Scientific Research Publishing

Journal of Data Analysis and Information Processing, 2024, 12, 289-303
https://www.scirp.org/journal/jdaip
ISSN Online: 2327-7203
ISSN Print: 2327-7211

Hourly Wage and the Likelihood of Stealing an Item

Benjamin Borketey[1], David Borketey[2]

[1]Department of Economics, The University of Akron, Akron, Ohio, USA
[2]Department of Mathematics, The University of Cape Coast, Cape Coast, Ghana
Email: bbortey9@gmail.com, Davidborketey10@gmail.com

How to cite this paper: Borketey, B. and Borketey, D. (2024) Hourly Wage and the Likelihood of Stealing an Item. *Journal of Data Analysis and Information Processing*, **12**, 289-303.
https://doi.org/10.4236/jdaip.2024.122016

Received: March 29, 2024
Accepted: May 26, 2024
Published: May 29, 2024

Abstract

Researchers have extensively explored the impact of wages on individuals' decisions to engage in property crimes. While most of these studies in the past have relied on macro-level data to investigate the relationship between crime rates and hourly wages, this paper takes a novel approach by utilizing micro-level data to examine the influence of hourly wages on the likelihood of stealing an item valued at least $50. The results obtained from the estimations reveal that an increase in hourly wage leads to a decrease in the probability of theft, all other factors being held constant. Further estimation by gender revealed that hourly wages given to both male and female have no bearing on the decision to steal. Additionally, the analysis of the differences in theft probabilities across gender and race demonstrates that males consistently exhibit a higher likelihood of engaging in theft when compared to females across various racial groups.

Keywords

Crime, Hourly Wage, Male, Female, Logistic Regression

1. Introduction

The wage provided to an employee serves as a motivating factor in their decision to work for an organization. Employee wages vary across different departments within an organization. Organizations establish several criteria for determining who deserves what and how much to compensate employees, in addition to adhering to the minimum wage regulations set by governments. Wages reflect job performance, measured by factors such as hours worked and educational qualifications, among other variables. Firms tend to offer higher wages to educated and more skilled workers than to those with less education and fewer skills.

Furthermore, employees with extensive experience typically receive higher earnings compared to their less-experienced counterparts.

The impact of lower wages on crime has been a subject of debate among researchers and experts in the field. Researchers have sought to elucidate how wages influence an individual's propensity to commit property crimes. For instance, [1] argued that lower wages might compel workers to seek alternative sources of income, often involving engagement in illegal activities, as outlined in [2] crime model. One might wonder whether the minimum wage levels established by federal and state governments adequately address the needs and desires of society, given the persistent levels of robbery and property-related crimes. While unemployment and poverty are commonly associated with criminal activities, it is worth considering whether these criminal behaviors can also be exhibited by individuals from affluent backgrounds and the working class.

2. Motivation for Research

Our motivation to undertake this research stems from the fact that though Federal and state governments have set up mandatory minimum wages and other forms of benefits to help better living conditions, there is also the tendency for people to engage in illegal activities for income. We desire to investigate if the disparities in hourly wages could explain the likelihood of a person committing a property crime (stealing an item).

3. Research Question

The general question for this research is to determine whether hourly wages influence the probability of committing property crime.

Specific Questions

1) Does hourly wage serve as a reason for stealing an item worth at least $50?

2) Is the hourly wage given to both males and females a contributing factor to their decision to steal an item worth at least $50?

3) What are the variations in the probabilities of males and females, earning an hourly wage of $10, and stealing an item worth at least $50 across different racial backgrounds?

4. Literature Review

Numerous researchers have examined the relationship between wages and crime by analyzing the tradeoff between earnings from illegal activities and wages earned from legitimate economic activities. The findings from these research studies, conducted in various countries, states, and municipalities, shed light on the connection between wages and crime.

4.1. Theoretical Review

The Time Allocation model, as presented in [3], examines the role of wages and

opportunity costs in determining criminal activities. This theory treats the decision to engage in illegal activities (crime) and economic activities as substitutes, as each consumes time and generates income. The model argues that the main factor influencing one's decision to commit a crime is the expected benefit, which is the monetary utility to be gained. The cost associated with a crime depends on the likelihood of being apprehended and the consequences (incarceration) that follow. The model posits that individuals with low-paying jobs are more inclined to commit crimes than those with high-paying jobs because the latter face a greater opportunity cost if caught. Essentially, the model views crime as an economic activity in which individuals respond positively to the benefits and negatively to the costs associated with their choices.

The Human Capital model, developed by [4], contends that the opportunity cost of engaging in crime involves forfeiting work and the potential for incarceration if apprehended. According to this model, individuals with high abilities, measured by intelligence and education, are less likely to commit unskilled crimes because they have invested more in human capital and can earn higher wages. In an analysis of how education and employment affect crime, [5] utilized the Human Capital model to explain that investing in human capital factors increases earnings while reducing criminal activity. He argued that the opportunity cost associated with crime rises when an individual earns a higher income.

4.2. Empirical Review

In the study titled "The Minimum Wage and Crime," which utilizes micro-level data from the national longitudinal survey of youth NLSY 1997 cohort, [6] aim to determine if changes in state and federal minimum wage rates affect crime. The study reveals that unskilled workers who are adversely affected by wage increases are more likely to lose employment, become idle, and ultimately engage in criminal activities.

They estimate that unskilled workers have a 1.3 percent chance of becoming idle when negatively affected by changes in the minimum wage, with a 7.6 percent difficulty in attaining full employment and a 1.4 percent increase in the probability of committing a crime. They also employ linear probability and logistic regression models in analyzing self-reported crime and find that youths aged 14 to 16 exhibit a higher crime rate than those aged 17 to 19. Additionally, they estimate that monetary crime is more prevalent among young individuals than adults, attributing the difference in monetary crime between the two groups to the rate of substitution among workers within these age brackets in the low-skilled labor market.

Using aggregated police force area data from England and Wales between 1975 and 1996 to investigate if the simple choice model of criminal behavior aligns with the UK case since 1970, [7] find that all labor market condition variables significantly and substantially impact the crime rate. Specifically, they discover that wage increases reduce crime, while increases in benefits from illegal activities lead to increased crime.

In their study examining the relationship between crime and labor market conditions [8] initially employ panel data to explore how changes in labor market opportunities can explain crime changes among those most likely to engage in criminal activities in the United States from 1979 to 1997. The study reveals a positive relationship between wages of non-college-educated men and crime, with elasticity ranging from 0.940 for larceny to 0.023 for auto theft. The paper further indicates that a decrease in wages of highly educated men contributes to a 19 percent increase in violent crime. They also estimate that a 3 percent increase in the unemployment rate results in a 10 percent increase in the crime rate. The second part of their research uses micro-level data and controls for the likelihood effects of individual characteristics on criminal behavior. Through this approach, they estimate that a rise in property crime is associated with a decrease in wages and an increase in the unemployment rate among less-educated individuals.

In the research entitled "Identifying the Effect of Unemployment on Crime," [9] reveal that unemployment has a strong effect on burglary and a weaker effect on auto theft rates. Their estimates also show a positive and significant effect on property crime and violent crime rates for youth aged 15 to 17 years. Furthermore, they find a strong positive effect on violent crime rates for those living in metropolitan areas.

Analyzing the impact of the male civilian unemployment rate on crime from the first quarter of 1970 through to the fourth quarter of 1983, [10] show that males aged between sixteen and seventeen years accounted for 8.8 percent and 14.1 percent of violent crimes and property crimes in 1984, respectively. Those aged between eighteen and nineteen years also accounted for 10.2 percent and 12.3 percent of violent and property crimes, respectively. Males aged 25 years were the primary perpetrators of crime, accounting for 48.7 percent and 32.5 percent of violent and property crimes, respectively. They argue that severe economic effects and mental stress associated with lower wages and unemployment explain the crime rates for males aged 25 years in 1984.

A study on macroeconomic and social-control policy influences on crime rate changes from 1948-1985 in [11] finds mixed evidence for the relationship between economic distress (unemployment and inflation) and crime rates. The research finding revealed that economic conditions do influence crime, but the impact varies across different types of crime. The research indicates that social control policies, both deterrent (like incarceration rates) and placative (like public relief), have an effect on crime rates. The findings further support the idea that government policies can influence crime dynamics. The model used in the study gains strength when explaining less violent offenses like burglary compared to more violent crimes like homicide. The study controls for age structure and criminal opportunity, finding that these factors are significantly related to crime rates, particularly for robbery and burglary, but less so for homicide.

This research is unique in that it employs logistic regression to investigate whether hourly wages influence the decision to steal an item worth at least $50.

If hourly wage is found to have a significant influence on the probability of a person stealing an item worth at least $50, then the influence of hourly wage given to both male and female on the probability of stealing will be established. Additionally, the research will control new individual characteristic variables, such as illegal drug use, to distinguish itself from other studies.

5. Literature Review

The purpose of this project is to determine whether hourly wages influence the likelihood of an individual stealing an item worth at least $50.

Hypothesis

We are testing whether hourly wages can explain the property crime rate.

Ho: Hourly wage does not influence the probability of stealing an item worth at least $50.

H1: Hourly wages influence the probability of stealing an item worth at least $50.

Ho: Hourly wage given to males and females does not influence the probability of them stealing an item worth at least $50.

H1: Hourly wage given to males and females influences the probability of them stealing an item worth at least $50.

Ho: There are no differences in the probabilities of males and females who earn an hourly wage of $10 stealing an item worth $50 across races.

H1: There are differences in the probabilities of males and females who earn an hourly wage of $10 stealing an item worth $50 across races.

6. Description of Data and Methodology

The data used in the analysis consists of micro-level data on criminal activities from the national longitudinal surveys of youth spanning from 1997 to 2013, specifically focusing on the NLSY97 cohort. Using micro-level data for crime prediction offers advantages such as providing detailed information about individuals and enabling the identification of risk factors associated with criminal behavior. This granularity allows for the development of targeted interventions and early warning systems to prevent crime before it occurs. Additionally, micro-level data can be used to evaluate the effectiveness of crime prevention programs and policies over time. Though concerns exist regarding privacy, ethics, and potential bias in the data, which may affect the accuracy and fairness of crime prediction models. Data quality issues, such as missing values and measurement errors, also pose challenges to the analysis of micro-level data for crime prediction purposes. Despite these challenges, leveraging micro-level data remains valuable for understanding crime patterns and informing evidence-based strategies for crime prevention and law enforcement.

To that end, we gathered eighteen variables from 8984 observations, utilizing data collected during the 2002 survey. The NLSY97 covers a wide range of sub-

ject areas, including demographics, family background, education, military experiences, job characteristics, labor market status, marital and family characteristics, income, assets, health, nutrition, fertility, parenting, attitudes, behaviors. In addition, NLSY97 data capture information at multiple points in time, allowing researchers to establish a clearer temporal order of variables. This longitudinal aspect enables the study of transition from school to the labor market and into adulthood. By following the same individual over time, NLSY97 allows for better control for individual heterogeneity. Researchers can explore how various factors influence one's decision to commit steal an item.

The binary dependent variable is based on the response to a property-related crime question, specifically, whether the respondent has stolen an item worth at least $50 from a store, person, house, or property, including a car, since the last interview. The primary independent variable of interest is the hourly wage of individual respondents from their economic activities. In his research entitled "Crime and the Labor Market," [12] asserted that individuals with high-paying jobs are less likely to commit property-related crimes than those with low-paying jobs or those who are unemployed.

Following the work of several researchers, we include labor market conditions variables and some human capital variables in the analysis to determine their impact on the dependent variable, all else being equal. We also control the educational level of respondents to assess its influences on the probability of committing a crime. In [2] individuals with abilities, measured by intelligence and education, commit fewer unskilled crimes because they have made more significant human capital investments and can earn higher wages.

We also control for past records of incarceration of the respondents to examine its influence on their individual probability of stealing an item. Research conducted by [1] discovered that individuals with a history of incarceration are more likely to be unemployed and, consequently, tend to commit crimes. On the other hand, those without any criminal records are more likely to commit crimes as their expected income from criminal activities increases. The influence of drug use, specifically cocaine or hard drugs, on crime, using respondents' answers regarding the use of any drug or substance not prescribed by a doctor to achieve a state of intoxication or altered consciousness was also controlled.

Demographic variables, including sex, age, family background, and race, will be controlled for in the analysis. The gender of the respondent will help determine if gender influences the likelihood of an individual committing a property crime. We use the age of the respondent to test whether the likelihood of committing a crime varies with the respondent's age. The race variable aids in explaining the influence of ethnicity on the likelihood of stealing an item worth at least $50. Additionally, the income of the respondent's family is included to assess how the respondent's background affects the likelihood of stealing an item. Finally, residential location is controlled as a measure of opportunities to commit a crime, as living in urban areas exposes individuals to more properties and items than in

rural areas, thereby increasing the likelihood of committing a crime.

We also control for respondents' access to guns, as possession of firearms could serve as a source of intimidation, potentially influencing an individual's decision to engage in criminal activities.

6.1. Model Specification

We employ a logistic regression model specification to examine how the explanatory variables explain the probability (P) of an individual stealing an item worth at least \$50 (binary response variable). Following the work of [13], the logistic model is specified as below:

$$\begin{aligned}\text{Logit}(\text{steal}) &= \ln\left[\frac{P}{1-P}\right] \\ &= B_0 + B_1 * \text{wage} + B_2 * \text{highest grade} + B_3 * \text{incarcerated} \\ &\quad + B_4 * \text{male} + B_5 * \text{Used drugs} + \cdots + Z_i\end{aligned} \tag{1}$$

The model specification also recognizes the potential interactions among the explanatory variables in influencing the likelihood of an individual stealing. Individuals with higher levels of education may earn higher hourly wages, thus the interaction between the highest grade obtained and hourly wage (wage) influences crime. Similarly, there is an interaction between other variables, such as male and highest grade obtained, where educated males have a lower probability of committing a crime compared to uneducated males.

Thus, modifying the above model to a complete one as follows.

$$\begin{aligned}\text{Logits}(\text{steal}) &= \ln\left[\frac{P}{1-P}\right] \\ &= B_0 + B_1 * \text{wage} + B_2 * \text{highest\_grade} + B_3 * \text{incarcerated} \\ &\quad + B_4 * \text{male} + \cdots + B_{12} * (\text{male}) * (\text{highest grade}) \\ &\quad + B_{13} * (\text{wage}) * (\text{edu}) + \cdots + Z_i\end{aligned} \tag{2}$$

6.2. Measurement of Variables

We use a binary response to a question on stealing an item worth at least \$50 as the dependent variable, and hourly pay rates (wage) as the main independent variable for the research. Responses from individuals who reported an hourly wage of zero have been removed from the sample. The motivation for this research is to determine whether individuals who are employed and earn hourly wages can also commit crimes. Using the minimum wage rate during the year of the survey (2002), we set the minimum hourly wage for this research at \$5 and then took the natural logarithm of it. We use the highest grade completed prior to the start of the 2002/2003 academic school year to examine the impact of obtaining a higher level of education on the probability of committing a crime.

A proxy variable for the past record of incarceration of the respondent for committing a property crime has been employed in the analysis. This variable represents the monthly incarcerated status calculated in 2002, starting from the

month the respondent turned twelve. Incarceration records and gender variables are readily available in the dataset. A dummy variable was created, with "1" indicating if the person has been incarcerated before and "0" if not. Another dummy variable was coded for gender, with "1" representing males and "0" representing females. Dummies were also generated for drug usage and carrying guns, with both variables taking on "1" if the respondent reported using drugs or carrying guns since the last interview, and "0" if otherwise.

The age of the respondent was calculated by subtracting the year of birth from the year (2002) the survey was conducted. The race variable is categorical, with a mixed-race category for individuals who are neither Black nor Hispanic serving as the reference category. We utilized the natural logarithm of the gross income of the respondent's family to assess the influence of family background on the probability of stealing an item. A dummy variable was created for the residential location of individuals, with "1" indicating that the respondent lived in urban areas and "0" if they lived in rural areas. We created another dummy variable for drug usage, with "1" assigned to drug users and "0" if otherwise. Table 1 gives the descriptives statistic of the variables by Gender.

Table 1. Summary statistics of selected variables by gender.

Male	No. of Observations	Variable	Mean	Min	Max
1	2950	Steal	0.02	0.00	1.00
		Ln(hourly wage)	6.29	2.00	12.00
		Used Drugs	0.07	0.000	1.00
		Highest Grade	11.34	6.00	95.00
		Age	19.92	18.00	22.00
		Carried Gun	0.07	0.00	1.00
0	2933	Steal	0.01	0.00	1.00
		Ln(hourly wage)	6.19	2.00	12.00
		Used Drugs	0.06	0.000	1.00
		Highest Grade	11.48	6.00	12.00
		Age	19.94	18.00	22.00
		Carried Gun	0.01	0.00	1.00

Note: male = 1 imply males, male = 0 imply female. A Total of 8984 observations were obtained. 5883 observations were used in analysis.

We conducted a series of regressions to determine the best model, utilizing the core variables along with some controlled variables. Table 2 presents the regression results from various models, including the coefficients of the log odds and their associated statistically significant level.

From the table above, the primary independent variable, hourly wage, exhibit significance and maintains the expected signs across the first four models. Specifically, an increase in hourly wage reduces the probability of an individual stealing an item worth at least $50, all else being equal.

Table 2. Log odds of steal (Standard error in parentheses).

Variables	(1)	(2)	(3)	(4)	(5)
Intercept	2.25 (1.90)	2.25 (1.86)	2.55 (2.01)	3.24 (2.32)	−6.56 (6.51)
Ln Hourly Wage	−0.25* (0.15)	−0.25* (0.15)	−0.25* (0.15)	−0.25* (0.15)	1.21 (1.00)
Highest Grade	−0.17** (0.08)	−0.16** (0.09)	−0.17** (0.08)	−0.24** (0.15)	0.67 (0.59)
Male[1]	0.63*** (0.24)	0.63*** (0.24)	0.63*** (0.24)	0.28 (1.92)	0.64*** (0.24)
Race (1)[2]	0.45* (0.27)	0.43 (0.28)	0.45* (0.27)	0.45* (0.27)	0.46* (0.27)
Race (2)	0.77*** (0.26)	0.76*** (0.27)	0.77*** (0.26)	0.78*** (0.26)	0.79*** (0.26)
Race (3)	−12.93 (697.90)	−12.94 (700.50)	−12.93 (699.10)	−12.94 (695.70)	−12.91 (700.10)
Used Drugs[3]	1.78*** (0.25)	1.78*** (0.25)	1.78*** (0.25)	1.78*** (0.25)	1.76*** (0.25)
Incarcerated[4]	1.05*** (0.37)	1.05*** (0.37)	1.05*** (0.37)	1.06*** (0.37)	1.05*** (0.37)
Age	−0.21*** (0.08)	−0.21*** (0.08)	−0.21*** (0.08)	−0.21*** (0.08)	−0.21*** (0.08)
Carried Gun[5]	1.61*** (0.27)	1.61*** (0.27)	1.61*** (0.27)	1.60*** (0.27)	1.60*** (0.27)
Residence[6]	−0.09 (0.26)	−0.08 (0.26)	−0.09 (0.26)	−0.09 (0.26)	−0.09 (0.26)
Ability		(0.00)			
Ln Family Income			−0.00 (0.09)		
Male Highest				0.09 (0.17)	
Wage Edu					−0.14 (0.09)
N	**5883**	**5883**	**5883**	**5883**	**5883**
Likelihood Ratio	**135.96**	**136.00**	**135.97**	**136.24**	**137.91**
Wald	**149.82**	**149.76**	**149.62**	**149.25**	**150.49**

[1]Female was used as reference category for male; [2]Race (1) is for black, Race (2) is for Hispanics, Race (3) is for mixed race who are non-Hispanics, Race (4), reference race is for non-blacks and non-Hispanics mixed race; [3]Used Drugs for those who use drugs verses those who uses no drugs; [4]Incarcerated is for those who have incarcerated before versed the non-incarcerated; [5]Carried gun is for access to gun verses non access to gun; [6]Residence is for those who lived in urban areas verses rural areas. Note: All regressions estimated using SAS Logistic producer, ***significant at the 0.01 level, **significant at the 0.05 level *Significant at the 0.10 level.

While the main independent variable, hourly wage, shows statistical significance with the expected sign in the four models, some control variables, such as the highest grade, are not statistically significant. Considering the significance level of the main independent variable and the relevance of the sign of the log odds for certain controlled variables, the first model is chosen.

7. Interpretation of Result from Selected Model (1)

The negative sign of the log odds of hourly wages indicates that an increase in hourly wage reduces the probability of stealing an item worth at least $50, all else being equal. Workers have a lower probability of committing property (stealing) crimes following a rise in hourly wage. Given the negative relationship between hourly wage and the probability of stealing, it is possible that a reduction in hourly wage or a lower hourly wage level could compel the working class to seek other sources of income through involvement in illegal activities. As confirmed in [1].

The dummy variable "male" was statistically significant with the expected sign in the model. The positive sign of the male log odds shows that males have a greater probability of stealing than females, all else being equal. Acquiring higher education, measured by the highest grade attained, reduces the probability of stealing an item, all else being equal. This confirms results from various researchers that investment in human capital through education reduces the likelihood of engaging in illegal activities. Additionally, the signs and significant levels associated with the log odds of carrying a gun and being incarcerated reveal that individuals who have been incarcerated before, as well as those who have access to guns (carried gun), have a greater probability of stealing than their counterparts, all else being equal. This result confirms the fact that incarceration reduces the chances of being employed and thus increases the likelihood of a person engaging in illegal activities as a source of income.

The influence of drugs on the probability of stealing an item was significant and had the expected sign. This means that individuals who use drugs have a greater probability of stealing than those who do not use drugs, holding other factors constant. The "residence" variable, which measures the opportunity to commit a crime, shows that the probability of committing a property crime (stealing) is not influenced by the residential location of the respondent when all other variables are held constant.

The significant levels and signs of the "race (1)" and "race (2)" variables in the selected model show that Blacks and Hispanics have a greater probability of stealing than those who are of mixed race but neither Black nor Hispanic (the reference category). The probability of individuals stealing an item worth at least $50 reduces as individuals advance in age, holding other factors constant.

Separate regression equations were revealed for males and females after conducting the Chow test on the selected model. The test results from **Table 3** indicate a structural break in the log odds of stealing for males and females at the 2933rd observation, at a 5% alpha level.

Table 3. Structural change test.

Test	Break Point	Num DF	Den DF	F Value	Pr > F
Chow	2933	10	5863	2.03	0.0264

Interpretation of Results by Gender

Results from the splits regression equation by gender in Table 4 indicate that the hourly wage given to both females and males does not influence their decision to steal an item worth at least $50. The influence of the hourly wage on the probability of stealing is not significant in both equations.

Table 4. Log odds of steal from male and female regression (Standard error in parentheses).

Variable	Male Model	
	(0)[1]	(1)
Intercept	−1.49 (3.64)	4.43 (2.19)
Ln Hourly Wage	−0.22 (0.30)	−0.27 (0.17)
Highest Grade	−0.17 (0.16)	−0.15*** (0.09)
Race (1)	0.25 (0.57)	0.57* (0.31)
Race (2)	1.08** (0.49)	0.71** (0.32)
Race(3)	−12.71 (995.20)	−12.85 (883.40)
Used Drugs	2.28*** (0.45)	1.55*** (0.30)
Incarcerated	2.55*** (0.74)	0.83* (0.43)
Age	2.55*** (0.74)	0.83* (0.43)
Carried Gun	2.26*** (0.68)	1.49*** (0.29)
Residence	−0.38 (0.51)	0.07 (0.30)
N	**2933**	**2950**
Likelihood Ratio	**54.565**	**74.887**
Wald	**66.501**	**78.955**

[1]Female = 0 Male = 1. Note: All regressions estimated with OLS using SAS Logistic producer, ***significant at the 0.01 level, **significant at the 0.05 level, *Significant at the 0.10 level.

These results suggest that the supposed wage gap between males and females, which most researchers have attributed to discrimination against women in the labor force, has no bearing on their decision to engage in illegal activities for income. The decision to participate in illegal activities for income does not stem from the hourly wage given to both genders during economic activities.

The estimate of the coefficient of the highest-grade variable for males reveals that as men acquire higher levels of education, the probability of them stealing an item worth at least $50 decreases, holding all other factors constant. Black men (race 2) have a greater probability of stealing than men who are neither black nor Hispanic but of mixed race. Both females and males who use drugs, possess guns, and have been incarcerated before have greater probabilities of stealing than their counterparts without those characteristics, all else being equal. The significant level and the negative sign of the age of men show that an increase in the age of men by a year reduces the probability of them stealing an item when all other variables are held constant.

Both males and females who are Hispanics have greater probabilities of stealing than males and females who are neither Black nor Hispanic but of mixed race, respectively as shown in Table 5.

The conclusion drawn from the separate equations reveals that the hourly wage given to both males and females does not influence their probabilities of stealing. Those with special characteristics like drug use, a record of incarceration, and access to guns tend to have tendencies to steal.

Table 5. Differences in estimated probabilities for male and female across race by gender.

Gender	Hourly Wage	Highest Grade	Race	Used Drugs	Incarcerated	Age	Carried Gun	Residence	Prob	Diff
M	10	12	B	1	1	22	1	1	0.2060	8.45%
F	10	12	B	1	1	22	1	1	0.1215	
M	10	12	H	1	1	22	1	1	0.5884	36.57%
F	10	12	H	1	1	22	1	1	0.2227	
M	10	12	MNH	1	1	22	1	1	0.6913	38.15%
F	10	12	MNH	1	1	22	1		0.3098	
M	10	12	MNHNB	1	1	22	1	1	0.7782	36.53%
F	10	12	MNHNB	1	1	22	1	1	0.4129	

8. Limitation and Future Work

Data on certain variables, such as income derived from illegal activities or hours dedicated to committing a crime, cannot be obtained from the NLSY 1997 cohort. Also, information on self-reported crimes where respondents admit to stealing an item could be misleading, as individuals tend to consistently deny sensitive questions during surveys. Future research should explore other source of data that includes income variable, hours dedicated to committing a crime,

other measurements of socioeconomics educational level and how they influence the probability of stealing an item.

Furthermore, the existing literature does not explicitly address whether there exists a threshold effect concerning the impact of hourly wage on theft. It remains unclear whether there is a point at which increasing wages no longer significantly reduces theft rates, or if the relationship between hourly wage and theft continues to exhibit diminishing returns beyond a certain threshold. Consequently, we propose conducting additional research to explore the presence of any threshold effects in the relationship between hourly wage and theft. This investigation could involve examining various wage levels and their corresponding effects on theft rates to identify potential breakpoints or saturation points in the relationship. By elucidating the presence or absence of threshold effects, future studies can provide valuable insights into the nuanced dynamics underlying the relationship between wages and theft, informing more targeted policy interventions and crime prevention strategies.

9. Policy Implications

Following research findings suggesting that higher hourly wages correlate with reduced stealing probabilities, policymakers might contemplate raising the national minimum wage to curb property crimes. By increasing wages for the working class, government initiatives can potentially incentivize individuals to pursue legal means of income generation. This incentive arises from the expectation that higher earnings from legitimate employment would offer a dependable livelihood, thus reducing the temptation to engage in theft. Consequently, implementing policies to boost wages could contribute to a decrease in property crimes, as individuals are less likely to resort to illegal activities when they have access to stable and sufficient income. This approach not only addresses the economic motivations behind theft but also fosters social stability and enhances community well-being.

The research findings also revealed that both males and females who use drugs and possess guns have a higher probability of committing property crimes, such as theft, compared to those who do not. Laws regarding drug use and gun control should be implemented and enforced to mitigate crimes committed under the influence of drugs and firearms. Implementing and enforcing laws related to drug use and gun control is essential for reducing crimes associated with these substances and weapons. Such measures help mitigate the risk of crimes committed under the influence of drugs and firearms by restricting access to them and imposing penalties for illegal possession and usage. Additionally, effective enforcement of these laws can deter individuals from engaging in criminal activities involving drugs and firearms, thereby enhancing public safety. Moreover, regulations on drug use and gun control contribute to maintaining social order and preventing the proliferation of violence and criminal behavior in communities. Overall, a comprehensive approach that combines legislation,

enforcement, and prevention efforts is crucial for addressing the underlying factors contributing to crimes involving drugs and firearms.

10. Conclusions

Estimations from the research confirm that the hourly wage given to the working class influences the probability of them stealing an item worth at least $50. Specifically, the probability of stealing the item reduces as the hourly wage increases, all else being equal, thus rejecting the null hypothesis that hourly wage does not influence the probability of stealing. The hourly wage given to both females and males does not influence the probability of them stealing. This points to the fact that the tendency to steal an item worth $50 does not depend on the hourly wage given to both genders, but rather, there is a collective influence of hourly wage on the probability of stealing. Hence, the second hypothesis is not rejected.

Additionally, estimates of the difference in probabilities between males and females stealing an item worth at least $50 show that men who earn an hourly wage of $10 have greater probabilities of stealing than their female counterparts with similar characteristics across different races. The null hypothesis, which posits that there are no differences in the probabilities of stealing an item for males and females who earn an hourly wage of $10 across races, is rejected.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Chan, Y.-S. (2012) A Structural Analysis of Crime and Economic Incentives of Youth. Diss., The Graduate School, Stony Brook University, Stony Brook, NY.

[2] Becker, G.S. (1968) Crime and Punishment: An Economic Approach. In: Fielding, N.G., Clarke, A. and Witt, R., Eds., *The Economic Dimensions of Crime*, Palgrave Macmillan, UK, 13-68. https://doi.org/10.1007/978-1-349-62853-7_2

[3] Ehrlich, I. (1973) Participation in Illegitimate Activities: A Theoretical and Empirical Investigation. *Journal of Political Economy*, **18**, 521-565. https://doi.org/10.1086/260058

[4] Becker, G.S. (1967) Human Capital and the Personal Distribution of Income: An Analytical Approach. Institute of Public Administration, New York.

[5] Lochner, L. (2004) Education, Work, and Crime: A Human Capital Approach. *International Economic Review*, **45**, 811-843. https://doi.org/10.1111/j.0020-6598.2004.00288.x

[6] Beauchamp, A. and Stacey, C. (2014) The Minimum Wage and Crime. *The BE Journal of Economic Analysis & Policy*, **14**, 1213-1235. https://doi.org/10.1515/bejeap-2013-0130

[7] Stephen, and Meghir, C. (2004) Crime and Economic Incentives. *Journal of Human Resources*, **39**, 958-979. https://doi.org/10.3368/jhr.XXXIX.4.958

[8] Gould, E.D., Weinberg, B.A. and Mustard, D.B. (2002) Crime Rates and Local Labor

Market Opportunities in the United States: 1979-1997. *Review of Economics and Statistics*, **84**, 45-61. https://doi.org/10.1162/003465302317331919

[9] Raphael, S. and Winter-Ebmer, R. (2001) Identifying the Effect of Unemployment on Crime. *The Journal of Law and Economics*, **44**, 259-283. https://doi.org/10.1086/320275

[10] Yamada, T. and Kang J.M. (1993) Crime Rate and Labor Market Conditions: Theory and Time-Series Evidence. *The Economic Studies Quarterly*, **44**, 250-262.

[11] Devine, J.A., Sheley, J.F. and Smith, M.D. (1988) Macroeconomic and Social-Control Policy Influences on Crime Rate Changes, 1948-1985. *American Sociological Review*, **53**, 407-420. https://doi.org/10.2307/2095648

[12] Freeman, R.B. (1994) Crime and the Labor Market. In: Wilson, J.Q. and Petersilia, J., Eds., *Crime*, Institute for Contemporary Studies, San Francisco, 383-420.

[13] (2002) Logistic Regression Analysis and Reporting. *The Journal of Educational Research*, **96**, 3-14. https://doi.org/10.1080/00220670209598786