

# Investigating Human Trafficking Within the United States: A State-Level Analysis of Prevalence and Correlates

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## Abstract

Human trafficking remains one of the most pervasive criminal activities worldwide, including in the United States. Much of the research on human trafficking in the U.S. has been limited, focusing primarily on individual-level factors, providing victim assistance, or with a few exceptions, examining the role of structural characteristics on human trafficking in a particular city or state. Guided by insights from social disorganization, routine activities, and push-pull migration theories, this study investigates the impact social structural factors have on human trafficking rates for states. Data from the National Trafficking Hotline, the American Community Survey, and other secondary data sources for 2018 are analyzed using OLS regression. Results reveal that resource disadvantage, population instability, and the routine activities factor exert positive and statistically significant influences on human trafficking rates in U.S. states. Limitations and areas for future research are discussed.

**Keywords:** Human trafficking, Crime, Social disorganization, Routine activities

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## Introduction

Human trafficking is a social and criminological problem that continues to flourish globally. It is present in most nations, including the United States. Approximately 40 million people are trafficked around the world (International Labour Organisation 2017), making it a multi-billion-dollar industry (Gallucci 2019) that is second only to drug trafficking in terms of its profitability as an illicit activity (U.S. Department of Justice 2016). Over 500 trafficking routes were identified between 2012 and 2014 (UNODC 2016), some within and many crossing national boundaries (U.S. Department of State 2018). Since the Trafficking Victims Protection Act of 2000, many efforts have been made within and among nations and states to identify and prosecute traffickers and assist victims with the many facets of recovery

(Kakar 2017). More recently, the U.S. Department of Justice released over \$65 million in grants aimed at combatting human trafficking and assisting trafficking victims (U.S. Department of Justice 2020).

At the same time, scholarly research on human trafficking has also increased. Much of this research has focused on trafficking across nations (Brodie et al. 2018; Cho 2012) or within regions (Bello and Olutola 2020; Perry and McEwing 2013). Some studies have focused on specific nations, such as Sri Lanka (International Labour Organisation 2019), the Netherlands (Kragten-Heerdink, Dettmeijer-Vermeulen, and Korf 2017), Vietnam (Dinh et al. 2019), and Kenya (Munyi 2016). A few studies have examined human trafficking for a city or cities within a nation, such as Lagos in Nigeria (Aransiola and

Zarowsky 2014) and Mumbai in India (Silverman et al. 2007).

Research on human trafficking within the U.S. has been limited in scope. Many of these studies have been concerned primarily with identifying (Franklin 2017; Rockinson-Szapkiw et al. 2017) and assisting victims (Ahn et al. 2013; Cole and Sprang 2015; Peck et al. 2020). These studies have focused on individuals, either victims' characteristics or perceptions (Cockbain and Kleemans 2019).

Macro-level research of human trafficking in the U.S. has varied in its approach to understanding this crime. Some studies have described the characteristics of human trafficking (Anderson, Kulig, and Sullivan 2019; Johnson 2016) and/or its effects within a particular state (Busch-Armendariz et al. 2016). Others have examined the structural features of a place associated with human trafficking across sections of a city (Mletzko, Summers, and Arnio 2018), counties within a state (Huff-Corzine et al. 2017), or states within the U.S. (Corliss and Hill 2016; Vargas 2018). The relatively few studies examining how the structural features of a place impact human trafficking have examined factors such as concentrated disadvantage (Vargas 2018), racial composition (Mletzko et al. 2018), home foreclosure (Corliss and Hill 2016), police presence, and task force presence (Huff-Corzine et al. 2017).

Calls for more theoretically-based empirical studies of human trafficking continue to be issued by researchers (Okech et al. 2018; Russell 2018) and policymakers alike (National Institute of Justice 2019; Urban Institute n.d.). Guided by social disorganization, routine activities, and push-pull migration theories, this study examines the influence of structural measures on the rate of human trafficking cases in the United States. State-level data from the National Human Trafficking Hotline for 2018 are analyzed. The type of food to purchase is an important decision that consumers make and has implications for their health, the health of the environment, and their local economy. Twenty-first-century consumers are trending toward a social awareness regarding the food they are bringing home (Lockie and Halpin 2005; Mansfield 2004; Noll 2014). Specifically, there is a growing awareness that food items may travel long distances before reaching the consumer, referred to as food miles, which strikes some conscientious buyers as problematic (Lang 2005). Consumers consider many factors when deciding what food to purchase, so they may choose local over organic because it has traveled fewer food miles. The origin, health, sustainability, and ethics of food production and consumption are becoming increasingly important to consumers, as is evidenced by this type of information

becoming more available to the general public (Eli et al., 2016).

## Theoretical & Empirical Framework

Although human trafficking involves the interaction between two individuals at its core, according to Ecological Theory, there are community and societal factors that create conditions conducive to such an exploitative relationship between the trafficker and the victim taking place (Meshelemiah and Lynch 2019). The role of these macro-level factors in influencing human trafficking is the focus of this research study. Several theories of crime and migration provide guidance as to which macro-level factors should be investigated. A discussion of these theories and their application to human trafficking are presented below.

### *Social Disorganization Theory*

Social Disorganization Theory posits that the weakening of conventional social institutions in communities limits their influence and constraint on residents' behavior. As a result, activities that once were considered unacceptable begin to flourish. As criminal activities increase, law-abiding residents who can relocate to other more stable communities leave; those who are unable to leave become suspicious of others and begin to withdraw from community interaction. This undermines community efficacy, allowing for the further deterioration of community conditions (Siegel 2015). Social Disorganization Theory is predicated on the existence of the following structural conditions that reduce the community's ability to regulate members' behavior: low socioeconomic status, ethnic/racial diversity, population turnover, urbanization, and family disruption (Sampson and Groves 1989).

### Low socioeconomic status

Low socioeconomic status (SES) has consistently been linked to crime in studies testing Social Disorganization Theory (Barnett and Mencken 2002; Lowenkamp, Cullen, and Pratt 2003; Sun, Triplett, and Gainey 2004, among others). Low SES in a community may be conducive to crime as residents feel they have few, if any, conventional means to provide for their families (Dennison and Demuth 2018).

Research has linked several measures of low SES to the prevalence of human trafficking. Specifically, poverty is a condition conducive to this criminal activity (Corliss and Hill 2016; John 2019; Mawere 2019; Mletzko et al. 2018; Vargas 2018). Studies also show that unemployment creates opportunities for

traffickers to prey on people (Danailova-Trainor and Belser 2006; John 2019; Vargas 2018) as those in communities lacking opportunities may be easily drawn into the trade. Finally, both Kumar (2013) and Helms (2013) reported that traffickers often seek out communities where large portions of the population possess low levels of educational attainment.

#### Ethnic diversity

Another element of social disorganization is ethnic diversity. Communities with high levels of ethnic heterogeneity stem the development of formal and informal ties as individuals from diverse backgrounds may have cultural and language barriers that prevent meaningful interaction (Kubrin 2000; Umar, Johnson, and Cheshire 2018).

Concerning human trafficking, Mletzko et al. (2018) reported that the ethnic/racial heterogeneity of neighborhoods is positively associated with the presence of sex trafficking activities in Austin, Texas. In a study of U.S. states, Corliss and Hill (2016) found percent African American and mixed race population to be positively associated with human trafficking. However, results of Huff-Corzine et al. (2017) showed a negative, but statistically insignificant, relationship between the percent Hispanic population and human trafficking arrests in Florida counties.

#### Population turnover

A third element of social disorganization is population turnover. Neighborhoods with other structural concerns, such as low socioeconomic status, tend to lack residents committed to staying for the long term. Many residents in these communities seek to leave when they can afford to do so searching for more opportunities and a better environment for their family. As a result, these individuals may not concern themselves with forming relationships within and to the community (Quick, Li, and Brunton-Smith 2018).

Related to trafficking crimes, Mletzko et al. (2018) found a positive association between residential instability and sex trafficking prevalence in Austin, Texas. Hepburn and Simon (2010) speculated that Hurricanes Katrina and Rita produced the ideal conditions for trafficking foreign people into the Gulf Coast, as most residents were forced to leave, resulting in a shortage of traditional workers and an influx of outsiders brought in to assist with recovery efforts. Under these conditions, it was likely that trafficking victims would go unnoticed (Hepburn and Simon 2010). In fact, a federal court issued a \$14 million verdict against a Mississippi company for the labor trafficking of Indian guest workers after Hurricane Katrina (Southern Poverty Law Center 2015).

#### Urbanization

The fourth element of social disorganization is urbanization. Densely populated urban areas allow for increased anonymity among residents, which Social Disorganization Theory argues reduces the ability or willingness of residents to develop close connections to others (Hardyns and Pauwels 2009). In areas lacking these relationships, it is harder to recognize outsiders who may infiltrate for their economic gain (Bellair 1997).

Regarding human trafficking, rapid urbanization is positively associated with human trafficking in West Africa (Sawadogo 2012). Aransiola and Zarowsky (2014) argued in their study of Nigerian street children and human trafficking that people living in densely populated places near areas known for criminal activity are more at risk than those living in other areas. In the U.S., Huff-Corzine and associates (2017) found human trafficking arrests to be higher in metropolitan than nonmetropolitan counties in Florida. Human trafficking has also been a problem at major urban sporting events where large crowds of strangers congregate, and traffickers can go unnoticed, such as the Super Bowl, Olympics, and FIFA World Cup (Lapchick 2019).

#### Family disruption

A fifth element of social disorganization is family disruption, commonly measured as the presence of female-headed households with children (Umar et al. 2018). Having a single-parent household reduces connections to the community, as the sole parent is usually preoccupied with ensuring they provide for their family (Garfield 2009).

Research on family structure and human trafficking is limited but suggests a positive relationship exists. Sex trafficking victims in India tend to have a history of separation from husbands or violence within the family (Silverman et al. 2007). Greenbaum (2017) also reported that many victims have disrupted family relationships. Russell (2014) argued that a diversity of family types, many headed by females responsible for the financial security of their families, often become involved in human trafficking.

#### *Routine Activities Theory*

Routine Activities Theory, as developed by Cohen and Felson (1979), argues that three elements must be present for crimes to occur: motivated offenders, suitable targets, and the absence of capable guardians. Motivated offenders are persons who have strong

reasons to commit crime – it could be the economic profitability or necessity, or a social need to “fit in” with a pro-crime group (Cohen and Felson 1979). Paraskevas and Brookes (2018) argue traffickers are motivated by the high profitability of trafficking and the minimal risk of being arrested that is associated with it, especially in the tourism and related industries. Many traffickers earn income that exceeds many legitimate occupations (Kenyon and Schanz 2014).

Suitable targets are persons who are vulnerable to victimization – perhaps they need good-paying jobs or are ambitiously seeking to improve their status in society, and they are tricked by traffickers who promise to fulfill these desires. Four factors affect the suitability of a target: value, inertia, visibility, and access. The first element considered is the value of the victim to the offender (Cohen and Felson 1979). In terms of trafficking, value could be their perceived monetary worth in the trade. In terms of labor trafficking, younger victims provide cheap labor that allows for lower production costs and increased profits (Nagle 2008). In sex trafficking, younger victims are often considered more attractive by those utilizing these sexual services (Lyman and Potter 2015).

Additionally, younger victims provide greater opportunities for traffickers to resell victims to another trafficker multiple times (Kakar 2017). Inertia refers to the transportability of a victim, including the potential for resistance against an offender (Cohen and Felson 1979). Younger victims would be less likely to fight back against traffickers and more inclined to follow orders given by older people (Kakar 2017). The third factor, visibility, is influenced by a victim’s daily activities, which can determine their exposure to a potential offender (Cohen and Felson 1979). Individuals who are in public frequently and for longer, more extended periods of time, such as those who are homeless, may be more visible to exploiters. Aransiola and Zarowsky (2014) reported that street children in Nigeria regularly receive assistance from people in the community for clothing, accommodations, and food, and they are very vulnerable to overtures from traffickers. Finally, access refers to the ease of targeting and successfully obtaining a potential victim. A target’s inertia and visibility can influence their accessibility (Cohen and Felson 1979). Bales (2005) argued those who are poor, are unemployed, have limited education, have an unstable family life, and/or experience violence are vulnerable to targeting by traffickers. As a result, those who have each of these characteristics are at higher risk of victimization (Kenyon and Schanz 2014).

Capable guardians are anyone or anything that could prevent the crime from occurring (Cohen and Felson 1979). Local law enforcement officials, community leaders, family members, neighbors, etc.,

all serve as capable guardians. These individuals may be aware of crime opportunities in society and actively attempt to curtail and impede these opportunities for victimization (Cohen and Felson 1979). Even when capable guardians cannot prevent human trafficking from occurring, their presence increases the likelihood of detection and intervention into human trafficking activities (Lutya and Lanier 2012). Huff-Corzine et al. (2017) found the presence of a multi-agency law enforcement task force significantly increases the number of human trafficking arrests made in Florida counties. The lack of capable guardians could mean an absence or inadequate presence of law enforcement and/or another capable guardian during a victim-trafficker encounter to prevent human trafficking from occurring. As Hepburn and Simon (2010) mentioned, after Hurricanes Katrina and Rita in 2005, local law enforcement was so overwhelmed by the needs for other kinds of service that they were limited in their ability to respond to trafficking. Because human trafficking is embedded in other normal daily activities such as working in a job, law enforcement and the public may not recognize it even though it occurs in plain sight (Farrell, McDevitt, and Fahy 2008).

#### *Push-Pull Theory of Migration*

As developed by Lee (1966), Push-Pull Theory of Migration argues that when considering whether to move, migrants examine the positive and negative features of their current location and compare them to those of other potential destinations. Examples of positive features of a place could be an economic opportunity, access to quality healthcare, and religious or political freedom. Negative features could be a lack of the noted positive features or other issues such as discrimination or high crime rates. When deciding to migrate, individuals must also consider intervening issues or factors that may hinder their ability to move, such as transportation to and costs associated with relocating to a new destination or the destination country's immigration laws. If the perceived benefits of migrating outweigh the costs of relocating, as well as the benefits gleaned from staying put, then people are likely to move to another location (Lee 1966).

Moreover, what is deemed as a positive or negative feature will depend upon the persons in question? Age, education, income, relationship status, and other aspects of people’s lives come into play when evaluating place features (Weinstein and Pillai 2016). Those who are disadvantaged educationally and financially are more willing to migrate and to take risks in the migration process to move to wealthier nations that can provide increased economic opportunities. Countries with greater economic equality, therefore, serve as common destination

locations for these migrants. Opportunities for the poor in developed nations, along with messages of a better life elsewhere, encourage these individuals to migrate (Williamson 2019). This can create an issue of large-scale emigration from places with more inequality (Stark 2006), which decreases the costs of migration, making relocation more appealing to migrants (Mahmoud and Trebesch 2010).

Human traffickers can take advantage of these factors and effects in various ways. First, migrants persuaded to move due to economic inequality may be willing to go to great lengths to leave. Traffickers can provide this opportunity to those who may not be able to afford to do so otherwise. Research has supported this notion, finding that as economic inequality increases globally, human trafficking opportunities also increase (Barner, Okech, and Camp 2014). Second, countries experiencing large-scale emigration can provide traffickers with a way to move their victims cheaply and with a lower risk of detection as illegal migrants can blend into larger groups migrating legally. Finally, as noted above, migrants often seek entry into rich nations, many of which have legal restrictions on immigration. Traffickers provide these individuals an alternative way to immigrate to these desired locations (Williamson 2019). Regardless of the motivating factors, traffickers are providing illegal means to migrate individuals across borders. Not surprisingly, illegal immigration flows have been found to increase human trafficking chances (Mahmoud and Trebesch 2010).

### Summary of Expectations and Hypotheses

Based on prior research on crime and human trafficking cited above, social disorganization is expected to play a role in human trafficking rates. Though typically used to explain more common violent or property crimes (Sampson and Groves 1989), limited research presented above has suggested these factors contribute to the incidence of human trafficking. Several hypotheses regarding the relationship between measures of social disorganization and human trafficking rates are tested.

H1: States experiencing higher rates of poverty, unemployment, and high school dropouts (measures of low socioeconomic status) will have higher rates of human trafficking.

H2: States with more ethnic heterogeneity (represented by the presence of Hispanic and foreign-born populations) are expected to have higher human trafficking rates.

H3: Residential instability (a measure of population turnover) in states will result in increased rates of human trafficking.

H4: Human trafficking rates will increase as the size of the urban population increases.

H5: The presence of single-parent households (a measure of family disruption) will be related to increased human trafficking rates.

Research also suggests Routine Activities Theory may partially explain human trafficking rates in states. Because of its general application to crime, this theory can be used to understand human trafficking rates by focusing on those groups more likely to be targeted and the community members capable of catching trafficking offenders. Two hypotheses regarding the relationship between measures of Routine Activities Theory and human trafficking rates are tested.

H6: States with a larger population of young people (teenagers and young adults) and of homeless individuals will have increased rates of human trafficking.

H7: States with a greater presence of capable guardians, specifically law enforcement officers and civic organizations, will have higher human trafficking rates.

Finally, based on the research presented above, human trafficking is expected to be related to factors associated with migration. Two hypotheses are provided.

H8: States experiencing greater inequality, as measured through the Gini coefficient, will have higher rates of human trafficking.

H9: An increase in the unauthorized immigrant population in a state will be associated with increases in human trafficking rates.

### Data and Methods

#### *Data Sources and Sample*

The data for this research came from a variety of sources. Human trafficking data were obtained from the National Human Trafficking Hotline Statistics. Variables measuring the theoretical components were obtained from several U.S. Census Bureau surveys, including the American Community Survey's (ACS) 1-year estimates, the Annual Survey of Public

Employment, the County Business Patterns (CBP), and the U.S. Decennial Census. Other data sources included the Migration Policy Institute and the U.S. Department of Housing and Urban Development's (HUD) PIT Counts. The data obtained from each of the above sources were produced for the year 2018, except the U.S. Decennial Census data, which are from 2010. The sample consists of the 50 states in the U.S. and the District of Columbia. American territories were excluded from the analyses. States were analyzed because human trafficking data at smaller geographical units are extremely difficult to acquire for most places (Farrell and Reichert 2017).

#### *Dependent Variable*

The dependent variable in the analyses is the human trafficking rate, measured as the number of cases for every 100,000 people in the state. The National Human Trafficking Hotline defines a case as the reporting of a distinct human trafficking situation involving at least one potential victim. Cases can be reported through various forms of communication, including calls, text messages, and emails. Law enforcement involvement is not required for a situation to be included in the case count (National Human Trafficking Hotline n.d.).

#### *Independent Variables*

Several independent variables are utilized to test components of Social Disorganization Theory. Measures of low socioeconomic status include poverty, unemployment, and educational attainment. Poverty is measured as the percentage of the population with incomes at or below the poverty threshold income level. The unemployment rate is measured as the percentage of people 16 years of age or older in the civilian labor force who do not have a job but are seeking employment. The high school dropout variable is operationalized as the percentage of the population 25 years and older who have less than a high school diploma. To measure ethnic heterogeneity, data on the percentage of the population that is foreign-born and the percentage of the population that is Hispanic are utilized. Population turnover, measured through residential instability, is calculated as the percentage of residents who are currently living in a different house than the prior year. Female-headed households, operationalized as the percentage of households headed by women with children under age 18 years, represent the family disruption component of the theory. Data for each of the variables described above were drawn from the

2018 ACS 1-year estimates. Urbanization, the final component of Social Disorganization Theory, is measured as the percentage of the population that lives in an urban area. For this measure, the 2010 U.S. Decennial Census was the most recent year of data available from the U.S. Census Bureau because this information is not provided in the ACS.

Four variables are used to measure aspects of Routine Activities Theory. Suitable targets are captured through measures of age and homelessness. Age, obtained from the 2018 ACS 1-year estimates, is measured as the percentage of the population ages 10 to 34 years old. Homelessness is operationalized as the number of homeless individuals per 100,000 people in a state. HUD's PIT Counts were used for this information. Police presence and civic organizations represent capable guardians. Obtained from the Annual Survey of Public Employment, police presence is measured as the number of law enforcement officers per 100,000 persons. The civic organizations variable, measured as the number of civic, religious, grants making, and social organization establishments per 100,000 persons, was gathered from the County Business Patterns.

Two variables are utilized to test features of Push-Pull Migration Theory. The percentage of the population that are unauthorized immigrants was collected from the Migration Policy Institute. Finally, the Gini index is used to measure inequality. Obtained from the 2018 ACS 1-year estimates, values of the index range from 0 to 1, where higher values indicate more inequality exists in the state.

#### *Descriptive Statistics*

Table 1 presents the descriptive statistics for the dependent variable and each of the independent variables. On average, there were 3.149 cases of human trafficking for every 100,000 persons in a state. The majority of a state's population lives in urban areas, are non-Hispanic, are native born, and are legal citizens, on average. States, on average, have a moderate level of inequality. On average, there are approximately 118 civic organizations and 219 police officers for every 100,000 persons in the state. Additionally, there are approximately 160 homeless individuals for every 100,000 people in the state, on average.

#### *Data Reduction and Analyses*

Because of the known statistical and theoretical association between several measures,<sup>1</sup> an obliquely rotated principal components factor analysis was

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<sup>1</sup> Correlation matrix for all variables is available upon request.

conducted. The factor analysis reduces multicollinearity and ensures similar concepts are analyzed together. Variables with factor loading scores above 0.50 and eigenvalues of at least 1 are considered to load together (Land, McCall, and Cohen 1990).<sup>2</sup> To confirm the internal reliability, a Cronbach's alpha was generated for each factor. Factors whose alpha values were 0.60 or higher were considered internally reliable and were kept for use in the regression analyses.

**Table 1: Descriptive Statistics**

	Mean	SD
<b>Dependent Variable</b>		
Human Trafficking Rate	3.149	1.887
<b>Explanatory Variables</b>		
Urban	74.108	14.886
Hispanic	12.058	10.367
Foreign-Born	9.491	6.164
Unauthorized Immigrants	2.452	1.692
Unemployment	4.749	1.070
Poverty	12.912	2.841
High school dropout	10.146	2.623
Female-headed households	7.258	1.399
Gini Index	0.468	0.020
Civic Organizations	117.519	59.945
Police Presence	219.213	66.564
Residential Instability	14.483	2.018
Age 10 to 34	33.649	1.976
Homelessness	159.954	161.254

N=51

These analyses confirmed four distinct factors: urban diversity ( $\alpha = 0.764$ ), resource disadvantage ( $\alpha = 0.774$ ), population instability ( $\alpha = 0.644$ ), and routine activities ( $\alpha = 0.725$ ). The urban diversity factor consists of the variables measuring the foreign-born, Hispanic, unauthorized immigrant, and urban populations. The resource disadvantage factor is comprised of the poverty, unemployment, high school dropout, female-headed households, and Gini index variables. Though the Gini index is not a typical measure of low socioeconomic status, inequality measures tend to have strong collinearity with deprivation measures, such as poverty and unemployment (Land et al. 1990). The population instability factor is comprised of the variables measuring residential instability and age structure.

<sup>2</sup> Factor pattern matrices are available upon request.

<sup>3</sup> Some factors include variables not typically included as structural variables in Social Disorganization Theory, specifically ages 10 to 34 and the Gini index. However, because of their collinearity with other measures, it was necessary to include them in these factors.

Research has shown that populations are most mobile during young adulthood (Clark 2018). Finally, the routine activities factor consists of the civic organizations, police presence, and homelessness variables. These variables simultaneously capture the presence of capable guardians that may discourage crime as well as a population that is vulnerable to victimization, which are two essential components of Routine Activities Theory. After creating the factors and saving their scores, OLS regression analyses were performed using the four factors as independent variables and the human trafficking rate as the dependent variable.

## Results

Table 2 presents the results of the regression analyses through a series of models. Model 1 includes factors consisting of structural variables relevant to Social Disorganization Theory.<sup>3</sup> These variables explain approximately 34% of the model variance, with resource disadvantage and population instability attaining statistical significance. States experiencing higher levels of resource disadvantage and population instability see higher rates of human trafficking cases. Since these measures are factors, their coefficients are interpreted as a standard deviation change. These results indicate that a one standard deviation increase in resource disadvantage results in 0.570 additional human trafficking cases for every 100,000 people. Population instability appears to have a larger effect, resulting in an additional 0.812 human trafficking cases for every 100,000 people with each standard deviation increase in this factor.

Model 2 replaces these variables with the routine activities factor. This factor, which is positive and significantly related to the rate of human trafficking cases, explains nearly 38% of the model variance. Additionally, each standard deviation increase in the routine activities factor results in approximately 1.2 additional human trafficking cases for every 100,000 people.

In Model 3, the full model, resource disadvantage, population instability, and the routine activities factor positively and significantly influence human trafficking rates for states. This model indicates that a one standard deviation increase in resource disadvantage results in 0.395 additional human trafficking cases for every 100,000 people. For each

**Table 2: OLS Models Predicting Rate of Human Trafficking in U.S. States**

	Model 1	Model 2	Model 3
Constant	3.149*** (0.221)	3.149*** (0.211)	3.149*** (0.189)
Urban Diversity	0.368 (0.234)		0.318 (0.201)
Resource Disadvantage	0.570* (0.231)		0.395† (0.202)
Population Instability	0.812*** (0.230)		0.540* (0.207)
Routine Activities		1.157*** (0.213)	0.873*** (0.206)
R <sup>2</sup>	0.344	0.376	0.528

Unstandardized coefficients reported with standard error in parentheses

†p ≤ .10; \*p ≤ .05; \*\*p ≤ .01; \*\*\*p ≤ .001

standard deviation increase in population instability, there are an additional 0.540 human trafficking cases for every 100,000 people. Finally, the routine activities factor appears to have the most significant impact on reporting human trafficking cases in states. Specifically, there are an additional 0.873 human trafficking cases for every 100,000 people with each standard deviation increase in this factor. Urban diversity remains the only factor that does not have a statistically significant impact on human trafficking rates. Overall, the full model explains more than half of the variance in the rate of human trafficking cases experienced by states.

## Discussion and Conclusions

Based on the literature, each of the independent variables was predicted to positively and significantly impact human trafficking rates. Resource disadvantage (consisting of the poverty, unemployment, high school dropout, female-headed households, and the Gini index variables) was positive and marginally related to human trafficking rates in the final model ( $p = 0.057$ ), providing support for H1, H5, and H8. These findings support research showing a link between measures of low socioeconomic status and human trafficking (Corliss and Hill 2016; John 2019; Mawere 2019; Mletzko et al. 2018; Vargas 2018).

There is also a positive and statistically significant relationship between population instability and human trafficking, indicating that states with more residential instability coupled with a larger proportionate population of teens and young adults will experience higher human trafficking rates. This finding supports H3 and part of H6. These results extend support for the effect of residential instability on human trafficking rates (Mletzko et al. 2018). Regarding the measure of age, these findings provide further evidence of the vulnerability of teens and young adults to being trafficked (Kakar 2017; Lyman and Potter 2015). Finally, the routine activities factor did exert positive, significant impacts on human trafficking rates, providing support for part of H6 and H7. States that experience more homelessness, coupled with an

increased presence of police officers and civic organizations, report higher rates of human trafficking. These results support the notion that homeless individuals are suitable targets for traffickers as they are more visible to potential exploiters. While capable guardians, such as police officers and civic organizations, are typically associated with lower crime rates, research has shown that the presence of similar groups and individuals results in higher rates because of increased detection (Huff-Corzine et al. 2017). As states devote more time and resources to the issue, community awareness increases overall with more individuals reporting human trafficking incidents to the authorities.

Although urban diversity produced a positive impact on human trafficking in the analyses, these results were statistically non-significant in the final model, indicating H2, H4, and H9 were not supported. The urban diversity factor consisted of the variables measuring the foreign-born, Hispanic, unauthorized immigrant, and urban populations. According to the Global Report on Trafficking in Persons from the United Nations Office on Drugs and Crime (UNODC), persons from all racial/ethnic backgrounds and citizenship (including Americans within the U.S.) are subject to being victims of human trafficking (UNODC 2014). Moreover, since trafficking activity can occur anywhere in common everyday life, its presence is not limited to areas with certain racial/ethnic compositions (Kakar 2017). Aguirre et al. (2017) also argue that human trafficking can occur anywhere, including small towns, rural areas, and native reservations, and not only in urban areas.

### Limitations

This study is not without data limitations. Several limitations are associated with the data from the National Human Trafficking Hotline. First, the cases reported by the hotline indicate potential, not identified victims. As stated above, these cases do not imply involvement by law enforcement, though the hotline may report information regarding a case to authorities where warranted. Instead, the hotline primarily serves as a referral source for those who



contact it, providing information on the organizations and services available to potential trafficking victims (National Human Trafficking Hotline n.d.).

A second limitation is that some victims or observers of human trafficking activities may not contact the hotline, resulting in an undercount of the probable amount of human trafficking activity taking place. Not knowing about the hotline is one factor that may influence this undercount. If victims or observers of human trafficking are unaware of the organization, those cases would remain uncounted in these statistics. Additionally, it is possible that there are cases reported to law enforcement that are not included in the hotline statistics because victims or observers only report these incidents through official means. Undercounting could also be influenced by reluctance on the part of the victim or an observer to report a case to any organization or authority figure. This aspect of undercounting crime is a problem in all crime-related data, even in data reported by law enforcement agencies, as victims are often reluctant to come forward and reveal information for fear of retaliation from perpetrators or disbelief from officials (Siegel 2015). It is not possible to know the extent to which undercounting for any reason affects the case count in a particular state.

A third limitation is that several states do not report the number cases by human trafficking category (i.e., sex trafficking, labor trafficking, organ trafficking). Cockbain and Bowers (2019) advocate for the separate analysis of human trafficking types, based on their analysis of individual-level data from the UK. They argue that different factors influence the various forms of human trafficking that occur. For example, some of the contributors to sex trafficking are different from those factors that promote organ trafficking. The same is true of cases involving multiple forms of human trafficking, such as a combination of sex and labor trafficking. While factors contributing to human trafficking may vary by type of trafficking, the breakdown of cases by human trafficking type was not available for 18 states on the National Human Trafficking Hotline website at the time of data collection. For the states that did report this information, a majority of cases involved sex trafficking (67 to 78 percent), followed by labor trafficking as a distant second category (National Human Trafficking Hotline n.d.).

Additionally, the human trafficking data reported by the hotline have been aggregated to the state level, meaning that researchers do not have access to information about individual cases (such as the number of victims or perpetrators involved in each case) or statistics at a smaller geographic unit (such as county or city-level statistics). This prevents researchers from conducting multi-level analyses,

such as Hierarchical Linear Modeling, with the data. It also precludes researchers from analyzing predictors of victimization at the individual level. Being able to understand how individual-level factors intersect with macro-structural features of a place (such as those examined by Social Disorganization Theory) would provide valuable information on the heightening or dampening effects place has on a person's trafficking experience (e.g., the type of trafficking they are subjected to or the length of victimization).

Furthermore, some information provided at the state level regarding victim characteristics is not available for all states, preventing researchers from adequately analyzing these statistics. For the states that did report some features, data were limited to sex (male, female), age (adult, minor), and nationality (U.S., foreign). No information on the race and/or ethnicity of victims was reported, nor did states provide any information on perpetrators (National Human Trafficking Hotline n.d.). Finally, data availability is limited to the years of 2015 to 2018. Year 2019 data were not available for the whole year at the start of this study. Hence, the analysis consisted of the most recent year's (2018) data for which the whole year's cases were available.

#### *Policy Implications*

Human trafficking has existed for centuries but has only recently gained the attention of the U.S. and other world governments (Kakar 2017). Consequently, there are no criminological theories developed or designed specifically to explain this social problem as most are aimed at understanding the more common, "typical" street crime. This research extends the explanatory power of Social Disorganization Theory, Routine Activities Theory, and Push Pull Migration Theory to include human trafficking, as most of the macro-level factors tested predicted human trafficking rates in much the same way they explain crime in general.

These findings have several policy implications. Efforts that involve raising community awareness about human trafficking, the signs indicating its presence, and how to report it to law enforcement should be undertaken, particularly in vulnerable communities and among vulnerable populations (e.g., teens and young adults). Indeed, such efforts are already underway in many states. For example, the state of South Carolina mandates that establishments likely to encounter trafficked persons (such as emergency rooms, airports, and adult businesses, among others) conspicuously post the National Human Trafficking Hotline's information (South Carolina Attorney General 2021). Employees of local DMVs in Nevada are trained to spot the signs of human trafficking (Tahernia 2018). Those in Kansas

wishing to renew or obtain their commercial driver's license must watch an educational video produced by the Truckers Against Human Trafficking organization as part of the process (Office of Attorney General of Kansas 2021). Finally, in Florida, the Department of Education requires schools to provide instruction to K-12 students about child trafficking prevention (FDOE Press Office 2019).

Moreover, as many jurisdictions have formed task forces to address street gangs and drug trafficking (Federal Bureau of Investigation n.d.; U.S. Drug Enforcement Administration n.d.), similar task forces are being formed to address human trafficking. The Attorney General of South Carolina heads a statewide task force comprised of personnel from various law enforcement, mental health, social services, and labor licensing departments. This task force meets to issue an annual report that evaluates current efforts and proposes plans to address human trafficking (South Carolina Human Trafficking Task Force 2021). Additionally, the South Carolina counties of Lexington, Edgefield, McCormick, and Saluda have formed the LEMS regional task force to combat human trafficking within their area. By creating a task force with personnel and resources devoted specifically to the issue, jurisdictions are making the fight against human trafficking a priority (WISTV Staff 2020). These efforts overall will improve the reporting of and response to human trafficking.

Future research should pursue several avenues as human trafficking statistics improve in both depth and breadth of reporting. First, the area would benefit from a more detailed analysis of human trafficking by type (sex, labor, etc.). Understanding if the theoretical components analyzed above can equally explain specific types of human trafficking would be useful for targeting prevention strategies. The area would also benefit from in-depth analyses of the characteristics of victims and perpetrators. Additionally, longitudinal studies should be conducted to determine long-term patterns and trends of exploitation as well as any significant changes in incidents or rates that may result from legislation and/or funding. Finally, an analysis of smaller geographical units (such as counties, towns and cities) across multiple states could provide a more nuanced picture of human trafficking across place. More work is needed to fully understand the circumstances surrounding these incidents and to adequately address this national social problem.

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