



# USING TRANSACTION DATA TO DISRUPT HUMAN TRAFFICKING MARKETS

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Human Trafficking markets involve transactional nodes that delineate the commercial interactions between participants. These nodes represent crucial opportunities for stakeholders such as law enforcement, regulators, academic, and industry partners to gather and analyze data, as well as to prevent, detect, and respond to human trafficking.

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While we often think of human trafficking as a single criminal act, to solely focus on the act of trafficking, or on the victims of trafficking, misses the broader opportunity to disrupt human trafficking at the scale it exists. Legacy strategies launched by the government, nonprofits, and social enterprise companies to fight human trafficking have focused on identifying the victims of trafficking, increasing public awareness, and educating the potential victim population. Operations against the perpetrator of human trafficking - the trafficker - have never been the focus, and while such operations may have been the primary focus of law enforcement, they are far from law enforcement's primary focus.

What if the same approach was taken when fighting terrorism? Imagine if, instead of finding, fixing, and finishing terrorists and their facilitators, we instead focused our resources on building hospitals to treat victims of terrorism, educating the public about how to avoid becoming a victim of terrorism, and made "awareness" the central theme of our anti and counter terrorism strategies. If this were the strategy, finding and finishing terrorists would be a tertiary priority at best, and terrorism would proliferate. The so-called "Global War on Terror" has been extremely successful due to the strategy of market disruption implemented against terrorists and their facilitators, not due to a terrorism awareness campaign or a focus on treating victims of terrorism. Specifically, we focused on disrupting the economics and logistics of the terrorism market, because after years of living and working overseas - actively participating in counter terrorism activities - we intuitively understand terrorism as an illicit commodity market.

Like terrorism, human trafficking is also an illicit commodity market, and like all markets, is subject to basic economic principles. Demand drives the need for supply, and so market incentivized people work to procure and distribute supply to meet the demand. The problem here is that the supply - in this case vulnerable people - exists at an extreme scale and so cannot be addressed through traditional means. Likewise, demand is virtually limitless and therefore also unable to be fought through traditional methods. Like trying to fight the narcotics market through supply or demand reduction, fighting human trafficking through supply or demand reduction strategies does not work. What does work, however, are market disruption strategies.

In both military special operations and the intelligence community, we are taught to disrupt enemy forces by damaging or removing their lines of communication. In this case, lines of communication are anything the enemy can use to communicate or move, so we jam radio signals, seize funds, capture and kill leadership, destroy bridges, bomb supply shipments, sabotage computer code, and build walls. As a general strategy, we attempt to make it difficult for the enemy to operate against us by forcing them to use their time and resources to rebuild the lines of communication we disrupted. We attack the lines of communication because that action creates the largest disruption in the enemy's plans. When you kill a single fighter you merely remove that fighter's capability to close with and harm you. However, when you jam radio communications, you disrupt the communications for an entire company of fighters, therefore removing their ability to communicate and coordinate their actions and reducing their battlefield effectiveness. The return on investment for jamming the radio



transmissions is significantly higher than for killing a single fighter. All forces need lines of communication to operate - without them, they cannot prosecute their war. Likewise, all businesses need lines of communication in order to conduct commerce, and in commerce lies the primary battlefield of the modern human trafficking market.

All businesses conduct transactions, and there are lines of communication between each of those transactions. Disrupt even one transaction and you sever the entire business line of communication, rendering the market inoperable. These points of transaction represent vulnerabilities to a business, and so most business operators mitigate those risks either through insurance, strategy, contracts, or changes in processes and procedures. The same can be said of human traffickers. Traffickers may take steps to mitigate the risks in each point of transaction, but historically, these risks have only existed at the end of the line in the form of detection by law enforcement. Since law enforcement's opportunity to disrupt the human trafficker primarily exists at the end of the business transaction line, arresting the trafficker, while important, does not prevent or disrupt the crime of trafficking from taking place. The damage has been done as the victim has already been trafficked. Law enforcement action is also a limited resource, and their ability to disrupt the trafficking market does not scale. The trafficking market continues to grow, year after year, because the disruption strategies implemented against it have at best a 10% chance of success by focusing on only one out of ten opportunities for disruption. The ten major points of transaction, and therefore opportunities for disruption, in the human trafficking market are: 1) realization of market opportunity, 2) workforce recruitment, 3) workforce control, 4) advertisement, 5) customer communication, 6) workforce transport, 7) service rendered, 8) payment, 9) banking, and 10) legal compliance. By combining data aggregation and analysis with generative Large Language Model (LLM) Artificial Intelligence (AI), we increase the probability of disrupting a human trafficker from 10% to 90%.

**1) Realization of Market Opportunity:** Before any person starts a for-profit business they must realize one thing; the market opportunity to make money. That realization might come by recognizing a market opportunity that few others have, or it might come by watching and copying other businesses. In the case of human trafficking, it is primarily the later. It's not that human traffickers do not realize new opportunities to exploit their victims once they start in the industry, but their initial "realization of market opportunity" comes from watching others in their sphere of influence make significant amounts of money as human traffickers. Countering this point of transaction in the human trafficking business cycle is easy - if potential traffickers see current human traffickers incurring extreme risk and not making any money, they will self select out of trafficking, thereby reducing the trafficking market, the number of traffickers, the number of trafficking victims, and the number of customers by reducing the availability of commercial sexual services. Some states have already implemented severe penalties on human traffickers, but we need the federal government to take the same approach. A human trafficking conviction, for any form of trafficking, should carry a life sentence in all jurisdictions, no chance of parole, no exceptions. When combined with the other disruption opportunities explained below, traffickers will self select out of the market due to a significant increase in risk and market friction.



**2) Workforce Recruitment:** All service businesses need workers if the owner/manager is not performing the service themselves, and all businesses need a pool of qualified candidates to pull from. The business of trafficking is no different. To a human trafficker, a “qualified candidate” is any person who is desirable to their customer base and is predisposed to control and exploitation by the trafficker. While this is theoretically anyone, young people who lack moral instruction, positive role models, and are experiencing relative poverty with limited supervision make the choicest candidates for traffickers. Other negative factors only compound the before mentioned and increase a trafficker’s chances of a successful recruitment.

I selectively use the term relative poverty because poverty is relative to the immediate environment. Just as an African tribesman is considered wealthy by owning five cows, they are impoverished when compared to American’s who are considered impoverished. Poverty is often cited as the primary driver of vulnerability in the west, but this is wrong. The chief driver of vulnerability is the lack of a father or other positive male role model in the home, not relative poverty. The research on fatherless homes is conclusive, and often the vulnerable child is looking to fill the void left by their absent father. Traffickers are keenly aware of this need and use it to their advantage, often going so far as to require their victims to call them “daddy”. Countering this point of transaction in the trafficking market is simple and only requires the application of LLM AI to cyber-social conversations by the companies hosting the platforms. Once the AI detects recruitment behavior - also known as grooming - by the suspected trafficker, the communications should be severed and elevated to an authority figure for further screening. Attacking this point of transaction represents the single largest opportunity to disrupt the human trafficking market at the scale it exists. While this presents a great opportunity, the barrier to implementing this technical solution is extremely high as the strategy not only requires broad cooperation from industry, but it also requires the completion of the AI models used to combat all other points of transaction in the trafficking market.

**3) Worker Control:** All business need to control their workforce. This is usually a mutually agreed upon and beneficial arrangement that distills to a worker performing labor and being enumerated by their employer for doing so. The remuneration to the worker results in a form of control, however, the worker also exerts a form of control as they are free to quit their job and perform work elsewhere. In the case of human traffickers, even though they need to control their workers, the standard mutually agreed upon and beneficial control arrangement does not apply. Instead, traffickers control their victims through fraud, force, or coercion. The techniques human traffickers use to control their victims are well documented and present reliable data signals in both cyber and physical spaces. Countering this activity is easy to program, however, it requires contact with public and private entities in order to start the process. That said, the automated detection of human trafficking activity, as well as the automatic detection of human trafficking victims, can easily be built into the existing customer screening tools used by industry.

**4) Advertisement:** All businesses need customers in order to make money, therefore, they



must advertise to attract customers. Advertising can be as simple as word-of-mouth recommendations from past customers to product recommendation engines running complex AI. Regardless of the complexity, businesses must advertise, and the business of human trafficking is no different.

Human traffickers capitalize on the demand for commercial sex services in western countries by finding their customers online. While the demand signal is not as strong as most people think, it is still significant enough to create a broad business opportunity anywhere a trafficker chooses to visit. In terms of product, the supply of potential victims is unlimited, and the more violent and evil the trafficker is willing to be, the deeper their potential victim pool is. The trafficking market barrier to entry is extremely low, as all a potential trafficker needs to become an actual trafficker and start making money is an internet connected device, and the ability to control a vulnerable person through fraud, force, or coercion. They do not even need to own the device or the internet connection to get started.

The factors of limited demand, unlimited supply, and a low barrier to market entry all compound to create a set of circumstances that bottom-out the prices of commercial sex services. Because the price is low, and a trafficker's business overhead expenses are high relative to other illicit commodity markets, traffickers have to broadly advertise their product in order to make the money required to make their labor worth their time. This broad advertisement is the Achilles' heel of the human trafficker as they are openly giving law enforcement and industry all the information we need to counter their behavior. **Advertising data represents the single greatest opportunity to collect data about individual traffickers, collective trafficking activities and data patterns, individual victims, and demographic data for both traffickers and victims.** Most of this advertising data can be reverse engineered to create a trafficker's pattern-of-life, and can therefore be extrapolated into AI models that can predict a traffickers behaviors and movements. Furthermore, this data can be used to screen traffickers and victims from commercial platforms, which not only creates friction in a trafficker's business, but also increases the chances of identification of both traffickers and victims. Once identified, law enforcement, victim advocates, and industry partners can all - simultaneously - take action against the trafficker. The opportunities presented through advertising data are not only vast, but they are cheaper and faster to execute as compared to other AI and data collection strategies. Advertising data also serves as the foundation of other strategies, specifically those to disrupt customer communications, workforce transport, payment, banking, and legal compliance. **Second to disrupting workforce recruitment, the collection and analysis of advertising data represents the single largest opportunity to disrupt global human trafficking markets.** When combined with other all-source intelligence data and LLM AI, advertising data provides the foundation for predicting the pattern of life of existing traffickers, and simultaneously attacking all of their business transactions. The collection and analysis of trafficker advertising data is also multi use, leading to AI models that can predict trafficking behavior and create other opportunities for disruption as outlined below.

**5) Customer Communication:** All business must communicate with their customers. While



most legitimate businesses adopt “cyber first” customer communication strategies to reduce their cost-of-sales, traffickers have adopted a “cyber first” customer communication strategy to reduce their exposure to law enforcement, and to screen out and prevent other traffickers from connecting with their victims. This cyber first communication presents an opportunity for AI models to screen customer communications for signs of trafficking, and to report or sever those communications should the signs be present.

**6) Workforce Transport:** In the specific case of human trafficking, there is always a transport of the workforce of some type. While that transport is often in person, the transport mechanism can also be the remote control of an individual’s actions through the internet. Either way, the transport of a victim represents an opportunity to disrupt the human trafficking market because the traffickers are forced to expose themselves to risk of detection by using existing transportation infrastructure. It matters not if the infrastructure is physical or cyber, the disruption opportunities remain, though the execution of the disruption strategy is different.

In the physical world, disruption opportunities exist primarily in the form of denying transportation opportunities on planes, trains, taxi and ride sharing services, or detection by law enforcement through the enforcement of traffic and pedestrian laws. In the cyber world, disruption opportunities are nearly the same as most of the physical world opportunities are first accessed through the cyber world. In the case where they are not, the opportunities render much the same as in those created through customer communication.

**7) Service Rendered:** While Modern human trafficking within westernized countries consists primarily of labor services that are advertised online, the rendering of that service has to take place somewhere in the physical world. The exploitation of people always requires a physical location where the labor-act takes place. In the case of commercial sex trafficking, the location is often hospitality properties like hotels, motels, and short-term rentals. In each of these cases, a location has to be rented, and the renter usually has to interface with some type of cyber or physical system in order to get access to the location. In the case of a cyber-based reservation system, the same data that is used to disrupt other points in the human trafficking market can also be used to screen trafficking activity within the reservations system. In the case of Illicit Massage Businesses (IMB), the screening responsibility will fall on commercial landlords and banks to identify and screen commercial tenants for connections to IMBs. Luckily, the same data that is used to screen trafficking activity out of the hospitality and short-term rental industries can also be used screen IMBs from commercial real estate portfolios.

**8) Payment:** Payment systems represent the single largest opportunity to disrupt the human trafficking market. Traffickers, customers, and victims all use the same payment and money transfer systems as most of society. Contrary to popular belief, trafficking is not a predominantly cash business. Human traffickers use cyber based payment and money transfer applications, credit cards, prepaid cards, gift cards, crypto asset transfers, and other payment systems to both send and receive payments. In the United States - as well as in most



western countries - these payment platforms are regulated and therefore require a compliance with Know Your Customer/Business (KYC/KYB) regulations. The KYC/KYB process in the payments industry represents an opportunity to disrupt the human trafficking market by overlaying human trafficking data with account holder data to detect and screen out trafficking activity.

**9) Banking:** It is increasingly difficult for human traffickers to exist without a bank account. Holding large amounts of cash is risky for traffickers as they risk losing it through theft, loss, or through law enforcement seizure. The infrastructure required for traffickers to operate is becoming cashless, therefore traffickers need to open and maintain bank accounts. Like the payments industry, the banking sector is well regulated, and banks are required to conduct robust KYC/KYB screening when they open accounts so all the disruption opportunities that apply to the payments industries also apply to the banking industry. However, banks have an added level of continuous monitoring for money laundering activities. These Anti-Money Laundering (AML) programs are a regulatory requirement for the banking industry, so all banks are required to have some level of AML, and the reporting of suspected money laundering violations are reported to Law Enforcement via a well established mechanism called a Suspicious Activity Report (SAR). While traffickers have adopted digital payment mechanisms, they still use a significant amount of cash in their business, and they prefer to deposit that cash in banks for safe keeping and ease of use. This preference for depositing cash in banks gives the banking industry the same opportunities to disrupt the trafficking market as the payments industry, albeit through different mechanisms. The combination of required AML compliance programs and a well established SAR mechanism for reporting to law enforcement make the banking industry a key partner in fighting human trafficking. Just as in the payments industry, overlaying human trafficking data with account holder data represents an opportunity to disrupt the human trafficking market by detecting and screening out trafficking activity.

**10) Legal Compliance:** All business have legal compliance standards they must comply with if they want to avoid criminal or civil consequences. At the most basic, they must all file paperwork to start their business, and they must file some type of tax document annually. Add in requirements from government bodies that regulate the transportation, finance, hospitality, communications, tourism, healthcare, firearms, narcotics, and other industries, and it opens up a plethora of opportunities to disrupt the human trafficking market. Traditional strategies to disrupt human trafficking have used legal compliance to focus solely on either demand reduction, victim rescue, or the arrest of human traffickers. While each of these strategies are important, they represent a failure of every other effort to detect and respond to human trafficking. If traffickers could not source victims; could not advertise their services; could not communicate with customers; could not transport victims; could not rent any physical spaces; could not not accept payments; could not open or maintain bank accounts; and had a near certain risk of criminal or civil consequences; trafficking of all types would, at worst, be reduced by over 80%, and at best would be stopped. Either way, we win.

**DEMAND DISRUPTION STRATEGY “Operation Time Vampire”**

