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Prostitution and Rational Choice: Understanding the Relationship between Risk, Reward, and
Involvement in Prostitution

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ABSTRACT

Survey Data from *Women's Experience of Violence: Victimization and Offending in the Context of Women's Lives*, a study which utilized a life event calendar system to gather detailed survey data about the lives of incarcerated women during the 36 months prior to their arrest, is used in analyses in this thesis to better understand prostitution through the lens of Rational Choice Theory. This thesis sought to understand the decision-making model in entering prostitution through risk factors such as arrest, probation, living arrangements, and legal income and reward factors such as substance use, illegal earnings, and other crimes. This analysis revealed a strong positive relationship between hard drug use and illegal earnings with prostitution and a significant negative relationship between probation and drug dealing with prostitution. The findings amongst reward factors are highly consistent with Rational Choice Theory, though the negative relationship between probation unexpectedly did not behave as a risk. Following this analyses' findings, further empirical evaluations of prostitution considering women and other theories should be pursued in future research.

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Chapter 1

Literature Review

Overview

In 2007, the sex market economies of eight major US cities amounted to almost a billion US dollars (Dank 2014). This figure is not only striking but demonstrates the significance of the sex market in the United States. While a portion of this economy is due to illegal human sex trafficking and coercion, much of it is made up of people who choose to become prostitutes. Prostitution has historically been illegal and is currently still criminalized in all 50 states in the United States except for some areas in Nevada (Altemime 2013). Understanding the scale of the sex market economy paired with the criminalization of prostitution in the United States compels this thesis toward a unique group of individuals who are both actors in this market and defined as criminals by the state.

Understanding the motivations behind this illicit market will better inform policy on prostitution as well as the individuals participating in it. Informing regulation on the issue can better protect every party involved in the sex market to prevent victimization and exploitation. Not only will this thesis help inform policy on the matter, but it should also provide insight into criminal motivations which further bolsters criminological Rational Choice Theory. This theory emphasizes an approach to criminal and non-criminal behaviors where there is a decision-making process that involves strategic thinking and evaluating opportunities, weighing the benefits and costs in a decision (Cornish 2014). It seeks to analyze the decision to enter into prostitution through a quantitative analysis, which will expand existing research which is largely qualitative in nature. First, I will review the literature discussing Rational Choice Theory and

prostitution, then I will conduct an analysis and provide its results, and finally, I will discuss the implications of my findings in the context of the literature on rational choice and prostitution.

Prostitution

Prostitution is an age-old phenomenon which can be traced back to ancient times and has evolved throughout history. Not only has prostitution as a practice changed, but the frameworks through which it is viewed and the language surrounding it have progressed in the modern era. Though the word prostitution has widely been used for this concept, a shift from this term occurred in the 1980s when the term “sex work” was coined (Orchard 2020). This shift was largely due to connotations related to the term “prostitute” which boil the identity of the prostitute down to their profession, rather than personhood (Orchard 2020). Both of these terms refer to the concept discussed, but prostitution will be the term used for the purposes of this thesis.

Prostitution, also referred to as sex work, involves offering oneself to another as a paid sexual partner, or sexual relations between a prostitute and a paying customer (Flowers 1998). Prostitution is defined both legally and socially, which when paired help to inform a criminological understanding of the practice. Defining prostitution in the context of law requires an element of gain and has historically focused more on females who engage in prostitution, resulting in some bias and stigma for these women. (Flowers 1998). The prohibition against prostitution causes the need to understand the field through a criminological lens, as it often results in jail time or some criminal sanction. Sociologically, prostitution is defined as sexual relations that include a form of monetary payment or barter and can be characterized by “promiscuity or emotional apathy” (Flowers 1998). These definitions help form a broad

definition of prostitution, though, it still leaves out some of the elements of it which make prostitution what it is.

The prevalence of prostitution can be extremely difficult to quantify due to its secret, covert nature. As of 1995, the FBI's Uniform Crime Report recorded that there were over 50,000 arrests of female prostitutes (Flowers 1998). Most of them were over the age of 18, primarily between ages 25-34 (Flowers 1998). Additionally, during this time, prostitution was recorded as being 61% female amongst those practicing it (Flowers 1998). This data is not all encompassing because many prostitutes are never arrested, and those that are sometimes get arrested on a different charge (Flowers 1998). Because of how statistics vary, differential enforcement, and law enforcement's limited awareness, prostitution as a crime has been historically difficult to quantify (Flowers 1998).

Prostitution can be offered through various types of services which are categorized as direct or indirect. Direct sexual services utilized in prostitution involves a service where the primary intention is exchanging sex, and other varying services, for a fee (Harcourt 2005). Indirect sexual services do not always include sexual contact and can be lap dancing, massage parlors, or virtual services (Harcourt 2005). This thesis will primarily focus on engagement in direct sexual services associated with prostitution. Not only are there specific types of services offered by prostitutes but categorizing the types of prostitutes further clarifies the population this thesis will examine.

Frameworks to View Prostitution

Many theoretical frameworks attempt to understand why individuals engage in prostitution and define it as a phenomenon, and there are a few from a sociological approach.

Looking at sex from a macro perspective through a functionalist lens, it is viewed as an institution that serves a 'necessary evil,' or that it serves a purpose in society (Sanders 2017). More unpopularly, the pathological view of prostitution views the women who choose to engage in it as having 'degenerative characteristics,' that being the primary reason for their prostitution (Sanders 2017). This view is outdated and historically was used against people with different biological characteristics in order to marginalize them. Examining it ethnographically, prostitution is studied based on criminal sub-cultures and the conditions, typically economic, that shape the involvement in prostitution (Sanders 2017).

Not only do these frameworks help to interpret the practice, but because prostitution is primarily serviced by females, there are many feminist interpretations of the practice. One view from the feminist perspective is that women are forced into prostitution due to the patriarchy which disadvantages them into poverty and this unconventional line of work (Sanders 2017). Under this patriarchal view, prostitution is seen as an act of resistance to the threat of poverty (Sanders 2017). In addition to this, this perspective posits that prostitution perpetuates the belief that women are objects to be consumed for a price, effectively dehumanizing them. In essence, this wing of the feminist perspective views women entering prostitution as a concession to the patriarchal conditions they live in, further entrenching them in an objectified position.

Prostitution and Agency

The opposing feminist view to this is that prostitution is a freely chosen field of work that women should not be shamed for engaging in. This second view of prostitution from the feminist framework stems from the idea of agency and claims that the women are able to exert agency. Agency is the prostitute's ability to make rational decisions, being free from coercion and stigmatization, and how they use their bodies (Jean 2015). Agency is an elusive concept within

decision-making which has had ubiquitous signifying characteristics (Paternoster 2009). Though disputed, many criminologists have settled on agency being an ambiguous indication of ‘human will’ that can counter other factors (Paternoster 2009). Paternoster (2009) argues that agency is intentionally directed toward a goal, or in other words is acting to meet an end.

Consent and choice help to make up the concept of agency and are pivotal in understanding it in terms of prostitution. This view hopes to award labor rights to women engaging in prostitution in the same way that any other employee in any other profession would be awarded. Consent is the distinguishing factor between sex as work rather than as sexual violence (Jeffreys 2008). Where consent is pivotal in preventing sexual violence, agency is pivotal in understanding the decision to engage in prostitution. This concept of agency most relates to the criminological theory of rational choice, which will be used to understand engagement in prostitution for the purposes of this thesis. While many have the agency to make these decisions in their life contexts, there are others who are exploited, coerced, or forced into prostitution or other crimes in order to receive housing or money (Kramer 2003).

It is important to note that while there are instances where women engaging in prostitution willingly do so with consent, there are many instances where prostitution is thinly veiled exploitation or human trafficking. Because agency and consent are the primary distinguishing factors between prostitution and sexual violence, the practice teeters on the line of sexual liberation and victimization. There are multiple forms of victimization which can take place, using prostitution as a façade. Child abuse is one form of exploitation in prostitution, girls younger than 18 often being coerced or groomed into selling their bodies to adult men (Matthews 2015). Not only is this common, but human sex trafficking is a pervasive problem which is often passed off as voluntary prostitution. The U.S. Department of Justice defines human trafficking as

a crime that involves “compelling or coercing a person to provide labor or services, or to engage in commercial sex acts.”

While these forms of sex crimes are closely linked to the field of prostitution discussed in this thesis, this thesis focuses on the costs and benefits associated with reporting engaging in prostitution and does not focus on victimization. However, it is important to note that prostitution and victimization are intertwined and an important consideration. The potential for victimization certainly impacts a woman’s decision to engage in prostitution and is a risk factor in their decision-making process. As much as the economic support that prostitution awards is compelling, victimization and potential for arrest are risks which constrain. In this way, victimization can be considered as a risk associated with the rational choice being made, but not as a defining characteristic of the prostitute herself.

Context and Choice

Using a choice framework to understand why a woman engages in prostitution requires understanding the conditions which women are sustained in prostitution (Sanders 2017). These conditions are important to know because Rational Choice Theory focuses on risks and rewards related to circumstance and disposition in personal decision-making. However, it is necessary to look at limited economic, social, and material conditions when examining prostitution. Findings from Chicago's “urban ghetto” suggest prostitution is a rational resource exchange for men and women in low-wage economy (Rosen & Venkatesh 2008). In this way, prostitution provides the benefit of money, stability, autonomy, and professional satisfaction, all factors which are rational in the individual’s life context (Rosen & Venkatesh 2008). This theory also accounts for the constraints of the individual’s life conditions such as race, gender, and socioeconomic standing (Sanders 2017).

When looking at sex as work through a rational choice framework, there are certain characteristics and limitations to consider. Sex as a form of work requires attention to skills, labor, and is emotional work relationally (Sanders 2017). This line of work is compelled economically but comes with higher risks such as sexual harassment, rape, assault, PTSD, and emotional disorders, more so than some other jobs, which influences the choice to enter it (Farley 2018). Similarly, engaging in prostitution has risk to the prostitute, where instances of violence like robbery are common but risk of suicide and substance abuse increase as well (Farley 2018). This possibility poses physical risks to the prostitute, putting her health in danger. The prostitute also faces the risk of infection of sexually transmitted diseases (STDs), as she will likely not have access to each client's medical history (Farley 2000). Not only is this dangerous and threatening to the prostitute physically, but they may also face psychological impacts as well. On top of victimization as a risk, prostitutes may also face the risk of stigmas from their community or family, known as the "whore stigma." (Sanders 2017).

While the services in prostitution are categorized as direct or indirect, there are many complex conditions in which it takes place that cannot be categorized in one way. Each person engaging in prostitution has a different set of circumstances which have impacted their decision to pursue prostitution. In an interview with a peep show worker speaking about why women do prostitution, she said "Each woman has her own reasons for working, her own ideas about the work and her place in it. This work can be oppression or freedom; just another assembly-line job...The only safe thing to say is that we're all in it for the money." (Sanders 2017). The complexity of the decision to engage in this practice is what this thesis seeks to understand through examining risk and reward, weighed with the conditions these women find themselves

in. The rewards are primarily economic, and the risks can include victimization, loss of legal income, arrest, and even stigma.

Among the only studies on risk and reward in prostitution, in an ethnographic study of male prostitutes from 1984, the costs and benefits of prostitution were evaluated by viewing the decision through a rational choice model (Calhoun 1996). The study found that the main motivation for the prostitutes was financial gain, but in that, they sought to maximize pleasure and minimize pain (Calhoun 1996). These can be understood as costs (pain) and benefits (pleasure) which contribute to the decision-making process. In this study, the participants were observed and interviewed, the mean age of them being 18 years old with low education levels (Calhoun 1996). The results of this study found that the male prostitutes had similar views of risk and reward associated with their engagement. The main benefits include financial gain, sexual pleasure, control of schedule, and affection whereas the costs include fear of arrest, violence, sex with undesirables, and not receiving pay (Calhoun 1996). This study concluded that engaging in the activity was deemed rational, where the benefits and costs are weighed, the biggest potential cost being fear of arrest (Calhoun 1996). This study exhibits that Rational Choice Theory is a framework that is suitable to study prostitution.

Rational Choice

Rational Choice Theory is a framework in the study of crime which seeks to understand what is related to individuals' decision to engage in crime in a way that is rational for their situation. The theory originates from criminologists Cesare Beccaria and Jeremy Bentham whose explanations of crime under this economic model argue that crime occurs due to conditions that motivate people to break the law (McCarthy 2014). Today, Rational Choice Theory is defined as a multi-level enterprise and seeks to explain outcomes on the basis of social context and

individual action (Hetcher 1997). It assumes that people choose to commit crime, or make decisions, based on the factors around them and both law-following and law-breaking choices are affected by the same factors (Hetcher 1997). This theory is different from other models in that it focuses on the choice to commit crimes and are not obliged by their situations (Hetcher 1997).

When considering crime with punishment in mind, rationality implies that some individuals become or remain criminals because of perceptions of rewards, usually financial, compared to legal work, while considering the perceived probability of apprehension, conviction, and severity of punishment (Becker 1988). In this way, crime is not only determined by rationality and preference, but also by economic or social environments created by policy (Hetcher 1997). This includes police spending, punishment for various crimes, employment opportunity, and schooling (Hetcher 1997). As a result, the costs and benefits are not only determined by rationality but also by the social and economic environment and punishments created (Hetcher 1997). This weighing of cost and benefit suggests that crime can be for financial gain or rewards (Hetcher 1997).

This theoretical approach to understanding the decision-making process for engaging in crime rests on several assumptions. One assumption is that people have preferences for outcomes and those preferences are influenced by the expected benefit, relative to its cost (McCarthy 2014). The expected utility, or the satisfaction or benefit, is indicated by a cost-benefit ratio (McCarthy 2014). In this way, the outcome of a decision is a pivotal factor in its rationality for the individual. Another assumption is that these preferences remain relatively stable throughout the decision-making process (McCarthy 2014). While this approach assumes people are acting

rationally, it does not prevent people from acting irrationally, as decisions can be affected by sudden changes or emotions (McCarthy 2014).

The assessment of the benefit weighed with the cost is influenced by the information a person gathers, though gathering information can be a cost in and of itself (McCarthy 2014). The information gathered can inform a decision holistically, but when choices are made with incomplete information, the decision-maker has subjective expectations as a result (McCarthy 2014). The amount of information one has influences the decision, but the time orientation has an impact as well. When an individual has a time orientation with a positive time preference, they need higher compensation to forego any current benefit whereas when they have a negative time preference, they are willing to forgo the current benefit for lower return in the future (McCarthy 2014). Much of this is dependent on whether the individual is risk averse, risk neutral, or a risk seeker (McCarthy 2014).

Actions can be determined as rational when consistent with these aforementioned assumptions, which are consistent with maximizing utility (McCarthy 2014). In order to exhaustively determine the rationality of an individual, their information, preference ordering, approach to risk taking, and time discounting must all be known (McCarthy 2014). Though these factors can reveal rationality, it cannot be assumed that individuals use rationality by doing literal calculations or discourse about it in this way (McCarthy 2014). Under these assumptions, while there is consistency between preference and choice, preference is not ultimately deterministic of choice (McCarthy 2014). Understanding the assumptions of this framework allow it to be applied to various sociological scenarios that individuals exist under.

Prostitution and Rational Choice

There are several areas in which rational choice can be applied to further inform prostitution from a rational choice perspective. These areas include family, gender, stratification, and social disorganization, all which are factors relevant to women who engage in prostitution. Applying rational choice to families has previously been difficult due to their tendency toward hot motivations rather than cold motivations, meaning the tendency to act on enflamed emotion rather than a benefit and cost calculation (Hetcher 1997). Despite this, rational choice can be applied to families through viewing their adaptive strategies, or their choices made while under constraint, decisions being made by the family (Hetcher 1997). This is relevant to women engaging in prostitution who have or live with family. Another factor which rational choice applies to considering prostitution is the concept of stratification and mobility, or social hierarchies and the ability to move through those. In this respect, jobs supplied by employers and the supply of workers are the constraints used to make choices, considering their preferences (Hetcher 1997). In other words, some choices are limited by existing structures and opportunities.

One theory related to Rational Choice Theory is social disorganization theory, which posits that some communities are unable to effectively self-regulate because of harmful environmental traits, leading to a disorganized neighborhood structure (Hetcher 1997). This disorganized neighborhood structure eliminates normative social controls, increasing deviant behavior (Hetcher 1997). The disproportionate incarceration of those poor and African American has created neighborhoods without economic and social foundations for social control (Hetcher 1997). This is relevant to rational choice because it creates an economic need for individuals in those neighborhoods. One benefit of deviance for many people is economic gain, which is also

an outcome of prostitution. Understanding the situations which the women who do engage in prostitution come from will help to inform the model they use to make rational decisions.

Empirical Work

Rational Choice Theory broadly looks at decision making processes as a model applied to all people engaging in crime. Though this theory often considers people as a whole, crime data clearly represents a difference in the rates of crime between men and women and also in the types of crime they are engaging in. The Federal Bureau of Investigation's Crime Data Explorer shows that in 2021, there were over 580,000 crimes committed by men, whereas there were around 130,000 committed by women (Federal Bureau of Investigation). This roughly translates to about a fourth of crime being committed by women and three quarters by men. To assume that all factors which make crime a rational choice for individuals are exactly the same for men and women excludes the circumstances and factors unique to each gender.

In a study out of the University of Maryland, explanatory variables for drunk driving and shoplifting amongst university students were tested by gender (Tibbetts 1996). The study identified a discrepancy between the effects of these variables amongst men and women (Tibbetts 1996). Other findings suggested that the threat of shame, or social stigma, accounts for much of the gender difference in intention to offend (Tibbetts 1996). This study is one of many that provides empirical data which necessitates a closer examination of the approach of each gender to crime. This suggests that there is a difference in the decision making to engage in crime between men and women. This points to a gender difference in attitudes and perceptions of crime which impacts the risk-taking factors in a rational choice decision making model.

While there is a gender difference in crime rates generally, the types of crime men and women engage in are very different as well. Criminologists concur that men are the primary individuals committing violent crime, whereas that gender margin for property crime is much narrower. Prostitution has been coined a “victimless crime” by some in that both parties are assumed to be unharmed and receive some benefit and therefore is not categorized as violent or property crime. The UCR from 2017 reported that 61% of those identified committing prostitution were female whereas 39% were male (Federal Bureau of Investigations). This is a difference from both violent and property crime in that women make up the majority of individuals committing prostitution. Both risk and reward factors unique to women contribute to this trend in the practice of prostitution.

In findings of other empirical work in prostitution entry, an analysis of survey data from 309 street prostitutes contacted at two sites from one city examines education, minority status, and risk factors during childhood or adolescence in age of entry into prostitution (Kramer 2003). The study found that women who engaged in prostitution had a limited educational background with many having not completed high school. It also found that both white and minority women who engaged in prostitution had experienced sexual abuse during childhood and parental substance abuse (Kramer 2003). It also discusses the possibility of an earlier age of entry into prostitution for minority women pointing to lesser economic opportunity and other disadvantages (Kramer 2003). This is another one of few studies that investigate entry to engaging in prostitution. Findings generally suggest that early childhood risk factors are key in predicting earlier entry into prostitution, but the study does not consider proximal time varying factors, like drug use and participation in other crimes, which can play an important role in prostitution.

The Current Study

This thesis seeks to understand the factors that compel women to engage in prostitution through a rational choice approach. Understanding the costs and benefits associated with prostitution helps to inform this model, though the costs and benefits are specific to each individual. This thesis seeks to analyze the factors contributing to incarcerated women's decision-making process in committing prostitution. Rational Choice Theory informs an economic motivation to prostitution which is a huge reward factor in decision making. This analysis seeks to identify factors, both costs and benefits, that predict an increased likelihood for women to engage in prostitution.

Approaches in studying Rational Choice vary across the types of decision-making scenarios being studied and the population that is involved. Most studies of prostitution have been with smaller samples through a qualitative approach. For example, in a study of male street prostitutes' entry into prostitution, researchers sought to understand the perceived risks and benefits of the activity to understand it from a rational choice perspective. This was an ethnographic study that looked at a group of 18 young male street prostitutes using a combination of participant observation and interviewing (Calhoun 1996). A limitation of this approach is the small sample size and the lack of information to support a sophisticated statistical analysis to produce quantitative data and analyses (Calhoun 1996). This study cited the reasons of the prostitutes as to why they engage in it, considering risk and reward, but each individual had different characteristics and answers that make it hard to draw broad theoretical conclusions. While it does provide in-depth perspectives, it cannot be used for larger scale predictions in the same way that some quantitative analyses can do.

The current thesis will approach entering prostitution through a rational choice perspective using a quantitative analysis to determine how certain risk and reward factors affect the decision-making process to engage in prostitution. Prostitution paired with Rational Choice Theory has rarely been statistically analyzed and therefore stands as a valuable contribution to quantitative data on both. Not only this, but most research on this practice through the lens of this theory uses small sample sizes with populations that are very different. This thesis will increase empirical representations of this phenomenon, which is a current gap in research on prostitution and rational choice. This is invaluable in constructing a quantitative representation of not only Rational Choice Theory, but of an already elusive practice: prostitution.

This analysis will use survey data from hundreds of incarcerated women from one metropolitan area. Respondents provided answers to a large number of survey questions, including questions that reveal risky behavior and lifestyle patterns. The range of questions account for employment, alcohol and drug use, family relationships, and previous encounters with the criminal justice system. The benefit this provides in contrast to qualitative data is the ability to test for association between these patterns and engaging in prostitution through statistical analysis. This will add to the research on the decision-making process of women engaging in illicit money making and specifically will uncover motivations of sex market providers. This thesis is a unique opportunity to understand the under studied practice of prostitution through quantitative data analysis.

Chapter 2

Data and Methods

Data

The data I will be using to conduct my analysis and draw my conclusions is a large survey data set gathered from women while incarcerated. It was gathered from three major cities, but for the purposes of this thesis, I will only draw from one midwestern city for my analysis. The questions they responded to range from involvement in criminal activity to job commitment and entail demographic characteristics about each individual. This allows for in-depth information about risks and benefits such as legal job status, the degree of drug use, property crime, and illegal income, but more importantly, involvement in prostitution. The detailed data about other factors along with prostitution will allow for analyses testing for the relationship between these variables and prostitution, providing insight into the patterns associated with involvement. In the sample, 201 women provided responses for 36 months, resulting in 6,277 months of data gathered.

The women who were respondents in the study were incarcerated and were recruited on-site for participation. They were asked about experience of violence as well as family, social, and economic circumstances during the 36 months prior to their incarceration. For most questions, women could answer through a binary of yes or no, whereas in reporting age, responses were on a scale. In this way, I will be considering these ordinal and categorical variables in the analysis method. There were not many interval variables other than illegal and legal income, as many commitment questions were rated through ordinal answers choices rather than rated on a

numerical scale. Because of the type of data available in this dataset and its use of the life event calendar, I have decided on a few types of quantitative analyses to conduct. As a result of this life event calendar method for data collection, there are a total of 6,277 months nested in 201 women in the sample. My analyses take into account the nested nature of the data, for the multivariate logistic regression, I cluster my standard errors to account the correlated error terms across months.

Analytic Plan

The analyses are conducted in several stages, which include bivariate and multivariate analyses. The first step in the analytic plan is to understand the sample better through a table describing the data, indicating different demographic characteristics and variable averages. Next in the analytic plan is conducting bivariate analyses through a t-test for any continuous variables and tests of proportion for the binary variables. Finally, I will use a stepwise approach to the logistic regression analyses, first analyzing the demographic variables, then the cost variables, and finally the benefit variables which will provide an odds ratio for each variable. After these stepwise regressions, I will conduct a logistic regression analysis of the fully specified model, including all variables which takes into account all theoretically relevant factors.

Bivariate Analysis

The first type of test will use t-tests to contrast the difference of proportions of certain continuous variables within the data. T-test is what is used for age, which is the only continuous variable being tested. Using the formula $t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s^2(\frac{1}{n_1} + \frac{1}{n_2})}}$ where t is the t-value, x_1 and x_2 are the two proportions being compared, s is the standard error of the two groups, and n_1 and n_2 are the number of observations in each group (Bevans 2022). This method will reveal whether these

groups being tested are different from each other. If this test results in a larger t-value, it indicates a greater significance between the groups being contrasted (Bevans 2022). Using a t-table to test if the t-value is greater than the expected value, it can be determined if rejecting a null hypothesis (Bevans 2022). This is one method that interprets whether the results are statistically significant which will either eliminate or confirm the possibility that the results are because of chance (Bevans 2022).

Then, in the case of the binary variables, I use test of proportions to compare the months in which prostitution was reported to the months in which prostitution was not reported using tests of proportions. This test will allow us to determine if there is a statistically significant difference between the true data and the expected distribution assuming a purely random distribution (ByJu's 2021). After calculating observed and expected frequencies for the variables, I will calculate the test statistic in order to find the critical value using the formula $\chi^2 = \frac{\sum(O_i - E_i)^2}{E_i}$, where χ^2 is the test statistic, O is the observed value, and E is the expected value (ByJu's 2021). This method will be able to discern the difference of proportions of each variable with the dependent variable, engagement in prostitution.

Logistic Regression

One approach I will use to understand the relationships within the data is a logistic regression analysis. This method is fitting for the purposes of this thesis because it will aid in predicting the probability of an outcome, in this case engagement in prostitution, based on explanatory variables of my choice. Because the main goal is to understand factors which make involvement in prostitution more or less likely, this method considers the outcome of “no involvement” or “involvement” in prostitution based on the characteristics represented in the

survey responses. Some of these characteristics being considered are drug use, legal income, previous incarceration, and living situation. When testing these, the logistic regression analysis will result in a p-value for each explanatory variable along with an odds ratio (Statology 2020). These reveal the odds of the outcome based on the variables that are tested for (Statology 2020). One major benefit of this method is the ability to eliminate confounding factors by isolating the association of the variables being tested (Statology 2020).

I will use multiple variables in the logistic regression models, which will aid in finding the relationship between a predicting variable and other variables (Ranganathan 2017). This approach will measure the effect on multiple outcome variables weighed with a predictor variable (Ranganathan 2017). An example of this might be variables like previous incarceration, legal earnings, and employment status weighed with engagement in prostitution. This will help to find the relationship between the outcome and predictor variables when there is more than one predictor (Ranganathan 2017). This method works well for the purposes of this thesis because it will account for multiple contributing factors such as costs like legal job, living with kids, and probation and benefits like hard drug use, illegal earnings, and alcohol, in the choice of engaging in prostitution.

Measures

Demographic Variables

The survey data was gathered from 2001-2002 and recorded static demographic characteristics of the women. The age of respondents was recorded by the year they were born, and the variable labeled "BIRTHYEA." In order to represent the ages of the women considering this, I generated the variable "AGE" which replaces the value of each birthyear with the difference between 2002 and the given year. For example, the youngest person in the dataset was

born in 1984, which subtracted from the year of the survey, 2002, is 18 years old. Each year was then replaced with this value to be framed as 'years old' as opposed to 'birthyear'. The resulting range spanned from 18 years to 58 years old. This data will help to see any trends of involvement in prostitution in different age groups.

Race is another static variable which describes the population demographically, giving a better picture of respondents. This data for race was recorded using the question "With which racial/ethnic group do you identify?" and answered in 6 categories. The racial options provided were African American, Hispanic/Mexican or Spanish American, Caucasian, Native American, Asian, and Other. Out of this variable, called "RACE," I created four new variables using a binary response. The variables created were "WHITE," indicating Caucasian identity, "BLACK" indicating African American identity, "INDIG" indicating Native American identity, and "HSPOTH" indicating Hispanic/Mexican or Spanish American, Asian, or Other racial identity.

The highest level of education of individuals was also surveyed, the seven options for respondents being 6th Grade or Less, 7th-9th Grade, 10th-11th Grade, High School Graduate or GED, Some College, College Graduate, and Post Graduate Study. Because an insignificant amount of the population fell under multiple of the categories, I decided to condense this variable from a categorical variable to a binary variable. This variable "EDUCATIO" was recoded to "EDU_RE" which represents those who have not completed high school and those who have, represented by 0 and 1. This variable is important to this analysis because level of education and its effects may have a connection with involvement in prostitution or other crimes.

Cost Variables

The variables that remained unchanged are all binary variables assessing different factors. The variable ARREST surveys any arrest through the question “Were you arrested at any time during the calendar period? [If yes, what month(s)?]. This is an important variable for assessing one risk factor, as many respondents may want to avoid arrest leading to reincarceration. Additionally, the variable PROB represents whether respondents were on probation or parole, using the question “Were you on probation or parole at any time during the calendar period [If yes, what month(s)?]. These two variables will serve as risk factors as both previous arrest and current probation would increase the severity of any sanction as a result of being caught for prostitution.

Additionally, variables used to represent less severe, informal costs are respondents’ living situation. These variables, called “LWOTH” and “LWKID” represent if the respondent was living with family, friend, or significant other and if the respondents were living with kids. The LWKID variable remained unchanged from the original data collection, representing whether the respondent lived with any kids or not. The variable created, “LWOTHER” represents several variables that were combined such as “LIVING_SO” and “LWFAM.” The variable “LIVING_SO” is made up of the variables “LWBOY,” “LWHUS,” and “LWPART” which indicate whether respondents were living with any kind of romantic partner or not. The variable “LWFAM” is made up of the variables “LWREL,” “LWPAR,” and “LWFRND” which represented whether respondents lived with a parent, relative, or friend. “LWOTH” is important in assessing cost in that it represents the family or friends that may stigmatize either involvement in prostitution or a resulting arrest. Additionally, respondents may simply not want to live in jail as opposed to with family and friends.

Benefit Variables

The variable DRUG represents whether or not respondents dealt drugs, assessing this through the question “During [each] month on the calendar did you do ever DEAL in DRUGS? That is, did you make, sell, smuggle, or move drugs?” This variable remained unchanged for my purposes as it was already a binary variable. Finally, the last unchanged variable, PROST, measured was whether respondents committed prostitution or not, assessed through the question “During [each] calendar month, did you do any prostitution?” This variable’s significance is apparent as it is the primary variable being used to test various factors’ effect of involvement in prostitution. Another variable used to assess illegal activity named PROP_CRIME measures non-drug or prostitution related crimes. This variable created for this analysis is a binary representation of five original types of crime. The variables combined include “THEFT”, “BURG,” “FORGE,” “FRAUD,” and “AUTO.” “THEFT” represented whether the respondent committed theft, “BURG” whether they committed burglary, “FORGE” and “FRAUD” whether they committed fraud or forgery, and “AUTO” whether they committed auto theft.

Another reward factor is represented through the variable “DRINKING_DAILY” which represents dependence on alcohol because of consuming alcohol daily. This variable was a categorical variable originally called “YALC” and measured frequency of alcohol consumption. This was assessed through the question “During [each] month, were you drinking alcoholic beverages at all? [If yes,] how often were you drinking?” with the response choices of “Never,” “Once or Twice a Month,” “At Least Once a Week,” or “Every day or Almost Every day” to “Never.” I recoded this to have a binary response of either drinking alcohol every day or having it less frequently than that. This variable is an important factor in assessing reward, as involvement in prostitution provides an income to support daily alcohol consumption.

The other binary variable created to measure substance use is called “HARD_DRUGS” and was a combination of several hard drugs. The five original categorical variables were “CRACK,” “COKE,” “HEROIN,” “ACID,” and “OTHDRG.” The variables names are explanatory of the drugs used, assessing the frequency of usage of any of these drugs during the month. I recoded the categorical rating from “Never,” “Once or Twice a Month,” “At Least Once a Week,” or “Every day or Almost Every day” to “Never,” no hard drug usage, and the other three categories to any drug usage. After changes the five variables to binary, I combined them to be one binary variable representing consumption of hard drugs such as crack, cocaine, heroin, acid, or other drugs. This, like “DRINKING_DAILY,” is an important reward factor for the rational choice model because income from prostitution or other crimes can support a frequent drug use habit.

The variable “ILL” represents the monthly illegal income of the respondent, originally using an interval scale of 12 answer choices, ranging from none to \$100,000 or more. The question asked was “In [each] month on the calendar, did you earn any money from illegal sources? [If yes,] how much?” None of the categories for any amount of earnings had a significant portion of the population, so I made it a binary variable. Creating the variable “ILL_RE,” framed this data to either no illegal income or any illegal income, combining categories 1-12 for “yes” and category 0 for “no.” This variable is important because illegal income serves as a reward factor for the women’s decision-making process. The variable JOB represents the number of jobs a respondent held on a scale of 0 to 3. This was recoded to a binary variable where respondents either had or did not have a job and called the variable JOB_RE. One variable I chose to recode was called “OTHINC” and represented “Respondent’s Monthly Legal

INCOME from FOOD STAMP or WELFARE.” The responses were on a scale of “none” to “Greater than 500” which was changed to a binary variable representing “none” or “any.”

Chapter 3

Results

Description of the sample

The sample being used to conduct this thesis involves data from an urban city in the mid-west from incarcerated, ethnically diverse women who completed a survey. There were 6,277 observations from the sample. One of the first variables measured was respondents' involvement in prostitution. Respondents committed prostitution during roughly 20.7% of the months, indicating that roughly a fifth of the months, respondents reported engaging in prostitution. This will be the main outcome of the analyses conducted, as the primary goal of this thesis is to determine likelihood of engagement in prostitution based on several factors from a rational choice model.

Demographically, there is data on the ages, races, and education status of respondents. The ages of respondents range from 18 to 58 with the average age being 33.76 and the standard deviation being 8.786, indicating a wide spread of the age of respondents. Out of the racial categories of white, black, Hispanic/other, and indigenous, 42.7% were white, 32% were black, 18.49% were indigenous, and 6.84% were Hispanic or other. There is a plurality of white respondents, but also a high population of black and indigenous respondents. Additionally, approximately 64.33% of respondents reported having a high school diploma or GED.

When looking at the sample's substance use, I examined the proportion of hard drug usage in the sample. This entails drug such as crack, cocaine, acid, heroin, or other hard drugs. The proportion for this variable is 45%, indicating almost half of respondents using hard drugs.

Additionally, daily alcohol consumption had a proportion of 19%, indicating a substantial number of respondents were drinking daily. Both of these substance usage habits require financial gain to support them, which would be a reward of prostitution due to its income generating nature.

Table 1 – Description of Sample n = 6,277 months (201 Respondents)

| Variable | Mean | Std. dev. | Min | Max |
|--------------------|-------------|------------------|------------|------------|
| Prostitution | 20.00% | 0.400 | 0.000 | 1.000 |
| Demographic | | | | |
| Age | 33.801 | 8.784 | 18.000 | 58.000 |
| White | 41.93% | 0.493 | 0.000 | 1.000 |
| Black | 32.21% | 0.467 | 0.000 | 1.000 |
| Hispanic/Other | 7.03% | 0.256 | 0.000 | 1.000 |
| Indigenous | 18.83% | 0.391 | 0.000 | 1.000 |
| Education | 64.41% | 0.479 | 0.000 | 1.000 |
| Cost | | | | |
| Arrest | 7.00% | 0.260 | 0.000 | 1.000 |
| Probation | 41.41% | 0.493 | 0.000 | 1.000 |
| Living with Other | 73.33% | 0.442 | 0.000 | 1.000 |
| Living with Kid | 31.10% | 0.463 | 0.000 | 1.000 |
| Gov. Assistance | 27.99% | 0.449 | 0.000 | 1.000 |
| Job | 35.00% | 0.477 | 0.000 | 1.000 |
| Benefit | | | | |
| Drug Dealing | 19.74% | 0.398 | 0.000 | 1.000 |
| Property Crime | 16.20% | 0.368 | 0.000 | 1.000 |
| Hard Drugs | 44.59% | 0.497 | 0.000 | 1.000 |
| Daily Drinking | 18.30% | 0.387 | 0.000 | 1.000 |
| Illegal Income | 35.83% | 0.480 | 0.000 | 1.000 |

T-Test and Tests of Proportions

In a comparison of demographic, cost, and benefit variables, results show significant differences in the months when involvement or no involvement in prostitution was reported (see Table 2). In the demographic category, where the average age of the sample was 33.8, the

months in which prostitution was reported the age of respondents was 34.51 whereas in the months that prostitution was not reported, the average age was 30.99 years ($T = 12.89$, $p < .001$). This indicates that there is a statistically significant difference between age and the months in which prostitution was reported versus not reported. On average, the age of those reporting prostitution was younger than those not reporting prostitution.

Finally, race did not appear to have statistical significance in reporting prostitution for any racial group. Lastly in the demographic category, education, indicating high school completion or not, revealed a difference in proportions between prostitution and no prostitution. With a z-value of 13.102 and a $p < 0.001$, there is a significant difference in reporting prostitution between respondents with a high school diploma and those without. The proportion of those who completed high school and did not report prostitution was 68.39% and those who reported prostitution had a proportion of 48.66%. In the months when prostitution is not reported, respondents have a higher proportion of high school graduation when compared to the months when prostitution was reported.

In the cost category of variables, there were a few that had a significant difference of proportions. Arrest, probation, and living with others found that there is a difference in proportion of respondents reporting prostitution. Interestingly, living with kids found the opposite, where a lower proportion (9.32%) of months living with kids reported engagement in prostitution compared with reporting no prostitution (36.6%) during a month ($z = 18.735$), indicating a strong relationship. Additionally, a lower proportion of respondents reported holding a legal job when reporting involvement in prostitution. When respondents reported no prostitution, 41.45% reported a legal job in the same month whereas 9.48% reported a legal job when reporting prostitution ($z = 21.309$).

Finally, for the variables in the benefit category, there was also a difference of proportions between reporting each variable and reporting prostitution. A higher proportion of respondents reported prostitution when also reporting drug dealing. In the months prostitution was reported, 35% also reported drug selling whereas in the months with no prostitution reported, only 16% reported drug selling ($z = -15.261$). In addition to this, there was a difference of proportion between prostitution and no prostitution when reporting committing property crimes. In the months prostitution was reported, 29.86% also reported property crime whereas in the months with no prostitution, only 12.75% reported property crime ($z = -14.759$).

Hard drug use by far had one of the most significant differences of proportions of reporting involvement or no involvement in prostitution. In the months when no prostitution was reported, 33.01% of months reported hard drug use whereas when prostitution was reported, 90.44% of months reported hard drug use ($z = -36.734$). Daily drinking had a difference of proportions when reporting prostitution, 16.80% of those months reporting daily drinking and no prostitution whereas 24.25% of months reported prostitution and daily drinking. Illegal earnings were also strongly linked to reporting prostitution, 20.91% of months reported illegal earnings when reporting no prostitution and 94.87% reported illegal earnings when reporting prostitution ($z = -49.03$).

Table 2 – Bivariate Comparison of Months Prostitution is Reported

| Variable | Entire Sample | No Prostitution | Prostitution | P-Value | T/Z-Value |
|--------------------|---------------|-----------------|--------------|---------|-----------|
| Demographic | | | | | |
| Age | 33.8 | 34.510 | 30.994 | 0.000 | 12.891 |
| White | 41.93% | 42.09% | 41.31% | 0.617 | 0.500 |
| Black | 32.21% | 33.39% | 27.57% | 0.000 | 3.959 |
| Hispanic/Other | 7.03% | 6.19% | 10.35% | 0.000 | -5.176 |
| Indigenous | 18.83% | 18.34% | 20.77% | 0.048 | -1.980 |
| Education | 64.41% | 68.39% | 48.66% | 0.000 | 13.102 |
| Cost | | | | | |
| Arrest | 7.25% | 5.31% | 14.93% | 0.000 | -11.796 |
| Probation | 41.41% | 38.02% | 54.82% | 0.000 | -10.844 |
| Living with Others | 73.33% | 70.23% | 85.62% | 0.000 | -11.070 |
| Living with Kid | 31.10% | 36.60% | 9.32% | 0.000 | 18.735 |
| Legal Job | 35.00% | 41.45% | 9.48% | 0.000 | 21.309 |
| Gov. Assistance | 27.99% | 29.81% | 20.77% | 0.000 | 6.402 |
| Benefit | | | | | |
| Drug Dealing | 19.74% | 15.89% | 34.99% | 0.000 | -15.261 |
| Property Crime | 16.20% | 12.75% | 29.86% | 0.000 | -14.759 |
| Hard Drug Use | 44.59% | 33.01% | 90.44% | 0.000 | -36.734 |
| Daily Drinking | 18.30% | 16.80% | 24.25% | 0.000 | -6.122 |
| Illegal Earnings | 35.83% | 20.91% | 94.87% | 0.000 | -49.030 |

Logistic Regression Models

Regression models were conducted in a stepwise fashion. The first regression conducted, seen in Table 3, consisted of demographic variables including age, race, and education. Results show there is an inverse relationship between age and reporting prostitution (OR=.960, $p < 0.05$). The races included in the model were black, indigenous, Hispanic, and other and the reference category is white. None of the races compared to white were statistically significant in predicting reporting involvement in prostitution. The model also showed that high school education had a statistically significant negative relationship in reporting involvement in prostitution (OR=0.423, $p < 0.05$).

Table 3 – Logistic Regression of Demographics Predicting Prostitution

| Variable | Odds Ratio | P-Value | Confidence Interval | |
|----------------|------------|---------|---------------------|-------|
| Age | 0.960 | 0.013 | 0.929 | 0.991 |
| Black | 0.756 | 0.501 | 0.335 | 1.706 |
| Hispanic/Other | 1.587 | 0.371 | 0.577 | 4.362 |
| Indigenous | 0.659 | 0.364 | 0.268 | 1.620 |
| Education | 0.423 | 0.015 | 0.211 | 0.848 |
| Constant | 1.829 | 0.346 | 0.521 | 6.419 |

The next model, seen in Table 4, examines the variables categorized as costs, or risks, which include arrest, probation, living with others, living with kids, legal job status, and government assistance. Results for arrest predicting reporting prostitution indicated a positive relationship between the odds of reporting involvement in prostitution when also having reported arrest. Probation similarly indicated an increased odds of reporting involvement in prostitution (OR=1.743, $p < 0.05$). These results suggest that contact with the criminal justice system increases the odds of reporting prostitution that month.

The relationship between living situation and reporting prostitution differed based on who the respondent lived with, but overall did show a relationship. For those living with others, family or friends, (OR=1.975, $p < 0.05$) indicated increased odds in reporting involvement in prostitution while living with others. In contrast, living with kids had a negative relationship, indicating a decrease in the odds that a respondent reported prostitution the months that they lived with children (OR=0.276, $p < 0.01$). Finally, respondents who reported a legal job or government assistance had lower odds of reporting involvement in prostitution. Reporting government assistance had a negative relationship (OR=0.617, $p > 0.05$), and reporting a legal job also had a negative relationship, indicating a decrease in odds of reporting both a legal job and prostitution (OR=.160, $p > 0.01$).

Table 4 – Logistic Regression of Cost Predicting Prostitution

| Variable | Odds Ratio | P-Value | Confidence Interval | |
|--------------------|-------------------|----------------|----------------------------|-------|
| Arrest | 2.186 | 0.001 | 1.405 | 3.401 |
| Probation | 1.743 | 0.049 | 1.002 | 3.030 |
| Living with Others | 1.975 | 0.049 | 1.003 | 3.890 |
| Living with Kid | 0.276 | 0.003 | 0.119 | 0.639 |
| Legal Job | 0.160 | 0.000 | 0.070 | 0.366 |
| Gov. Assistance | 0.617 | 0.224 | 0.283 | 1.345 |
| Constant | 0.237 | 0.000 | 0.113 | 0.499 |

Following an analysis of the cost variables, I conducted a regression of the benefit variables predicted by reporting prostitution, the results shown in Table 5. Results indicate respondents who reported having dealt drugs in a given month predicts a decrease in odds of reporting prostitution (OR=0.285, $p < 0.01$). Additionally, other crimes had (OR=0.642, $p > 0.05$) which indicates a negative relationship between property crime and reporting prostitution. When examining the results of substance use, hard drug use and daily drinking have drastically differing results. Hard drug use had a notably high odds ratio of 6.952 with a significant $p < 0.001$. This suggests that the months in which hard drug use was reported, it increased the odds of reporting prostitution by almost 7 times compared to the months when hard drug use was not reported.

In contrast to this, the odds ratio for daily drinking was 0.630 with a $p > 0.05$, indicating a decrease in the odds of reporting prostitution when respondents reported daily drinking. Finally, the benefit variable with the strongest relationship was illegal earnings. The odds ratio of illegal earnings was 74.003 where $p < 0.001$. This indicates that when respondents reported making money illegally, the odds of reporting prostitution versus not reporting prostitution were 74 times greater. Due to the income generating nature of prostitution, these results are unsurprising.

Table 5 – Logistic Regression of Benefit Predicting Prostitution

| Variable | Odds Ratio | P-Value | Confidence Interval | |
|------------------|-------------------|----------------|----------------------------|---------|
| Drug Dealing | 0.285 | 0.003 | 0.126 | 0.644 |
| Property Crime | 0.642 | 0.290 | 0.282 | 1.460 |
| Hard Drug Use | 6.952 | 0.000 | 3.042 | 15.886 |
| Daily Drinking | 0.630 | 0.338 | 0.245 | 1.621 |
| Illegal Earnings | 74.003 | 0.000 | 17.220 | 318.027 |
| Constant | 0.008 | 0.000 | 0.003 | 0.022 |

Finally, after estimating regressions in each group of variables, a fully specified model predicting prostitution provided interesting results in Table 6. The fully specified model takes into account all theoretically relevant variables in the model and provides an odds ratio, holding all other variables constant. Therefore, it is the most conservative model. In the full model, several variables stood out for predicting prostitution. Reporting probation (OR=1.992, $p < 0.044$), indicating being on probation in a given month, has a positive relationship with reporting prostitution during the same month, the odds being two times greater. This reveals a relationship between reporting probation and prostitution. Additionally, drug dealing indicated a decrease in odds of reporting prostitution (OR = 0.251, $p < 0.05$).

When looking at variables concerning substance use, results for hard drug use indicate a statistically significant relationship. Those reporting hard drug usage in a given month had almost 7 times higher odds of reporting prostitution in the same month (OR=6.918, $p < 0.001$). Finally, illegal earnings also had a significant positive relationship with prostitution (OR = 52.931, $p < 0.001$). Those reporting illegal earnings in a given month were 52 times more likely to report prostitution in the same month. Both hard drug use and illegal earnings reduced their odds ratios in this fully specified model but remained the most salient in terms of their relationship with prostitution.

Table 6 – Logistic Regression of Fully Specified Model Predicting Prostitution

| Variables | Odds Ratio | P-Value | Confidence Interval | |
|--------------------|-------------------|----------------|----------------------------|---------|
| Age | 0.956 | 0.041 | 0.916 | 0.998 |
| Black | 0.812 | 0.713 | 0.268 | 2.462 |
| Hispanic/Other | 1.549 | 0.584 | 0.323 | 7.426 |
| Indigenous | 0.541 | 0.362 | 7.426 | 2.025 |
| Education | 0.518 | 0.186 | 0.196 | 1.372 |
| Arrest | 1.560 | 0.082 | 0.945 | 2.578 |
| Probation | 1.992 | 0.044 | 1.020 | 3.889 |
| Living with Others | 1.777 | 0.140 | 0.828 | 3.813 |
| Living with Kid | 0.456 | 0.111 | 0.174 | 1.198 |
| Legal Job | 0.355 | 0.052 | 0.124 | 1.011 |
| Gov. Assistance | 0.862 | 0.748 | 0.348 | 2.133 |
| Drug Dealing | 0.251 | 0.002 | 0.103 | 0.610 |
| Property Crime | 0.813 | 0.673 | 0.311 | 2.125 |
| Hard Drug Use | 6.918 | 0.000 | 3.348 | 14.295 |
| Daily Drinking | 0.672 | 0.449 | 0.241 | 1.879 |
| Illegal Earnings | 52.931 | 0.000 | 12.609 | 222.193 |
| Constant | 0.045 | 0.008 | 0.005 | 0.439 |

Chapter 4

Discussion

Research Problem and Major Findings

Prostitution is a phenomenon that is widespread within the United States and across the globe, an often-covert act that pervades more than consciously realized. Despite many commercial sex acts being criminalized in the United States (Dank 2014), the sex market economy is a billion-dollar industry and holds high significance within the economy. Because of this significance, this thesis sought to understand the factors which increase the odds of engaging in prostitution through a rational choice perspective, considering risk and reward. Understanding the results of this analysis broadens the theoretical understanding of prostitution paired with rational choice, but also can inform policy related to substance use, prostitution, and education.

When examining prostitution through the lens of Rational Choice Theory, existing theory informs probable risk and reward factors which influence the decision to be involved in prostitution. In order to test some of these factors and produce an understanding of this, I selected risk and reward factors that I expected would influence the decision to engage in prostitution and conducted quantitative analysis for association. The data from this thesis was drawn from study which utilized a life event calendar system to gather detailed survey data about the lives of incarcerated women during the three years prior to their arrest. The main goal of the current analysis was to ascertain what theoretically relevant factors are associated with women's decision to be involved in prostitution, despite costs like criminal justice contact, social stigma, or losing a job and in light of the benefit of substantial illegal earnings, access to substance use, and widened criminal opportunity.

After conducting a bivariate analysis comparing variables with either reporting prostitution or no prostitution, several results stood out as significant. Within the demographic category, the analysis showed that there was a difference in age when no prostitution versus prostitution was reported. In the months that respondents reported prostitution, those reporting prostitution were 3.516 years younger on average. Other demographic findings suggested little relationship between race and reporting involvement in prostitution whereas education was shown to have a statistically significant difference. Between prostitution and no prostitution, there was a lower proportion of high school completion amongst the months prostitution was reported. According to these results, those without a high school degree are more represented amongst those in prostitution than those not reporting prostitution.

Not only did the bivariate analysis of demographic characteristics indicate this relationship, but regression analyses did as well. The demographic regression analysis in Table 3 suggested that no race substantially increased the odds in reporting prostitution other than the variable Hispanic/Other versus white. Though the odds ratio was higher for this, the p-value indicated low statistical significance. Additionally, age did not indicate having a statistically significant effect on predicting prostitution in the multivariate logistic regression. Where race did not have much impact, high school education retained its significance, indicating that it has lower odds of predicting prostitution with a p-value indicating this as statistically significant.

These findings varied in alignment with theory, some results supported my initial expectations though some challenged what is consistent with theory. As a result of the bivariate analyses conducted, several variables showed difference of proportions that were expected. It revealed that a lower in age had a higher proportion with reporting prostitution. This suggests that as respondents get older, they are less likely to commit prostitution. This is consistent with

the criminological understanding of the relationship between age and crime, that being that crime increases until young adulthood then steadily declines as people age (Hirschi & Gottfredson 1983). Additionally, those who reported completing high school had a lower proportion amongst those reporting prostitution, also consistent with what was expected. It is also likely that the older women in the study saw the costs of engaging in prostitution, such as getting arrested, as more salient than younger women. The literature on rational choice and age suggests that the perception of risk increases with age, and adolescents typically see the rewards as greater than the cost than they do in adulthood (Thomas 2019).

Amongst the regression analyses, variables were grouped to test for a relationship with predicting the odds of reporting prostitution with each category of variables. The demographic characteristics showed a statistically significant decrease in the odds of reporting prostitution when also reporting completion of a high school degree. This also matches my prediction as an influencing factor, likely because lower education acts as a constraint on choices, many sources of income requiring completion of formal education (Torpey 2014). The U.S. Bureau of Labor Statistics found that in May 2013, 27% of jobs in the U.S. were in areas that require less than high school diploma, meaning that over two-thirds of U.S. jobs are accessible only with a high school diploma (Torpey 2014). The cost variables, probation and arrest, maintained an influence on a higher odds of reporting prostitution, possibly still due to the state of incarceration of all respondents. Probation had similar odds as arrest, further demonstrating that criminal justice contact does not seem to deter individuals from prostitution.

Interestingly, living with others such as family, friends, or relatives also indicated a higher odds of reporting prostitution during the month. These measures were initially considered a risk factor due to possible social stigma, but perhaps loved ones are less apt to stigmatize the

individual which does not deter them from prostitution. However, it could also indicate the financial difficulties that the respondent was in that month, hence increasing the odds of prostitution as a means to make money. In line with the anticipated costs, the regression analysis indicated living with kids decreased the odds of reporting prostitution, most likely because it is difficult to have a child that requires care while also conducting acts of prostitution. These corroborate with the theoretical understanding of the risk and rewards I selected based on Rational Choice Theory.

Within the cost variables in the bivariate analysis, results indicate arrest, probation, and living with others had a statistically significant difference of proportions which suggests these cost variables do not seem to deter involvement in prostitution. This is contrary to expectations based on theory because the prevalence for each of these factors was greater for the months with prostitution compared to the months with no prostitution. In contrast, other cost variables such as living with a child, holding a legal job, and receiving government assistance showed lower proportions for prostitution than no prostitution, suggesting a negative relationship between these cost factors. In this way, half of the cost variables had lower proportions when reporting prostitution which did not meet this expectation, but half of the variables confirmed this prediction.

In the bivariate analysis, probation and arrest both saw a greater proportion of those who reported prostitution than those who did not, which challenges my expectations of criminal justice contact acting as a risk. This is contrary to what I initially expected that criminal justice contact would deter prostitution because of the increased surveillance and the increased risk of more severe sanctions following arrest and probation. This positive association could be due to the more entrenched an individual is in the criminal justice system, the fewer legal opportunities

there are. Thus, criminal justice contact structures subsequent choices and constrains the options available to individuals.

In the regression of cost variables predicting prostitution, results behaved somewhat differently than in the bivariate analysis. For months that arrest was reported, the odds of reporting prostitution are two times higher. Similarly, in the months that probation was reported, the odds of reporting prostitution were just under twice as high. Living with others was also associated with reporting prostitution, whereas living with a kid was related to a lower odds of reporting prostitution. Additionally, holding a legal job was associated with a lower odds of reporting prostitution.

The data also indicated a decrease in the odds of reporting prostitution when living with a child, holding a legal job, or receiving government assistance. This was expected, as each of these factors could be lost when arrested and incarcerated for prostitution. These are costly losses that individuals have to consider the risk of losing by participating in prostitution. Not only might they lose these, but if a respondent's children or job found out about their illicit activity, they would likely face disappointment and social stigma. In this way, these internal and external costs seem to behave as deterrents from participating in prostitution. Literature suggests that internal costs like broken social bonds or stigma and external costs like criminal sanctions have varying degrees of influence on criminal-decision making, often based on the individual (Nagin 1993).

For the final section of findings within the bivariate analysis, benefit factors largely aligned with predictions of association between prostitution and each variable. While drug dealing, property crime, and daily drinking showed an increase in the proportions of reporting prostitution versus not reporting it, it was by margins of 0.191, 0.171, and 0.074 respectively.

Hard drug use showed a large increase of proportion when reporting prostitution versus not, indicating a very statistically significant difference between the two. In other words, there is an evident relationship between using hard drugs and reporting involvement in prostitution, the proportion of hard drug use being three times higher when reporting prostitution. Finally, illegal earnings were also different when reporting prostitution, the proportion of illegal earnings for prostitution being over four times higher than of no prostitution.

While the cost factors in some ways challenge and in other ways support expected results, the benefits category of the bivariate analysis largely supported what I expected. Drug dealing, property crime, and daily drinking all had a greater proportion when reporting prostitution, than when not but not by a very large margin. Hard drug usage and illegal earnings had a very large difference of proportions when reporting prostitution than when not, the margin between responding no prostitution and prostitution being extremely significant. Hard drug use is a reward factor in that prostitution provides the means to support a substance use habit, like highly addictive hard drugs. Not only does this theoretically line up, but illegal earnings also have a higher proportion when reporting engagement in prostitution. This can be explained by the income generating nature of prostitution, which is likely why they have such different proportions.

In the regression of benefits predicting prostitution, Table 5 shows results indicating various associations between reward variables and prostitution. Drug dealing reduced the odds of reporting prostitution, which were statistically significant. Additionally, property crime showed decreased odds of reporting prostitution. Hard drug use significantly increased the odds of reporting prostitution. This indicates a very strong relationship between hard drug use and involvement in prostitution. Similarly, reporting illegal earnings greatly increased the odds of

reporting prostitution. Similar to the bivariate analysis, this is likely due to the income generating nature of prostitution and the necessity of income to support a substance use habit.

In the fully specified regression model results, a few variables stood out with increasing or decreasing the odds of reporting prostitution. Arrest increased the odds of reporting prostitution by 1.5 times, and probation increased the odds almost two times greater. Drug dealing decreased the odds of reporting prostitution in contrast. Hard drug use and illegal earnings remained a salient factor in the odds of reporting prostitution in the fully specified model. Reporting hard drug use indicated an increase of odds in reporting prostitution by almost 7 times. In a more extreme finding, reporting illegal earnings indicated the odds of reporting being almost 53 times greater. Each of these relationships to prostitution are consistent with how Rational Choice Theory suggests reward factors influence the decision-making process in prostitution. Access to hard drugs and an income are benefits that incentivize prostitution in order to gain money.

Following the regression analysis of the benefits, drug dealing was found to decrease the odds of reporting prostitution. This finding could potentially be due to the income generating nature of both drug dealing and prostitution. Drug dealing may act as a substitution to prostitution, in order to gain illegal earnings. Hard drug use drastically increased the odds of reporting prostitution which may be economically fueled. A substantial income is required in order to support a substance use habit with highly addictive substances, which may have been the reward women considered in their involvement in prostitution (Collins 1985). Illegal earnings also increased the odds of reporting prostitution, likely because prostitution is an illegal earning generating crime. This connection may be because one of the main goals of prostitution is to produce an income.

In the fully specified model of the regression analysis, probation, drug dealing, hard drug, and illegal earnings maintained a significant relationship with the odds of reporting prostitution. For similar reasons as above, these variables maintained their effect. Probation likely had this effect due to the existing criminal justice contact of the respondents completing the survey. Drug dealing may have decreased the odds due to the ability to generate income, like prostitution does. Hard drug use maintains its effect in increasing the odds, likely due to the addictive nature of hard drugs and the income required to support such a habit. Finally, the connection between illegal earnings and prostitution was potentially due to the income generating nature of prostitution.

Findings and Previous Research

Research in Rational Choice Theory has seldom been used to understand the act of prostitution, potentially due to the elusive nature of prostitution or due to an assumption that it is solely economically driven. Though there is limited research on this topic, one 1984 ethnographic study of rational choice and prostitution amongst men found some similar results to the current analysis. Though not quantitative, the results revealed the men viewed financial gain as a motivating factor and arrest as a risk in prostitution. This aligns with the findings that illegal earnings highly increase the odds of reporting prostitution. These findings contradicted this study because arrest did not act as a deterring risk factor like it did in the 1984 study.

There is another study seeking to understand the factors that contribute to women's decision to be in prostitution (Murphy 2010). This study assessed women engaged in street-level prostitution through interviews, revealing major factors in their involvement. Their findings indicated that drug use initiates and keeps women in prostitution (Murphy 2010). In their interview responses, many women cited needing money to support their drug habit as well as the

economic advantage of prostitution (Murphy 2010). The findings in this study are consistent with the findings in this thesis on hard drug use and illegal earnings' association with prostitution in that income is a strong incentive, and often in order to support a drug habit. In this way, access to drug use paired with its addictive nature is a major reward factor in income-generating crimes. In essence, these findings are consistent with findings in the limited existing research.

Limitations

While these findings broaden the theoretical understanding of why women engage in prostitution, it does not explain the full picture for each individual circumstance. One limitation faced through the data was the necessity to reduce the sample to one city. As a result, these findings may be influenced by factors unique to the population in the city it was gathered in. Another limitation is the methodology used in the original data set for gathering responses. The respondents were already incarcerated when the study was conducted, which may influence their view of risk of arrest and probation. Not only this, but respondents were incentivized to complete the survey, which may mean the sample overall values certain incentives more highly.

Additionally, the findings do not provide insight into the reason behind the trends in data, merely the presence of them. Because of this, the data cannot explain the individual realities of the decision of participation in prostitution, but instead reveals the odds of reporting participation based on certain factors. Another limitation to this analysis were the risk factors chosen for the model which excluded victimization as a risk of prostitution. Due to the illegality of prostitution, it is difficult for those committing it to ensure safety from sexual violence or other assaults. This is a factor which may change the decision-making process of women that this thesis did not account for.

Further Research

In future directions of research understanding prostitution through the lens of Rational Choice Theory, an understanding of the motivations behind prostitution should be fleshed out in greater detail. Because this thesis cannot understand the complexity of the personal reasons women do or do not commit prostitution, research seeking explanations of associated factors should be pursued. Because hard drug use is so strongly linked with prostitution, an understanding of individuals' desire and dependence is important. Perhaps studies using both qualitative and quantitative approaches might be able to grasp the thought processes behind weighing the risk and rewards in prostitution. Though ethnographic studies using interview methodologies can be hard to quantify and generalize, they are helpful in providing insight to the individuals that data originates from.

Illegal earnings, more broadly the economic factor, in prostitution could be further investigated through understanding the purpose of gaining earnings. Quantitative or qualitative methods could be used to ascertain what illegal earnings from prostitution are being used for specifically, which may further speak to motivations in committing prostitution. Additionally, research seeking to understand the risk factor of victimization through sexual violence is a crucial factor in understanding the phenomenon. In this way, a study investigating the violent experiences of prostitutes would greatly aid in the theoretical understanding of risk and prostitution.

Finally, because women are not only the main actors in providing prostitution services but also the sole sample being analyzed, it is worth noting their unique standing within social science. Women and crime have often been on the margins of empirical research and quantitative analyses like these, but their role and impact warrant a more representative picture of the female

experience in crime. The rates in which women commit crime are not the same as men and this difference should particularly compel more research ascertaining why.

Conclusion

Ultimately, the goal of this thesis sought to understand prostitution as a phenomenon and what sustains participation in it. This goal was met through support found amongst risk and reward factors and prostitution such as education, hard drug use, legal job status, and illegal earnings. While drug dealing and high school completion were found to decrease the odds of reporting prostitution, hard drug use and illegal earnings were found significant in increasing the odds. While these findings are through the lens of Rational Choice Theory, they do not negate stress and strain that individuals experience.

Though stressors can heighten emotions and therefore influence factors in decision making, there are also real factors which strongly constrain people's choice in committing crime. Future research connecting strain theory and prostitution may be able to provide a different perspective to prostitution that Rational Choice Theory does not account for. The income generating reward factor that drives so heavily in prostitution could be due to rational choice but could also be out of necessity. With all this in mind, prostitution is a complex, multi-faceted social phenomenon that has historically eluded empirical evaluations of it.

Not only has prostitution been excluded from much research, but the existing research on prostitution often overlooks male involvement. Despite the majority of prostitutes being female and not being studied, male prostitutes have also seldom been researched. Not only this, but consumers of prostitution and clients are also underrepresented in research. Studying both groups could provide a fuller understanding of prostitution in its entirety. The sex market and

prostitution unfortunately have overlap with human sex trafficking, which can often be ambiguous. This warrants further research in order to better protect those being trafficked, people offering sexual services, and those receiving sexual services. Protecting individuals from sexual violence as a result of prostitution should compel research to further inform regulations and policy.

It is unclear as to why prostitution, a victimless crime, has not garnered much research interest historically, despite it having similar health implications as other phenomena. Drug use, also a victimless crime, has accumulated a breadth of research on its motivations, implications, and health impacts. Prostitution has implications on health just as drug use does, and even shows a strong relationship with it, yet has not received the same designation of research. One potential reason for this could be that prostitution, also known as sex work, has in recent years been considered a career choice, whereas drug use typically has not. Regardless of the cause of this underrepresentation, it has many facets which have yet to be investigated. Because of the broad implications of prostitution, its high prevalence, and its economic breadth, these findings are worthy of considering and expanding upon.

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Academic Vita

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EDUCATION

Schreyer Honors College | The Pennsylvania State University May 2023
Bachelor of Arts in Criminology Dean's List 5/7 semesters
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Relationship between Risk, Reward, and Involvement in Prostitution

RELEVANT COURSEWORK

| | |
|---------------------------------|--|
| Conflict Resolution Negotiation | Gender Roles in Communication |
| Politics of Human Rights | Comparative Politics |
| Race, Ethnicity, and Culture | Research Methods in Criminology |
| Sexual Violence | Honors Social and Political Philosophy |
| Women and Justice | Law and Society |

EXPERIENCE

House of Cherith May 2021-July 2021
Anti-Trafficking Intern *Atlanta, GA*

- Gained experience in trauma-informed residential care and aided in case management for women coming from backgrounds of sexual violence and poverty
- Received and logged over 20 inquiry calls per day and conducted intake interviews with current and future residents, assessing needs and program compatibility
- Completed clinical rotation where I researched and amalgamated material tailored to a 20-week clinical curriculum for over 25 survivors of sexual and substance abuse

Penn State Housing and Food Services January 2020-Present
Scheduler *University Park, PA*

- Create and assign schedules for over 160 student employees and 20 full-time employees
- Track employee behavior, resolve concerns, and onboard or terminate student employees

Student Manager

- Ensure all crew members' presence and performance during shifts and communicate with managers about concerns or behavioral issues at the start and finish of shifts

Barista

- Responsible for beverage quality control and training employees to meet beverage standards

LEADERSHIP EXPERIENCE

President | Disciplemakers Christian Fellowship April 2021-Present

- Coordinate club activities for over 90 members during weekly meetings, collaborating with teammates to ensure operations of 5 committees and 13 small groups

Leadership Team | Disciplemakers Christian Fellowship January 2021-Present

- Participate in weekly meetings to hone leadership and communication skills in a team of 25 students

Marketing Team | Disciplemakers Christian Fellowship July 2020-Present

SKILLS

Technology: Microsoft Office, Stata, Minitab, Canva, Social Media Platforms

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