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Executive Summary

Failure to Earn a High School Diploma: Correlates & Consequences for Central Pennsylvania

Failure to earn at least a high school diploma is associated with reduced hourly compensation among U.S. youth. In research conducted with the Central Pennsylvania Workforce Development Corporation (CPWDC; see <http://www.cpwdc.org/payt.htm>), the average difference in hourly compensation between youth in the U.S. who earned a diploma and those who did not is between 68¢ and \$1.21 per hour.

According to the staff of the CPWDC, the U.S. Census Bureau estimated that there currently are 11,245 persons in central Pennsylvania counties between 18 and 24 years old who do not have high school diplomas (counties of Centre, Clinton, Columbia, Lycoming, Mifflin, Montour, Northumberland, Snyder, and Union). If 60.3% of high school dropouts in central Pennsylvania could be employed (the same percentage as in the nation's general population), 6,781 of central Pennsylvania dropouts would be employed.

These 6,781 young people taken together would have earned a total of between \$4,611 and \$8,205 per hour more if they had earned at least a high school diploma. If all youth who dropped out were full-time (40 hours per week), full-year (50 weeks per year) workers, the aggregate compensation differences would be between \$9.2 million and \$16.4 million per year. The Pennsylvania personal income tax rate is 3.07%, which means that between \$283,000 and \$504,000 in state tax revenue would be foregone from lost full-time, full-year work opportunities. Taxes foregone for various Pennsylvania townships and cities would add to the social cost of dropping out of school.

Research provided in this report was prepared by Penn State's Workforce Education and Development (WED) Initiative, an alliance between Penn State Outreach and Penn State's College of Education. The regional economic analysis for this research was conducted by the Center for Regional Economic and Workforce Analysis in Penn State Outreach in collaboration with the Institute for Research in Training and Development, a research unit in Penn State's College of Education. Contact the staff of the Penn State WED Initiative at rmb194@psu.edu (e-mail), 814.865.9919 (voice), or 814.865.3589 (fax) for information about services available to help plan and evaluate economic and workforce development in the Commonwealth and beyond. Information on the web about the work of the Penn State WED Initiative is available at <http://PennStateWED.notlong.com>.



Focus

Background

High school graduation is important to social and individual economic well-being. Graduation rates are associated with increases in worker productivity and economic growth in the United States (Goldin & Katz, 2003). Rising wage differentials between high school graduates and dropouts have increased economic incentives to graduate from high school (Heckman & LaFontaine, 2007b). The internal rate of return to graduating from high school compared with dropping out is over 50 percent (Heckman, Lochner, & Petra, 2008). Inflation-adjusted weekly wages of high school dropouts have declined relative to high school and college graduates since the 1970s (Autor, Katz, & Kearney, 2005). The expected lifetime earnings and full-time employment rates for high school dropouts have been lower, and unemployment rates have been higher, than for high school graduates (Rumberger, 1987, p. 114).

Increasing high school graduation rates is a primary aim of the No Child Left Behind Act (20 USC 6301. Public Law 107-110, 2001). The graduation rate is defined by the Act as the percentage of students who, within the standard number of years, meet a state's academic standards to receive high school diplomas. The number of students who receive General Educational Development certificates and certificates of attendance specifically are excluded from calculations of graduation rates.

The more restrictive definition of "graduation" in the No Child Left Behind Act caused reassessment of the meaning and implications of graduation rates and trends. Measurement of graduation rates is uncertain due to differences in definitions and inconsistency among data sources (Swanson & Chaplin, 2003). High school graduation rates in the United States climbed steadily throughout the 20th century (Mishel & Roy, 2006, p. 4) due to compulsory schooling and movement of the economy from a traditional rural agricultural to primarily an industrial base. Heckman and LaFontaine (2007a), using alternative definitions and data sources, found that U.S. high school graduation rates actually stagnated or declined after reaching a peak in the late 1960s. Moreover, graduation rates of minorities are much lower than estimated previously. Coupled with the productivity, growth, wage, and employment consequences of failure to receive a high school diploma, the specter of having a higher incidence and greater number of dropouts than ever previously estimated raises the stakes for reducing the negative impact of the failure to leave high school with a diploma.

Estimates of the number of dropouts in central Pennsylvania, the geographic focus of this study, are uncertain. On one hand, the Pennsylvania Department of Education (2008b) counted 681 public secondary school dropouts during the 2005–2006 school year in the central Pennsylvania counties of Centre (56), Clinton (35), Columbia (56), Lycoming (210), Mifflin (73), Montour (12), Northumberland (179), Snyder (36), and Union (24). The Department defines a dropout as "A student who, for any reason other than death, leaves school before graduation without transferring to another school/institution" (Pennsylvania Department of Education, 2008a, p. A1). On the other hand, the Central Pennsylvania



Workforce Development Corporation uses U.S. Census Bureau estimates to report 11,245 persons between 18 and 24 years of age in the region who do not have a high school diploma. The aggregate impact of dropping out of secondary school depends not only on the employment and compensation deficit caused by dropping out of secondary school, but also on the numbers of dropouts who are believed to exist in the region.

Purpose

The purpose of the research described in this report was to estimate the personal compensation foregone as a consequence of the failure of these 681 dropouts in 2005–2006 to leave high school with a diploma. To provide this estimate, from the National Longitudinal Survey of Youth 1997 (NLSY97) (Bureau of Labor Statistics, 2007a) was analyzed to calculate, using ordinary least squares regression, the average difference, *ceteris paribus*, between the personal compensation of dropouts and graduates at the national level. Then, the average personal compensation difference is multiplied by the number of the central Pennsylvania dropouts working, which provides an estimate of the aggregate personal compensation costs of failure to earn a high school diploma for central Pennsylvania. This central Pennsylvania estimate is crude because it is based on the following assumptions and constraints:

- The average compensation difference is a reasonable estimate for all dropouts. In the sense that the mean is the best, linear, unbiased estimator of the expected value of a parameter, this statement is true. The aggregate estimate of personal compensation foregone is reasonable, in a statistical sense, for the population of dropouts in central Pennsylvania. However, the regression approach applied in this analysis holds constant variables in the regression equation other than the variable measuring whether a high school diploma is earned. A practical matter is that the average compensation difference is a poor estimate of the impact of failure to earn a high school diploma for individual dropouts, who vary considerable in measured and unmeasured ways.
- The average compensation difference is estimated for a national sample of respondents to the NLSY97, not for central Pennsylvania youth. A major assumption is that the dynamics of failure to earn a high school diploma are similar for a national sample of youth and central Pennsylvania youth. This assumption is not testable with the NLSY97 data.

Organization

Presented in the remainder of this report are: a listing of specific research questions answered; the methodology followed to conduct this research, including the target population and sample selected, variables studied, and analyses conducted; the results of analyses that answer each research question; conclusions that apply national estimates of the impact of the impact of failure to earn a high school diploma to central Pennsylvania data; and, then, alternate aggregate estimates of the employment and compensation effects of dropping out of school in the central region of Pennsylvania.



Research Questions

Research questions answered in this study include:

1. *What are the relationships between earning at least a high school diploma and gender, race/ethnicity, census region, marital status, and income status?* Some of the characteristics—such as gender and race/ethnicity—are antecedents to earning a diploma, while other characteristics studied are post-diploma indicators. This question is posed to explore the variability in earning at least a high school diploma among young people.
2. *What are the relationships between hourly compensation and earning at least a high school diploma, gender, race/ethnicity, census region, marital status, and income status?* The primary relationship of interest is between compensation and earning at least a high school diploma, which is estimated, *ceteris paribus*, with other variables acting as controls.

An answer to research question 1 helps describe the dynamics of earning at least a high school diploma. The answer to research question 2 is used to extrapolate the impact of failure to earn at least a high school diploma estimated from a national sample of youth to central Pennsylvania high school dropouts.

Methods

Target Population & Sample

The National Longitudinal Surveys (NLS) are a set of surveys sponsored by the Bureau of Labor Statistics of the U.S. Department of Labor (Bureau of Labor Statistics, U.S. Department of Labor, 2007c). These surveys have gathered information at multiple points in time on the labor market experiences of diverse groups of men and women. Eight NLS cohorts are studied: older men (ages 45-55 as of 1966), mature women (ages 30-44 as of 1967), young men (ages 14-24 as of 1966), young women (ages 14-24 as of 1967), NLSY79 (ages 14-21 as of 1978), NLSY79 Children (from Birth-14), NLSY79 Young Adults (age 15 and older), and NLSY97 (ages 12-16 as of 1996). NLSY79, NLSY79 Children, NLSY79 Young Adults, and NLSY97 continue; older men, mature women, young men, and young women cohorts no longer are studied.

Each of the NLS samples consists of several thousand individuals, some of whom have been surveyed over several decades. The earliest NLS interviews began in 1966 under the original sponsorship of the Office of Manpower, Automation, and Training (now the Employment and Training Administration). The NLS cohorts were formed in an effort to understand specific issues pertaining to the U.S. labor market, such as retirement, the return of housewives to the labor force, and the school-to-work transition. Since that time, however, the surveys have been expanded to provide useful information on an extremely broad range of topics. The NLSY97 cohort was studied in this research.

Collected in the NLSY97 is information about the circumstances that influence or are influenced by the labor market behaviors of United States youth ages 12-16 as of December



31, 1996. Documenting the transition from school to work, this survey is designed to be representative of the 1997 U.S. population born during between 1980 and 1984.

The NLSY97 survey documents the transition from school to work of 8,984 sample members. Two subsamples comprise the NLSY97 cohort: 6,748 respondents representative of people living in the United States in 1997 who were born during the years 1980-1984, and 2,236 respondents designed to over-sample black and Hispanic people living in the US during the same period as the cross-sectional sample. Many of the oldest youths (age 16 as of December 31, 1996) were still in school at the time of the first NLSY97 survey conducted in 1997, and the youngest respondents (age 12) had not yet entered the labor market. An NLSY97 survey is conducted annually. The most recent release of data from the NLSY97 included the ninth round of longitudinal micro-data collection, which contains data from 2005. Cumulatively through the ninth round of the NLSY97 data collection, the NLSY97 data set contains 127,158 variables that were cross-sectionally and longitudinally measured. Sample attrition over the history of NLSY97 is approximately 18% of original sample members; 7,338 cases remain in the ninth round of the NLSY97.

Information analyzed for this research is mainly from NLSY97 survey data for 2005. A case is deleted from the analyses presented in this report if any dependent or independent variable for the case contains a missing value. The consequence of this casewise deletion process is that fewer than the full 7,338 cases available from 2005 are analyzed for this research. The exact number of NLSY97 cases analyzed is reported in tables constructed to display the results of this research.

Variables

Specified in Table 1 are dependent and independent variables examined in this research that were constructed from NLSY97 data. In this study, the associations of dependent variables indicating high school degree status and hourly compensation were examined as functions of ascriptive and social characteristics, geographic location, and income status.

Analysis

Earned HS Diploma or Greater ν No Degree Earned/GED is modeled as a binary logistic function of the following independent variables: Male ν Female; Urban ν Rural; Hispanic/Mixed ν Non-black/Non-Hispanic; Black ν Non-black/Non-Hispanic; NC ν NE; S ν NE; W ν NE; Not in Poverty ν in Poverty; and Ever Married ν Never Married. Transformations of point and interval estimates from SPSS-derived logistic regressions (log odds statements) to conditional probability statements were calculated using spreadsheet processes developed by the authors.

Hourly Compensation is modeled through ordinary least squares regression with the following independent variables: Earned HS Diploma or Greater ν No Degree Earned/GED; Male ν Female; Urban ν Rural; Hispanic/Mixed ν Non-black/Non-Hispanic; Black ν Non-black/Non-Hispanic; NC ν NE; S ν NE; W ν NE; Not in Poverty ν in Poverty; and Ever Married ν Never Married. The probability of Type I error (α) selected for concluding statistical



significance of equations and regression coefficients is 0.05, and 95% confidence intervals (CI) were calculated around point estimates of parameters estimated in equations. Regression analyses were performed with Version 15 of the Statistical Package for the Social Sciences (SPSS, Inc., 2007). Transformations of point and interval estimates from SPSS–derived logistic regressions (log odds statements) to conditional probability statements were calculated using spreadsheet processes developed by the authors.

Table 1. Independent and Dependent Variables Selected from NLSY97

Variable for Analysis	Description	NLSY97 Variable Reference Number Used to Create Variable for Analysis*	Coding of NLSY97 Reference Variable Applied to Create Variable for Analysis
<i>Independent</i>			
Male v Female	Comparison of males versus females	R0536300	"1" if male; "0" if female.
Urban v rural	Residence in an urban or a rural area at the time of the 2005 NLSY97 survey.	R5436300	"1" if urban; "0" if rural.
Hispanic/Mixed v Non-black/Non-Hispanic	Race/ethnicity	R1482600	"1" if Hispanic or mixed race; "0" otherwise. Reference category is Non-black, non-Hispanic.
Black v Non-black/Non-Hispanic	Race/ethnicity	R1482600	"1" if black; "0" otherwise. Reference category is Non-black, non-Hispanic.
NC v NE	Census region of residence at time of 2005 NLSY97 interview	S5405600	"1" if resides in north central U.S. (IL, IN, IA, KS, MI, MN, MO, NE, OH, ND, SD, WI); "0" otherwise. Reference category is northeast U.S. (CT, ME, MA, NH, NJ, NY, PA, RI, VT).
S v NE	Census region of residence at time of 2005 NLSY97 interview	S5405600	"1" if resides in southern U.S. (AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV); "0" otherwise. Reference category is northeast U.S.
W v NE	Census region of residence at time of 2005 NLSY97 interview	S5405600	"1" if resides in western U.S. (AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY); "0" otherwise. Reference category is northeast U.S.
Not in Poverty v in Poverty	Ratio of 2004 household income to poverty level in 2004	S5412900	"1" if ratio ≤ 0.99 ; "0" if $> .99$.
Ever Married v Never Married	Legal marital status at time of 2005 NLSY97 interview	S6348300	"1" if married, separated, divorced, or widowed; "0" if never married.



Variable for Analysis	Description	NLSY97 Variable Reference Number Used to Create Variable for Analysis*	Coding of NLSY97 Reference Variable Applied to Create Variable for Analysis
<i>Dependent</i>			
Earned HS Diploma or Greater v No Degree Earned/ GED	Highest degree received by the time of 2005 NLSY97 interview	Z9000300	"1" if high school diploma (regular 12 year program), associate/junior college degree, bachelor's degree, master's degree, PhD degree, or professional degree; "0" if none or GED.
Hourly Compensation	Hourly monetary compensation (wage, salary, overtime, tips, bonuses and other pay for performance) for primary job at time of 2005 NLSY97 interview that lasted ≥13 weeks.	S5420100	Cents/hour in 2005 dollars. Extreme values <100 or >2000 were treated as missing data.

*Each NLSY97 variable is designated in NLSY97 documentation (Center for Human Resource Research, The Ohio State University, 2007) by a unique reference number that links instructions to interviewers and questionnaire content to variable definition, editing, and coding details.

Findings

Likelihood of Earning a High School Diploma by 2005

Provided in Table 2 are estimates of the likelihood of earning at least a high school diploma by 2005. Seventy-nine percent of the 5,905 NLSY97 sample members studied had earned at least a high school diploma by 2005. On one hand, being male, Hispanic/mixed race, black, and ever being married are negatively related to earning a diploma. On the other hand, youth living in households with income above the poverty line are more likely than those living in poverty to earn a diploma as are youth living in the western U.S. rather than the northeast. Living in the south or north central region of the U.S. rather than the northeast as well as residing in an urban rather than rural area are unrelated to the probability of earning at least a high school diploma by 2005. By itself, the likelihood that a youth living in a household above the poverty line earning a diploma is between 2.28 and 2.97 times greater than for a youth living in poverty. Said in another way, probability of earning a diploma is 16% greater for a youth living in a household above the poverty line than a youth living in poverty.



Table 2. Logistic regression of the relationship between earning at least high school diploma by 2005 and gender, race, 2005 geographic location, 2005 urban/rural residence, 2004 household income status, and 2005 marital status in the civilian noninstitutional population of the United States born in 1980 through 1984 (n = 5,905)

Variable	Mean (SD)	Point Estimate of β (Standard Error β) Variable for Analysis*	Wald Statistic	Odds of high school graduation, given unit change in independent variable (or e^β) (95% CI)	Probability of high school graduation, given unit change in independent variable** (95% CI)
<i>Independent</i>					
Male v Female	0.50 (0.50)	-0.45 (0.07)	45.16*	0.64 (0.56; 0.73)	-0.08 (-0.10; -0.05)
Urban v rural	0.79 (0.40)	0.16 (0.08)	3.48	Not Sig	Not Sig
Hispanic/Mixed v Non-black/Non-Hispanic	0.21 (0.41)	-0.61 (0.09)	47.77*	0.54 (0.46; 0.65)	-0.10 (-0.13; -0.07)
Black v Non-black/Non-Hispanic	0.26 (0.44)	-0.46 (0.080)	31.48*	0.63 (0.54; 0.74)	-0.08 (-0.10; -0.05)
NC v NE	0.22 (0.41)	-0.07 (0.12)	0.31	Not Sig	Not Sig
S v NE	0.40 (0.49)	-0.16 (0.11)	2.24	Not Sig	Not Sig
W v NE	0.24 (0.42)	0.27 (0.12)	4.81*	1.30 (1.03; 1.65)	0.04 (0.08; 0.01)
Not in Poverty v in Poverty	0.57 (0.50)	0.96 (0.07)	199.50*	2.60 (2.28; 2.97)	0.16 (0.14; 0.18)
Ever Married v Never Married	.21 (.41)	-0.41 (0.08)	25.11*	0.67 (0.57; 0.78)	-0.07 (-0.09; -0.04)
Intercept		1.34 (0.13)	107.76*		
<i>Dependent</i>					
Earned HS Diploma or Greater v No Degree Earned/GED	0.79 (0.40)				

Model Fit Statistics: -2 log likelihood = 5713.44
df = 9
p < .001

Source: Logistic regression (SPSS, Inc., 2007) of NLSY97 data (Bureau of Labor Statistics, 2007a).

*Statistically significant at $\alpha = .05$

**First partial derivative of the logistic function evaluated at the mean of the dependent variable.

Hourly Compensation in 2005

Displayed in Table 3 are estimates of the correlates and consequences of earning at least a high school diploma by 2005 on 2005 hourly compensation of 4,146 NLSY97 sample members employed at the time of the NLSY97 interview in 2005. Average compensation due to wages, salary, overtime, tips, bonuses and other pay for performance in 2005 was \$10.56 per hour.



Males received higher hourly compensation than females as did youth residing in urban rather than rural areas, youth ever married, and youth living in households above the poverty line. Hispanic/mixed race and black youth received lower hourly compensation than non-black, non-Hispanic youth as did youth living the north central and southern regions of the U.S. rather than the northeast. Compensation of youth living in the western and northeast regions of the U.S. did not differ.

Table 3. Ordinary least squares regression of the relationship between hourly compensation in 2005 cents/hour and earning at least high school diploma by 2005, gender, race, 2005 geographic location, 2005 urban/rural residence, 2004 household income status, and 2005 marital status in the employed civilian noninstitutional population of the United States born in 1980 through 1984 (n = 4,146)

Variable	M (SD)	Point Estimate of β (Standard Error β)	95% CI of β
<i>Independent</i>			
Male v Female	0.47 (0.50)	86.92* (10.75)	65.84; 107.99
Urban v rural	0.81 (0.40)	64.19* (13.74)	37.26; 91.11
Hispanic/Mixed v Non-black/Non-Hispanic	0.22 (0.41)	- 38.29* (14.49)	- 66.68; - 9.89
Black v Non-black/Non-Hispanic	0.26 (0.44)	- 64.56* (13.66)	- 91.34; - 37.78
NC v NE	0.22 (0.42)	- 53.42* (17.93)	- 88.58; - 18.25
S v NE	0.40 (0.49)	- 60.93* (16.65)	- 93.57; - 28.29
W v NE	0.23 (0.42)	- 27.52 (18.39)	- 8.53; 63.58
Not in Poverty v in Poverty	0.56 (0.50)	136.08* (10.98)	114.56; 157.60
Ever Married v Never Married	. 20 (.40)	74.66* (13.76)	47.68; 101.65
Earned HS Diploma or Greater v No Degree Earned/GED	.80 (.40)	94.53* (13.62)	67.82; 121.25
Constant		851.49* (23.20)	806.00; 896.98
<i>Dependent</i>			
Hourly Compensation	1055.95 (359.09)		

Model Fit Statistics: $R^2 = 0.105$
 $F = 48.49$
 $df = 10, 4135$
 $p < .001$

Source: Ordinary least squares regression (SPSS, Inc., 2007) of NLSY97 data (Bureau of Labor Statistics, 2007a). An alternate model specification with the natural log of hourly compensation as the dependent variable yielded quite similar model fit and substantive results to findings presented in this table.

*Statistically significant at $\alpha = .05$



The focus of this study is on the impact of failure to earn at least a high school on hourly compensation. Eighty percent of NLSY97 sample members who reported compensation in 2005 had earned at least a high school diploma by 2005. Based upon regression results documented in Table 3, the compensation premium for earning at least a diploma was 95¢ per hour, $\pm 27¢$ per hour. Said in another way, we are 95% confident that, all other variables in the regression equation held constant, youth acquiring at least a high school diploma by 2005 received compensation between 68¢ and \$1.21 per hour higher than youth who did not earn diploma or received a GED certificate.

Conclusions from Analyses of NLSY97 Data

Perspectives

The point and interval estimates derived from this analysis of the NLSY97 data highlight the average employment and compensation impacts of failure to earn a high school diploma in the United States. Aggregate losses of employment and earnings opportunities in central Pennsylvania are calculated by multiplying the size of the population at risk for dropping out of secondary school by these point and interval estimates. However, because the number of dropouts in central Pennsylvania is uncertain, provided are several estimates of the aggregate impact of the failure to earn a high school diploma. One estimate is based on the number of dropouts in central Pennsylvania counted by the Pennsylvania Department of Education. Another estimate is based on U.S. Census Bureau figures.

Based on Pennsylvania Department of Education Dropout Reports

Pennsylvania Department of Education data indicate that there were 681 high school dropouts from central Pennsylvania secondary schools in the 2005–2006 school year. NLSY97 data indicate that 60.3% of youth with at least a high school diploma are employed. Under the assumption that this national rate of high school completion maps well to the employment–population ratio of central Pennsylvania youth, 411 of these dropouts would be employed. Extrapolating from the findings in Table 3, these 411 would have earned an aggregate \$390 per hour more if they had earned at least a high school diploma. If all were full–time (40 hours per week), full–year (50 weeks per year) workers, the aggregate compensation differential is \$780,900 per year. The Pennsylvania personal income tax rate is 3.07%, which means that \$23,974 in state tax revenue is foregone from full–time, full–year work.

Using the lower bound estimate of the impact of earning at least a high school diploma, the aggregate hourly compensation differential for these 411 employed dropouts could be as low as \$280 (\$560,000 in aggregate compensation and \$17,192 in aggregate state personal income tax revenues if all were full–time, full–year workers). Using the upper bound estimate of the impact of earning at least a high school diploma, the aggregate hourly compensation differential for these 411 employed dropouts could be as high as \$497 (\$992,620 in aggregate



compensation and \$30,535 in aggregate state personal income tax revenues if all were full-time, full-year workers).

Based Estimates of Educational Attainment of 18- to 24-Year Olds in Pennsylvania from Census

According to the staff of the Central Pennsylvania Workforce Development Corporation, the U.S. Census Bureau estimates that there are 11,245 persons in the nine-county central Pennsylvania region between the 18 and 24 years old who do not have a high school diploma. Again, NLSY97 data indicate that 60.3% of youth with at least a high school diploma are employed. Under the assumption that this national rate of high school completion maps well to the employment-population ratio of central Pennsylvania youth described by Census data, 6,781 of these dropouts would be employed. Extrapolating from the findings in Table 3, these 6,781 would have earned an aggregate \$6,442 per hour more if they had earned at least a high school diploma. If all were full-time (40 hours per week), full-year (50 weeks per year) workers, the aggregate compensation differential is \$12,883,900 per year. The Pennsylvania personal income tax rate is 3.07%, which means that \$395,536 in state tax revenue is foregone from full-time, full-year work.

Using the lower bound estimate of the impact of earning at least a high school diploma, the aggregate hourly compensation differential for these 6,781 employed dropouts could be as low as \$4,611 (\$9,222,160 in aggregate compensation and \$283,120 in aggregate state personal income tax revenues if all were full-time, full-year workers). Using the upper bound estimate of the impact of earning at least a high school diploma, the aggregate hourly compensation differential for these 6,781 employed dropouts could be as high as \$8,205 (\$16,410,020 in aggregate compensation and \$503,788 in aggregate state personal income tax revenues if all were full-time, full-year workers).

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About This Report

Penn State Workforce Education & Development Initiative

Sponsor

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this grant. A report of findings from the CPWDC PAYT project is available as an Adobe PDF file at: <http://PAYT-CPWDC-Report.notlong.com>. The views expressed in this document are those of the authors and do not represent positions of the Pennsylvania Department of Labor and Industry or the CPWDC.

Mission

This report was prepared using the resources and expertise of the Penn State WED Initiative, which is an alliance between Penn State's College of Education and Penn State Outreach. The mission of the WED Initiative is to support the development of the workforce in Pennsylvania primarily through the application of Penn State resources to conduct economic and workforce analyses for employers, industry partnerships, nonprofit organizations, and government entities. For additional information about the WED Initiative, see <http://PennStateWED.notlong.com>.

In addition to technical research reports, the WED Initiative produces a variety of reports for public use, such as through its *Economic and Workforce Brief* product (see <http://PSUBrief.notlong.com>). The web site for the WED Initiative is available at <http://PennStateWED.notlong.com>, and a two-page summary of the Initiative is displayed in an Adobe PDF file posted at <http://PSU-WEDInitiative.notlong.com>. For additional information about the WED Initiative capabilities, see <http://WDICapabilities.notlong.com>. Legacy publications of the Initiative prior to 2005 are available at <http://WEDActivities.notlong.com>.

Integrity & Independence in the Conduct & Reporting of Research

The Penn State WED Initiative often conducts research analysis about topics and issues that, at times, are the focus of vigorous debate and public attention and that frequently are associated with diverse stakeholders who represent divergent opinions. The Initiative adds value to this debate, attention, and discussion by conducting and reporting research and analysis decisions affecting economic and workforce development using the most objective approaches possible. The research and analysis of the WED Initiative are pursued independent of the commercial or political interests of any actual or potential sponsor of WED Initiative work.

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