13+2n$ years, where $n = \#$ of children

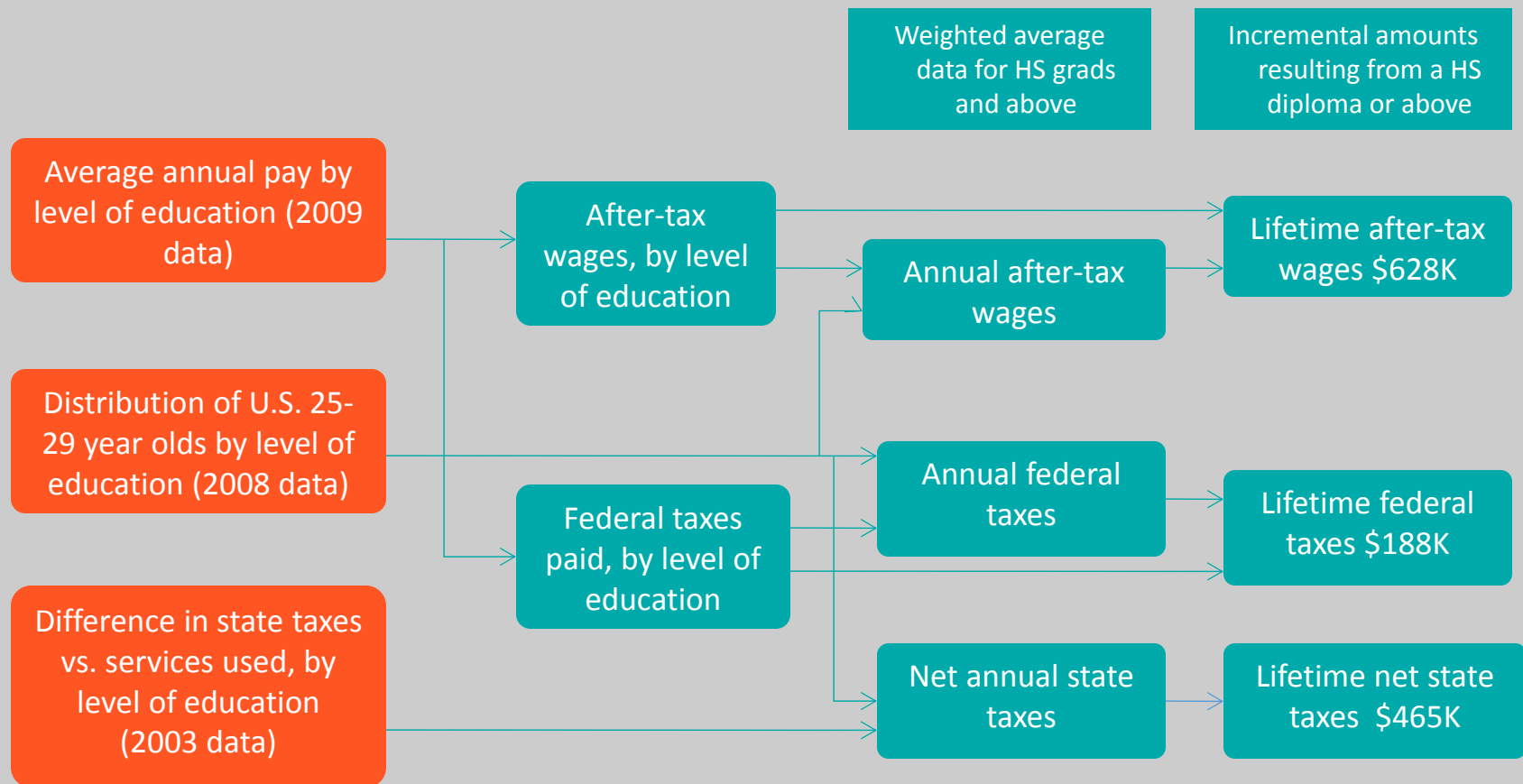
Justice System

- 50% of incarcerated juvenile offenders become chronic offenders
- Chronic offenders commit 1-4 crimes per year as juveniles, 10.6 crimes/year for 6 years as adults (from Ramsey study)
- Crime-related costs for chronic offenders are spread across a lifetime in proportion to prison/jail age distribution

BENEFITS DATA - EDUCATION

Primary data (from the U.S. Dept. of Labor, U.S. Dept. of Commerce, and OR Quality Education Commission)

Calculated data (2010\$ per person)



Total lifetime benefit from a HS diploma or above = \$1,282K/person

BENEFITS DATA – JUSTICE SYSTEM

Primary data from studies by Vanderbilt University and the University of CA

Calculated data (2010\$ per person)

Lifetime costs to society per chronic offender (1998 data, updated 2003)

Lifetime costs to society per incarcerated juvenile offender



Total lifetime benefit from avoiding youth incarceration = \$1,056K/person ³⁴

BENEFITS DATA – TEEN PARENTING

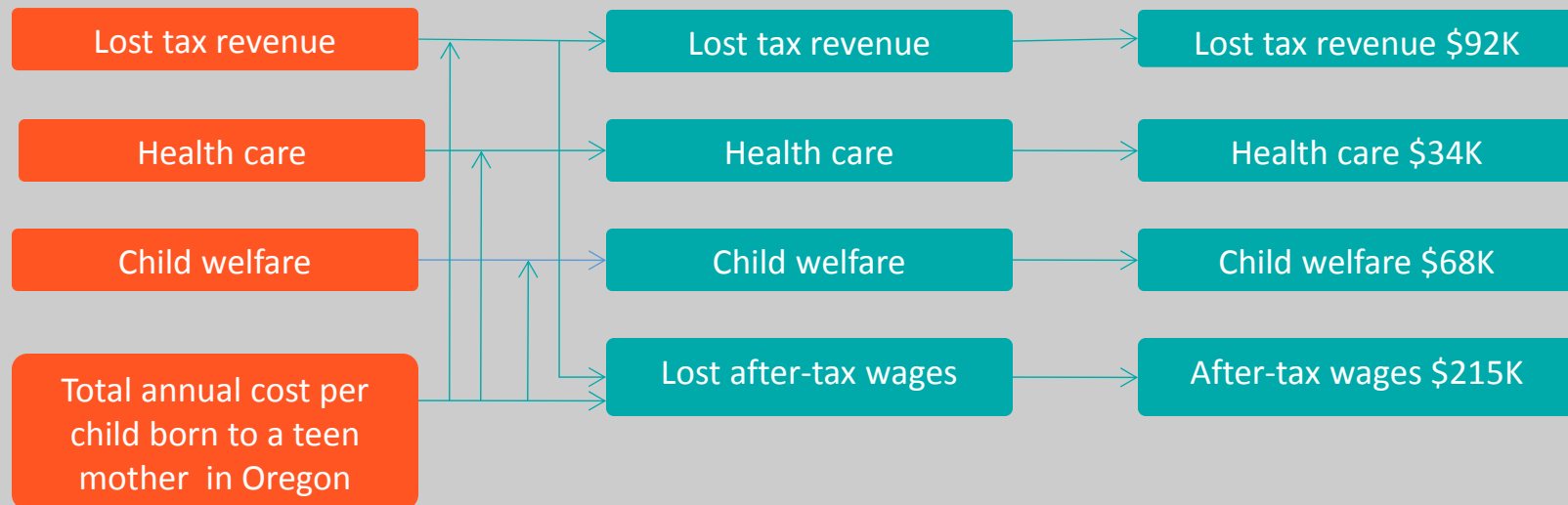
Primary data (from “By the Numbers” report for the National Campaign to Prevent Teen Pregnancy, 2004 data)

Calculated data (2010\$ per teen parent)

Annual public costs associated with U.S. children born to teen parents

Annual costs associated with Oregon children born to teen parents

Lifetime costs per Oregon teen parent



Total lifetime benefit from avoiding teen parenting = \$409K/person