

# Illegality is in the Eye of the Beholder: Experimental Evidence on Criminality and Risks of Irregular Migration<sup>‡†</sup>

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Why do so many migrants decide to live clandestinely in foreign countries despite the risks involved? Existing work on illegal migration is closely tied to economic incentives, but we expect that individual perceptions and attitudes represent an important, but highly underrepresented, component of illegal migrant behaviour. We identify three psychological motivations underlying illegal migration: perceived necessity, considerations of risk, and norms that condone law-breaking. We test each mechanism through the analysis of two list experiments in Jamaica, an origin country with a disproportionately high migrant population and a wide variety of migration channels. We examine two important strategies available to migrants: falsifying documents and working under-the-table, and we find that the psychological motivations behind each strategy vary substantially. Support for falsifying documents is driven by perceived necessity, and support for working under-the-table is largely a function of the perceived risks and legitimacy of immigration laws. Our findings suggest that public policies and empirical research that conflate illegal migrant strategies may be incomplete or ineffective. The full picture may only come together after these strategies are decomposed.

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# 1 Introduction

In 2005, an estimated 200 million migrants around the world had irregular residence status [GCIM 2005]. In the US alone, there has been a dramatic increase in the size of the unauthorized population over the past two decades - from 3.5 million in 1990 to 11.1 million in 2009 [Passel et al. 2009, Hoefer et al. 2009]. These high levels of undocumented movement are often perceived as highly threatening to natives in top destination countries [Hood and Morris 1998, Cohen 2001]. Indeed, few groups of people have been so demonized and scapegoated as irregular migrants for the apparent threats they pose to national security, the economy, and national identity [Brader et al. 2008, Malhotra et al. 2013, Hainmueller and Hangartner 2013, Hainmueller and Hopkins 2014].

For migrants themselves, the choice to migrate illegally is a risky decision that can make for precarious living conditions. They have limited access to services and protections from the state, they often work for sub-market wages, and they must accept conditions of extreme uncertainty [Eschbach et al. 2001, Donato et al. 2005]. The cycle of risk perpetuates itself as restrictive, complicated immigration policies increase demand for intermediaries and create a market for organized criminal groups [Hernández-León 2013].

This begs the question: Why do so many migrants decide to live clandestinely in foreign countries despite the risks involved? The prevailing argument suggests that illegal migration takes place because the economic incentives outweigh the costs. But the cost-benefit analysis of illegal migration appears dismal relative to that of legal migration. The illegal migrant receives a lower wage, has fewer opportunities for employment, encounters higher costs throughout the migratory journey, and faces the risk of capture and deportation [Todaro and Maruszko 1987]. Under these circumstances, it seems unlikely that the this model could account for even modest proportions of illegal migrants. The model also suggests that it would be easy and effective to raise the costs of illegal migration by intensifying legal sanctions, yet this has largely not been the case [Donato

et al. 1992, Espenshade 1994].

We argue that individual calculations based on macroeconomic and political variables are insufficient in explaining illegal migration. Extant research has only scratched the surface, and very little has been done to understand the deeper motivations underlying the decision to migrate illegally. We identify three psychological motivations underlying illegal migration: perceived necessity, considerations of risk, and norms that justify law-breaking. We test each mechanism through the analysis of two list experiments in Jamaica, an origin country with a disproportionately high migrant population and a wide variety of migration channels. Our list experiments focus on two important strategies available to migrants: falsifying documents (i.e., illegal entry) and working under-the-table (i.e., illegal work). We find that the psychological motivations behind each strategy vary substantially. Individuals tend to support illegal entry when they feel desperate, or when their desire to migrate far exceeds their ability to do so legally. In contrast, perceived necessity is not a predictor of illegal work, which appears to be driven by perceived risks and legitimacy of immigration laws.

We also find very compelling differences in the deterring effects of policy for each strategy. Through our risk indicators, we observed that increasing the probability of apprehension only lowers support for working under-the-table. It does not deter individuals from supporting illegal entry at all. In fact, there is tentative evidence to suggest that it makes individuals *more likely* to support falsifying documents. Furthermore, increasing the punishment for these crimes has zero effect on either dependent variable.

This paper has important implications for policy and empirical research. Substantively, we develop a nuanced, psychological model of illegal migration that complements existing literature on the macroeconomic and structural factors. Furthermore, to our knowledge, this is the first attempt to differentiate between illegal strategies, and we find that these strategies depend on starkly different motivations. Our findings suggest that public policies and empirical research that conflate illegal migrant strategies may be incomplete or ineffective. The full picture may only come together after these strategies

are decomposed.

## 2 The Psychological Motivations of Illegal Migrants

Much of what we know about illegal migration describes demographic trends [Espenshade 1995]. Illegal migration flows tend to increase during planting and harvesting seasons and when the origin-destination gap in employment and wages is highest [Espenshade 1990]. Literature at the individual-level suggests that illegal migrants are most likely to be men between the ages of 15 and 29, and they are more likely to come from rural areas [Donato et al. 1992].

But these demographic variables do not explain *why* some individuals decide to migrate illegally. Many theories on international migration - such as dual labour market theory, world systems theory, and the “new economics of migration” - seek to explain the decision to migrate, but they do not directly address the decision to do so illegally [Massey et al. 1993]. The neo-classical economic model is most flexible for these purposes [Haug 2008]. In this theory, individuals evaluate the expected costs and benefits of moving to foreign locations relative to their home country, and emigrate when the expected net returns of moving outweigh the costs. The cost-benefit calculation is usually defined in terms of expected wages, but non-monetary variables, such as social, psychic, and political variables have also been considered [Fitzgerald et al. 2014, Borjas 1989, Todaro 1969, Harris and Todaro 1970].

Todaro and Maruszko [1987] build upon the standard neo-classical model to consider the “special circumstances” under which illegal migration takes place (p. 103). Relative to the standard model where immigration policy and illegality are not considered (e.g. Todaro [1969] or Harris and Todaro [1970]), an illegal migrant’s cost-benefit calculation includes the probability of capture and deportation. Additionally, illegal migrants often are burdened by an “illegality tax” on earnings, as employers take advantage of the

individual's legal status. They also generally encounter a higher cost of migration, involving transportation to the border and smuggling fees. It is also likely that the probability of obtaining a job is lower for illegal than for legal migrants, particularly in the presence of employer sanctions or document verification software.

But this model comes up short in answering some basic questions of illegal migrant motives. First, given that the risks and costs of the illegal migrant are so high relative to the legal migrant, what accounts for such high rates of illegal migration? Second, if the decision to migrate illegally were primarily a function of costs, then what explains the low effectiveness of increasing legal sanctions? And lastly, how would this model help us to understand why some individuals from similar economic backgrounds migrate illegally while others decide not to migrate at all? We argue that individual calculations based on macroeconomic and political variables are insufficient in explaining illegal migration. To complement existing theories, we expect that individual perceptions and attitudes represent an important, but highly underrepresented, component of illegal migrant behaviour. Indeed, policies, costs, and expected benefits are all filtered through the individual migrant's perceptions and attitudes. What might appear to be very risky, difficult, or immoral for one individual might seem safe, easy, or justified to another.

This paper aims to tie psychological motivations into the literature on illegal migration. How do individuals interpret the costs of illegal migration? Why are they perceived as insurmountable to some and not to others? We have identified three processes that can make illegal migration seem more palatable: 1) perceived necessity, 2) subjective considerations of risk, and 3) norms and values that justify law-breaking. The first explanation centres on the gap between the individual's aspiration to migrate and their ability to do so. The second concerns the individual's perceptions and tolerance of risk, and the third relates to normative considerations on legal non-compliance.

## 2.1 Perceived Necessity

Much of the literature is based on the underlying assumption that illegal migrants are individuals who want to move abroad but, for one reason or another, are unable to do so legally. This assumption seems intuitive. After all, the current migration landscape is not characterised by its fluidity. The ability to migrate is hampered by different costs, including the direct monetary costs of travel, opportunity costs of leaving one's current job, information and search costs to obtain employment, as well as the psychic costs of leaving a familiar environment [Massey 1990, Sjaastad 1962].

The gap between aspiration and perceived ability has long been considered in behavioural economic models. In bounded rationality and aspiration adaptation theory [Simon 1957, Selten 1999], individuals caught in this gap are expected to look for different strategies or *decision alternatives*. Individuals initially attempt to find the alternative that allows them to achieve or surpass their current aspiration level. If this proves too difficult, they may adopt a lower aspiration level [Selten 1999]. Adaptation is an iterative process that theoretically ends when aspiration and ability are aligned.

Aspiration adaptation theory can allow us to think of migration as an enterprise consisting of several alternatives that can be continuously adjusted. Immigration policies restrict the feasible set of decision alternatives available to a potential migrant, conditional on individual characteristics such as educational attainment and social networks. This situation leads to a frustrating state of “involuntary immobility” [Carling 2002]. Alternatively, if aspiration is sufficiently high, potential migrants may undergo a process of adaptation in which they consider illegal channels to circumvent legal restrictions.

Case studies suggest that this iterative process can reorient migrants towards illegal channels. Hernández-Carretero and Carling [2012] describe the plight of aspiring Senegalese migrants, for whom legal migration paths into Europe - such as family reunification or labour migration - are closed off. Placed in the situation of not being able to migrate legally, potential migrants have two options: migrating illegally or not

migrating at all, and they ultimately decide on the former. These migrants endanger their lives in overcrowded pirogues they hope will take them to the Spanish Canary Islands. As a consequence of this mismatch between aspiration and ability, these migrants accept a less than optimal solution to circumvent the constraints imposed by European governments, but they migrate nonetheless.

## 2.2 Considerations of Risk

Because illegal migration is so commonly associated with high risks, we expect that individual risk assessment will be an important predictor of support. Risk assessments are often broken down into two components: estimation and evaluation [Breakwell 2015]. Evaluation refers to the amount of significance that the individual places on risk assessments, and they are considered to be unique to the individual's personality [Zuckerman 1996, Eysenck and Eysenck 1963, Chauvin et al. 2007]. The implications for migration are readily apparent: individuals with risk-friendly personalities are more likely to tolerate the risks associated with migration [Jaeger et al. 2010]. This point might be particularly relevant for illegal channels.

Risk estimation broadly relates to the individual's calculation of adverse outcomes for a given action, the probability of those adverse outcomes occurring, and the perceived severity of those outcomes. This estimation lays the groundwork for the deterrence model, which maintains that state-imposed legal sanctions can deter crime by increasing the probability and severity of punishment [Becker 1968, Ehrlich 1973, Grasmick and Bryjak 1980, Klepper and Nagin 1989].

Some scholars have examined migration policies under the deterrence model framework, and they have found very little evidence to defend it. Much of this literature examines the effects of the IRCA (the Immigration Reform and Control Act) in the United States, which increased apprehension rates and punishments for illegal migrants. Increased apprehension was found to have little effect on illegal border crossings [Es-

pensshade 1994, Durand et al. 1999]. Migrants often make subsequent unlawful attempts after being bounced back from the border [Donato et al. 1992]. Furthermore, punishments were found to have a counter-productive effect on illegal migration [Kossoudji 1992].

In summary, we expect that risk-friendly individuals are more likely to migrate, and especially to migrate illegally, compared to their risk-averse counterparts. Meanwhile, the effects of risk assessments are less clear. Although the impact of deterrence on risk calculation is well established in the criminal justice literature, legal sanctions appear to have limited effects for illegal migrant flows. Much of the literature on US immigration policies have found little to no impact from increasing the rates of apprehension or the severity of sentencing.

### **2.3 Non-Compliance Norms**

Both theories above conceptualize illegal migration as a strategic choice. Potential migrants consider the costs and benefits of different channels and decide that they are best served by migrating illegally. But what if illegal migration is not the outcome of a rational deliberation? What if the decision to migrate illegally is fundamentally rooted in individual values and norms?

While most literature considers legal non-compliance to be a rational calculation, some work examines the moral and normative justifications for disobeying the law. Such internalized norms have been found to complement rational choice models of legal non-compliance for a variety of offences, such as white collar crime [Paternoster and Simpson 1996], tax evasion [Wenzel 2004], and theft [Nagin and Paternoster 1991]. These theories are brought to the migration context by Ryo [2013], who designed the Being Illegal Survey component of the Mexican Migration Project to test her arguments. This normative model is distinctly not based on rational calculations, but rather on people's implicit observations and interpretations of the law.



Ryo identifies three normative justifications for illegal migration: personal morality, legitimacy of authority, and social norms. At the individual level, potential migrants evaluate how immigration law corresponds with their personal experiences of morality and justice. Personal morality delineates which behaviours an individual perceives to be right and wrong [Robinson and Darley 1997]. While morality and legality often intersect, there are certainly laws to prohibit behaviour many would not consider immoral [Tyler and Darley 1999], and there are many moral issues unprotected by law [Krisch 2002]. Indeed, individuals are less likely to comply with a law when they do not perceive the law to be based on moral grounds, as is often the case with laws prohibiting drugs and alcohol [Robinson and Darley 1995, Tyler and Darley 1999]. Furthermore, people tend to approve of punishment when it is based on moral authority [Darley et al. 2000, Carlsmith et al. 2002, Sunshine and Tyler 2003].

Relatedly, individuals may not comply with a law they believe to be unfairly or unjustly implemented, even if the law appears to be moral in its intention. In much of the literature on legitimacy, scholars find that legitimate authority is associated with procedural justice or fairness Tyler [2001], Colquitt et al. [2005]. Authorities that apply laws transparently and equally across the population are perceived as more legitimate and, consequently, yield greater legal compliance [Paternoster et al. 1997, Hoffmann 2005, Tyler and Huo 2002].

At the social level, individuals form opinions about laws based on the normative evaluations of others. Individuals may respect a law because they anticipate a reaction from their networks [Etzioni 2000, Ellickson 1999, McAdams and Rasmusen 2007]. In many cases, the social incentive might be negative (i.e., one might perceive shame or guilt for breaking the law) or positive (i.e., increased esteem or respect for non-compliance) [McAdams and Rasmusen 2007]. In either case, it is the expected reaction of the social network that guides individuals through their decisions and provides incentives to break laws.

## 3 Research Design

### 3.1 Case Selection

Data collection for this project was conducted in Jamaica, an island with an unusually high number of potential migrants and a diverse set of common corridors. According to the 2014 LAPOP survey, 58% of Jamaicans intend to move abroad within the next three years [Zechmeister 2014]. This figure compares with 13.7% of Mexicans, the most common case study for migration research. Some estimates suggest that the Jamaican diaspora is as large as the island-based population [Glennie and Chappell 2010]. Indeed, according to the 2015 Economic and Social Survey of Jamaica, emigration creates the “greatest impact on the population size and structure,” even compared to other basic demographic indicators such as birth and death rates [ESSJ 2015].

Unlike typical migration case studies which rely on one common corridor - such as the Mexico-US corridor - Jamaicans have a wide variety of destination countries to assess and compare. Since becoming a British Colony, Jamaicans have migrated to Central America to work on construction projects or Cuba to work on sugar cane production. The United States and the United Kingdom recruited Jamaicans and other Caribbean nationals as part of the World War I and II efforts and post-war reconstruction [Glennie and Chappell 2010]. Today, its migration diaspora is concentrated in the United States, Canada and the United Kingdom, but many Jamaicans migrate within the Caribbean to countries such as the Cayman Islands, Bermuda, Bahamas, or Antigua and Barbuda.

### 3.2 Eliciting Preferences

Our dependent variable, support for illegal migration, presents a particular challenge for analysis. We expect that research on this topic is so limited, in part, due to the fact that illegal migrants prefer to remain unobserved and unidentified. Consequently, data

are scarce and often unreliable. The traditional source for aggregate data is based on apprehensions and deportations, but these data do not include illegal migrants who are never captured or who fail in their plans before reaching the border [Espenshade 1995].

Another option is to use survey data, but few surveys on migration ask about legal status [Sana and Conway 2013]. Among the few surveys that do include items on legal status, such as the Mexican Migration Project, social desirability bias presents fundamental difficulties for measurement. Desirability bias is the tendency of respondents to answer questions in a manner that will be viewed favourably by others. It often results in over-reporting of *good* behaviour and under-reporting of *bad* behaviour.

Our survey uses list experiments to measure support for illegal migration (see Blair and Imai [2012], Glynn [2013]). List experiments allow us to protect respondents' anonymity on sensitive items, such as those about illegal behaviour, while still generating meaningful data (e.g., Kuklinski et al. [1997;?], Holbrook and Krosnick [2010], Gonzalez-Ocantos et al. [2012]). The list experiment procedure is straightforward. Respondents are presented with a hypothetical scenario, and they are instructed to reveal (only) the number of responses they would support but not *which* responses they would support. Half of the respondents are randomly assigned to a control group, and the other half to a treatment group. The only difference between these two groups is the inclusion of a theoretically important but sensitive item, which is only included in the treatment list.

In theory, respondents are protected insofar as it is impossible for the survey enumerator to know which items the individual supports. In practice, however, improper implementation of list experiments can threaten anonymity. Many respondents and enumerators struggle to understand the instructions of the list experiment. Rather than reporting the number of items they would support, they may vocalise which item or items they support *the most*. Alternatively, they may respond to each item in the list individually, despite instructions not to do so. Finally, enumerators who read the options aloud may accidentally intonate personal judgements through even slight changes in tone or expression. This may inadvertently amplify social desirability bias.

We observed all of these patterns while conducting pilot tests in Kingston. As a result, we implemented a number of practical solutions. First, we devoted a substantial portion of enumerator training to the use and purpose of list experiments. During training, we conducted several mock interviews and highlighted which respondent behaviours were unacceptable. Second, we explained our instructions in greater detail in the survey instrument and specifically stated that the appropriate response would be a numerical sum. Third, we included a dry-run list experiment in the survey instrument before beginning our substantive items. This dry-run walked the respondent through an example where they identified the number of foods they might like to eat during the week. Finally, we used showcards to identify the list items and response options, and we specifically instructed enumerators not to read any of the lists aloud unless the respondent required assistance. In the field, enumerators read the prompt, presented the showcard, and the respondents considered the list privately until they gave their answer.

### **3.3 Multiple Strategies**

To our knowledge, all research on illegal migration assumes uniformity of illegal strategies. It is implicitly assumed that the risks of apprehension, punishments upon capture, and payoffs for success do not vary significantly between different illegal means. But potential migrants differentiate between these strategies. Strategies can involve illegal entry by evading immigration controls or using deception to circumvent them; violating the restrictions of a visa by, for instance, taking up paid work; or staying in a foreign country beyond what is permitted by a time-limited visa [Vollmer and McNeil 2011].

We focus on two common forms of illegal migration: obtaining fake documents and working while on a visitor permit. Exploratory evidence suggests that these two strategies are common among Jamaican migrants [Sigona and Hughes 2010, Thomas-Hope 2005]. These two forms of undocumented migration vary on a few key dimensions. Punishment for entering with false documents is arguably more severe than violating the

conditions of a visitor permit. In the United States, for example, the latter can result in arrest, deportation, and a bar on readmission for 3 or 10 years (8 U.S. Code §1227, INA §212(a)(9)(B), INA §222(g)). Section 1546 of the United States Criminal Code makes it a criminal offence to use fraudulent immigration documents. In the best case scenario, this is punished through a civil money penalty between US\$250 and US\$5,000 (8 C.F.R. §270.3(b)(1)(ii)(B), 1270.3(b)(1)(ii)(B)) and, in the worst case, a 10-year prison sentence (18 U.S.C. §1546).

While severity of punishment is that widely recognized in the neo-classical economic model we expect that these two forms of illegal migration vary in less tangible ways as well. While illegal entry occurs as soon as movement is initiated, the decision to work under-the-table can take place once the individual has spent several months in the host country. For an individual who has spent some time at the destination, deportation is destabilising. It can mean leaving family members or new connections formed as well as a routine and lifestyle. Having left employment with the intention of settling at the destination, a deportee may find herself jobless and burdened with a life-long stigma upon return [Miller 2012]. An unsuccessful entry with no arrest, on the other hand, may simply mean a quick return to life as usual.

Also, both forms of illegal behaviour result in very different negative externalities, and migrants are likely to care more about one set than the other. Someone who may, individually, be willing to take the risks involved in violating visa conditions, may not be willing to compromise their employer, who is often a friend or relative [Bloch and McKay 2014]. In the UK, an employer found to have hired a person whose permit does not allow her to work may face an unlimited fine (Asylum and Immigration Act 1996, Section 8(1)). In the U.S., the employer may be fined US\$3,000 per employee and imprisoned for six months (8 U.S.C. 1324a(a)(1)(A), 8 U.S.C. 1324a(2), 8 U.S.C. 1324a(f)). A person entering a foreign country with false documentation is also likely to have received assistance from other actors, in this case smugglers or document forgers. Unauthorized entrants may not be concerned for the welfare of these actors [Fazito and Soares 2013].

Lastly, the perceived difficulties of carrying out each form of illegal migration may vary. Nearly 60% of our sample believed obtaining falsified documents to be extremely difficult (compared to roughly 30% believing the same of finding a job under-the-table). To obtain false documents, an individual needs to know how to make contact with agents who operate informally and clandestinely and understand what is expected from the transaction. It may also mean putting oneself in danger. Intuitively, undocumented poses fewer risks and difficulties.

To be clear, these are not always mutually exclusive strategies. Most individuals who use falsified documents to enter a foreign country will find themselves working under-the-table. However, in order to clearly differentiate between the two strategies, we constructed our list experiment scenarios to be mutually exclusive: An individual entering a foreign country with false documentation cannot be violating the conditions of a government-authorized visa by working under-the-table, and an individual working while on a legal visitor permit will not have entered a foreign country using false documentation.

## 4 Data

Our survey was fielded between April and June 2016, and the sample includes all 14 parishes on the island.<sup>1</sup> We used a multistage sampling strategy - blocked by parish and clustered by enumeration district. Clusters were proportionally allocated based on 2011 census data and randomly selected. Within the enumeration district, households were selected through systematic sampling, in which every  $K$ th household was selected (where  $K=10$ ), and individuals were then selected using the most-recent birthday method. In total, our sample will consist of 1,200 face-to-face interviews with Jamaican adults from across the island.<sup>2</sup> The surveys were conducted on tablets using the Qualtrics off-line

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<sup>1</sup> Jamaica is geographically subdivided into 14 large administrative units, called parishes.

<sup>2</sup>However, because data collection is not yet complete, the analyses in the remainder of this paper contain 1,024 responses.

application to allow for complete randomization and customisation.

In order to capture the complexity of the migration decision, some survey items include multiple variations to account different destination countries and dependent variables (see Table 1). When we ask about illegal migration, we include separate items for document falsification and undocumented work respectively. For example, items regarding the risks, access, and approval of illegal migration will specify different questions for each illegal strategy.

Also, because Jamaicans traditionally choose from a wide set of destination countries with diverse immigration policies, all of our items regarding policy are destination country-specific. For these items, we ask the question for each of 5 or 6 countries. Most respondents answered each question for a list of 5 countries - the United States, the United Kingdom, Canada, Sweden, and the Cayman Islands. These countries were selected to maximize information without overburdening respondents. The US, the UK, and Canada are the top destinations for Jamaican migrants, but they have notoriously restrictive immigration policies. The Cayman Islands is present to represent another Caribbean Island that is also an important destination for Jamaicans. We included Sweden, not a common destination for Jamaicans, because it has similar living conditions to the top three countries and is also considered to have very open immigration policies.

This study focuses on the respondent's *top* destination country.<sup>3</sup> After all, some countries, such as the United Kingdom, impose high restrictions on non-EU members to obtain legal permits, while other countries, such as Canada, are far less restrictive. But for an individual interested in moving to the United Kingdom, the ability to obtain a permit from Canada is far less salient than the ability to obtain one from the UK. Those respondents who chose a destination not on the list also viewed their selected country as a sixth item. For the 14% of respondents who, for one reason or another, do not have

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<sup>3</sup>This is determined early in the survey, when respondents were asked, "If you could move to any country, where would you go?"

or did not provide a top destination country, we averaged their responses for the entire set.



Table 1: Describing and Coding the Variables

Variable Name	Response Range	Mean	Dichotomous Coding	Country Specific?	DV Specific?
Gap	Aspiration (1-7) - Ability to migrate (1-7)	2.365	Gap: 1 if $\geq 1$ High: 1 if $\geq 4$	No	No
Bureaucracy Gap	Aspiration (1-7) - Legal ability (1-7)	2.807	Gap: 1 if $\geq 1$ High: 1 if $\geq 4$	No	No
Permit Gap	Aspiration (1-7) - Ability to get permit (1-7)	2.552	Gap: 1 if $\geq 1$ High: 1 if $\geq 4$	Yes	No
Ability: Legal Channels	1-7: Extremely difficult to extremely easy	Enter: 2.05 Work: 3.08	1 if $\geq 5$	No	Yes
Risk Taker 1	1-4: Real risk avoider to real gambler	2.241	1 if $\geq 3$	No	No
Risk Taker 2	1-4: Cancel vacation to extend vacation	1.921	1 if $\geq 3$	No	No
Perceived Risk	0-10 People caught	Enter: 7.375 Work: 5.635	High: 1 if $\geq 7$ Low: 1 if $\leq 3$	Yes	Yes
Punishment	1-4: Not at all to extremely severe	Enter: 3.591 Work: 3.256	1 if =4	No	Yes
Unfair to dark	1-7: Strongly disagree to strongly agree	4.087	1 if $\geq 5$	if	No
Unfair to poor	1-7: Strongly disagree to strongly agree	5.026	1 if $\geq 5$	No	No
Fair to Jamaicans	1-7: Strongly disagree to strongly agree	3.616	1 if $\geq 5$	No	No
Social Approval	1-6: None to all would approve	Enter: 1.648 Work: 1.984	1 if $\geq 3$	No	Yes
Law Unfair	1-7: Strongly disagree to strongly agree	2.4	1 if $\geq 5$	No	No
Law Flawed	1-7: Strongly disagree to strongly agree	2.426	1 if $\geq 5$	No	No
Family Needs	1-7: Strongly disagree to strongly agree	2.752	1 if $\geq 5$	No	No

## 4.1 Perceived Necessity

We capture perceived necessity by calculating the difference between an individual's aspiration to migrate and their ability to do so. Aspiration to migrate is one of the first items included in the survey instrument to mitigate order effects from subsequent topics such as immigration policy, risks, and resources. Our aspiration indicator asks respondents, "Whether or not you think you would be ABLE to move abroad, how much would you LIKE to move to another country?"

We use a number of indicators to assess ability to migrate. First, we measure the respondent's perceived ability through the broad question, "How easy do you think it would be for you, personally, to move abroad?" Focusing on legal ability, we evaluate how competent the respondent feels when navigating bureaucracy. To measure this item, we ask respondents, "How easy do you think it would be for you to work through legal processes without professional help?" Finally, we consider the respondent's perceived ability to obtain a valid work permit in each destination country.

To calculate the gap in aspiration and ability, we subtract each of these measures of perceived ability from the stated aspiration to migrate. Gaps are censored such that respondents with negative gaps (i.e., higher perceived ability than intention to migrate) are recoded as 0. For the final models, we constructed two dummy indicators from the gaps. The first dummy equals 1 when any gap exists, and the second dummy equals 1 when a large gap exists.

Finally, we consider how perceived ability to access illegal channels might mitigate a low ability to access legal channels. For these items, we address both forms of illegal migration independently. Each respondent is asked how easy it would be to 1) obtain fake immigration documents, and 2) get a job under-the-table in a foreign country.

## 4.2 Considerations of Risk

Considerations of risk consist of the individual’s personal tolerance towards risk-taking and their estimates of risk. We used validated survey items from the *Rutger’s Investment Risk Tolerance* survey instrument to measure risk friendliness [Grable and Lytton 2003]. We included two items from the instrument that fit the Jamaican context. The first asks, “How would your best friend describe you as a risk taker”. The second item is more situational: “Imagine you have just finished saving for a *once-in-a-lifetime* vacation. Three weeks before you plan to leave, you lose your job. What would you do?”

Personal estimations of risk must account for the likelihood of apprehension and the perceived severity of the punishment. We measure both in our survey instrument. To measure likelihood of being apprehended while migrating illegally, we provide respondents with the following two scenarios: “Suppose 10 people try to [CROSS THE BORDER / GET A JOB in a foreign country] without legal documentation, how many of these 10 people do you think will get caught by authorities?” We measure the perceived severity of punishment through the question: Based on what you know, how serious do you think the punishment would be for someone getting caught in the following two scenarios? Consistent with the rest of the survey, these two scenarios included getting caught entering a foreign country without documents and working under-the-table.

## 4.3 Norms and Law-Breaking

In accordance with Ryo’s [2013] instrument on legal non-compliance, we operationalise legitimacy of immigration law as the perceived fairness in the law’s implementation. Our items ask respondents if they believe that immigration authorities treat Jamaicans fairly, if they treat lighter-skinned Jamaicans more fairly than darker-skinned Jamaicans, and if they treat wealthier Jamaicans more fairly than less wealthy Jamaicans. Respondents who believe that the law is implemented unfairly are considered to perceive the law as illegitimate.

Morality - or the internalized sense of right and wrong - is operationalised into three situational items. These items ask if the respondent believes it is okay to disobey the law when 1) the law is flawed, 2) the law is unfair, and 3) it is necessary to support your family. Respondents who agree that it is okay to disobey the law under these circumstances are considered to have weaker moral scruples about breaking the law.

Finally, we assess the extent to which social approval drives preferences for law-breaking. We include two items on social approval, one for each type of illegal migration. The items ask, “How many of your family members, relatives, and friends would approve if you wanted to enter a foreign country without documentation (or, in the case of the second item, if you took a job under the table in a foreign country)?”

#### **4.4 Confounders**

Although treatment for the list experiment is random, assignment to the theoretically important subpopulations is not. We include a number of control variables to guard against confoundedness. The first four variables - sex, age, education, and household income - are generally straightforward to measure, but as often occurs with survey data, household income yielded a high proportion of non-response. More than a quarter of the sample declined to provide this information. We imputed missing values by modelling household income as a function of gender, age, education, marital status, employment status, sector of employment, and household remittances received.

We also controlled for the respondent’s international support network. Just as income and education levels account for resources available to a potential migrant, many scholars argue that migrants use their contacts and networks abroad as resources to acquire information, get jobs, and establish themselves in a new country [Massey 1990, Massey et al. 1993, Haug 2008]. In the context of a large battery on each of the respondent’s international contacts, we asked, “Do you think you could count on this person to help you settle into a new country? For example, they could help you find a place to

live or find a job.” We include the size of each individual’s resource network as a control variable in each model.

## 4.5 List Experiments

To understand the motivations behind both illegal strategies, we include two list experiments.<sup>4</sup> For the entry experiment, respondents were shown a list of things that people sometimes do to move permanently to a foreign country. Half of the respondents were randomly assigned to a control group to whom the survey enumerator lists only three potential responses:

- Apply to a university in the new country
- Ask family members abroad to sponsor you
- Be smuggled across the border

Similarly, the work experiment presents a list of things that people sometimes do to work in a foreign country. The control list includes the following items:

- Get an employer to sponsor you
- Build an online profile for recruiters
- Deal drugs

For each list, the first two items are likely unobjectionable. The third item is designed to be more radical so that most respondents do not necessarily respond affirmatively to all three control items. This is referred in the literature as a low-prevalence item that minimizes design effects when comparing control and treatment groups.

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<sup>4</sup>Treatment assignment was randomized independently for each experiment.

The other half of respondents were randomly assigned to a treatment group, to which the survey enumerator lists the three potential responses listed above as well as a fourth, sensitive item. In the case of the entry experiment, the treatment group list included an option to *obtain a fake visa*. In the work experiment, we included the option to *work under the table while on a tourist visa*.

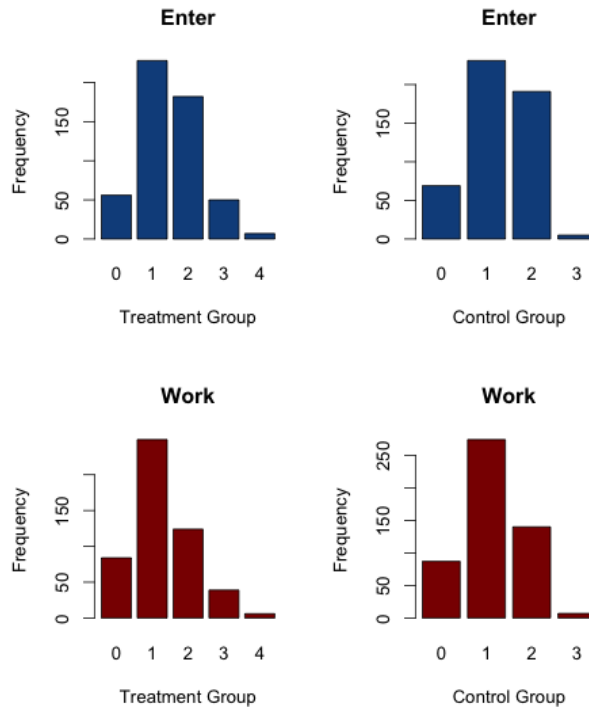
Again, respondents were asked to reveal only the total number of potential responses that they would support. Under complete randomisation, the difference between the average number of items that respondents in the treatment and control groups report represents an estimate of the percentage of the sample that supports the illegal/sensitive behaviour.

Before reporting results from the statistical analysis, we will assess the degree to which the list experiments accurately elicited preferences for illegal migration. List experiments hinge on the assumption that there are no design effects, ceiling effects, or floor effects [Blair and Imai 2012]. Design effects arise when the presence of the sensitive item changes the respondent's relative perceptions of the other items in the list, hindering comparisons between treatment and control groups. Ceiling and floor effects refer to the scenarios in which respondents support or reject every item in the control list. In the presence of these effects, the sensitive item stands out sharply from other items in the list, and treatment group respondents who support this item sacrifice their privacy.

These three challenges can be largely abated by careful design. The presence of the low-prevalence item in the list is intended to mitigate the possibility of ceiling and floor effects. Figure 1 shows the distributions of the treatment and control groups and suggests that the presence of these effects is unlikely. The top panel compares the groups for *Enter* and the bottom panel shows the groups for *Work*. The presence of ceiling and floor effects would manifest itself by noticeably different skews in the distributions in the control items. Figure 1 suggests that this does not appear to be the case. Indeed, for each experiment, there appear to be very similar proportions of responses for 0, 1, and 2 items, and the control group's 3 item responses closely resemble the treatment group's

4 item responses.

Figure 1: Distributions of List Experiments

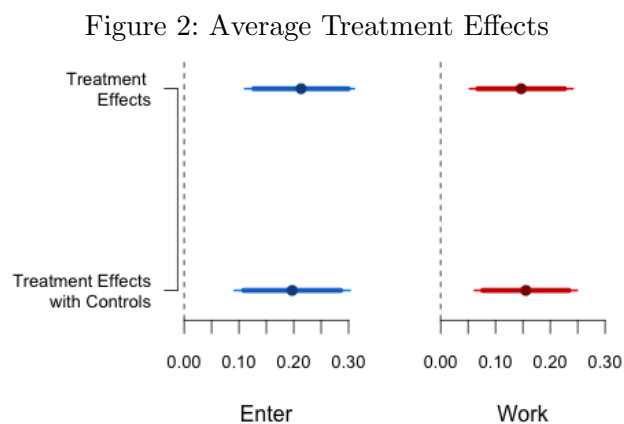


Next, we statistically test for design effects using the `ict.test` function in the R *list* package [Imai 2011]. With a Bonferroni correction for multiple testing, our minimum p-values (1.2 and 0.620 for *Enter* and *Work* respectively) adequately fail to reject the null hypothesis of no design effects for both experiments. Thus, the lack of design effects and the close distributions between treatment and control groups suggest that the list experiments were well designed to capture preferences for illegal migration.

## 5 Analysis and Results

We model the respondent's answer as a linear function of his/her treatment assignment and the control covariates. We also adjust the models to account for the sample design by

including fixed effects by parish and clustered standard errors by enumeration district. These models predict the count of items provided by respondents with a dichotomous variable that indicates whether or not the respondent received the sensitive item (falsify documents and work under-the-table). Under the conditions of randomization, the treatment and control groups are equally likely to support all three non-sensitive items. Given that the groups are identical on every measure except for the addition of a fourth item on the list, any differences between the groups may be attributed to the addition of the sensitive item. Specifically, differences between the groups - the average treatment effect - may be interpreted as the proportion of respondents who support illegal migration.



In Figure 2, we present the results of our baseline models for both obtaining a fake visa and working under-the-table while on a tourist visa (hereafter referred to as *Enter* and *Work* respectively). The average treatment effect model reports the effect of treatment assignment on the item count, and the baseline model includes the control variables. This is the model that will be used for the remainder of the statistical analyses as we test the theoretical arguments through heterogeneous effects.

For both models in Figure 2, the list experiments are highly significant. The treatment effects show that 21% of the sample support illegal entry, and 14.7% support illegal work. As would be expected, the control variables do not shift this effect significantly. The implications of these findings are compelling for a number of reasons. These



models suggest that approximately 1 in 5 Jamaicans support illegal migration. Indeed, *more* people would support the riskier and more costly activity - entry - than working under-the-table. This is a surprising finding, and one that makes little sense from a rational-choice, cost-benefit perspective.

In addition to the average treatment effect, Figures 3-5 plot the heterogenous treatment effects, or the interaction between treatment assignment and various relevant individual characteristics. The interactions test the degree to which theoretically-relevant subpopulations predict the significance and magnitude of the treatment effect. We focus on the heterogenous effects that speak to our three theoretical arguments: namely, that individuals support undocumented migration when 1) there is a large gap between their ability and aspiration, 2) they are undeterred by perceptions of risk or punishment, and 3) their normative considerations of immigration policy lead them to believe breaking the law is acceptable. In Figures 3-5, each point estimate reflects a different model that includes one interaction at a time.

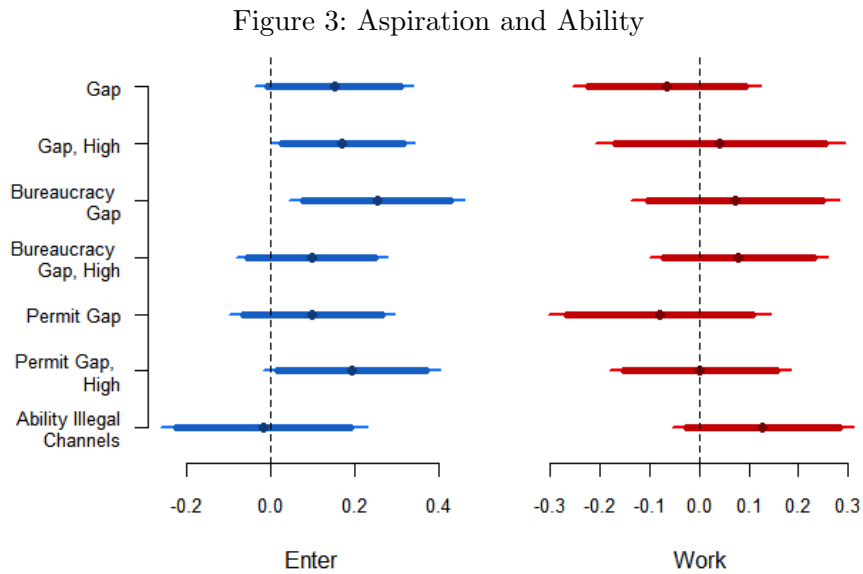
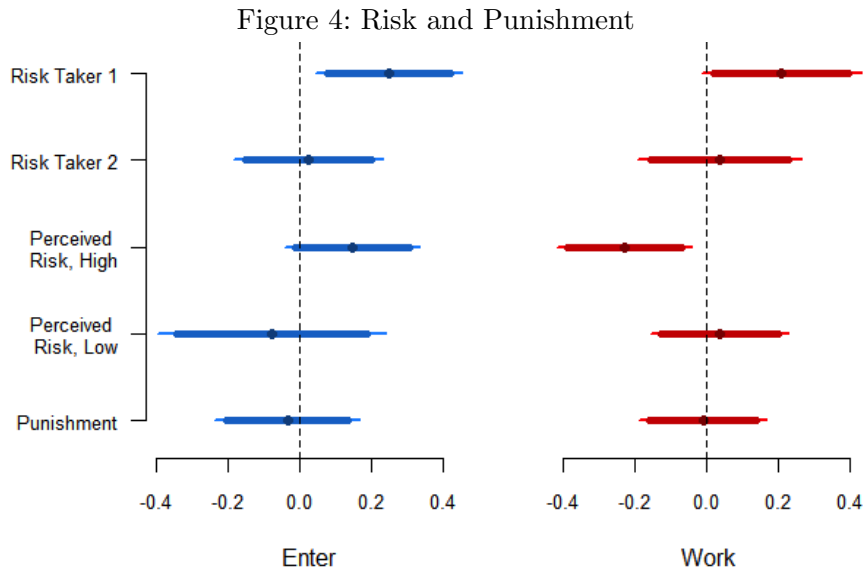


Figure 3 presents the results of the perceived necessity arguments for *Entry* and *Work*. Among individuals who perceive a large gap between their stated migration aspiration and ability, we find that 17% support illegal entry. Around 19% of individuals

whose perceived ability to obtain a work permit is much lower than their migration aspiration would support unauthorised entry. Both estimates are significant with a p-value of 0.1. The treatment effect is much higher (24%) for individuals who perceive some gap between their aspirations and their perceived ability to deal with bureaucratic processes, as required in visa applications, and is significant at a p-value of 0.02. Meanwhile, the coefficients for access to illegal channels were not significant, and none of the heterogeneous effects were significant in the *Work* experiment.

A comparison of the two list experiments is quite revealing. While the *Entry* experiment yielded a number of significant heterogeneous effects that are all in the theorized direction, none of these effects were even remotely significant for the *Work* models. This comparison suggests that individuals who desperately wish to migrate but feel they cannot do so legally are significantly more likely than their counterparts to support falsifying documents. This finding has face validity, given the high costs of this strategy. The less risky strategy, on the other hand, is not related to perceived necessity.



Next, we examine the role of risk perception and risk taking on support for illegal migration. The models in Figure 4 demonstrate that an individual's propensity to take risks accounts for their support for both illegal entry and work. In fact, 25% of risk

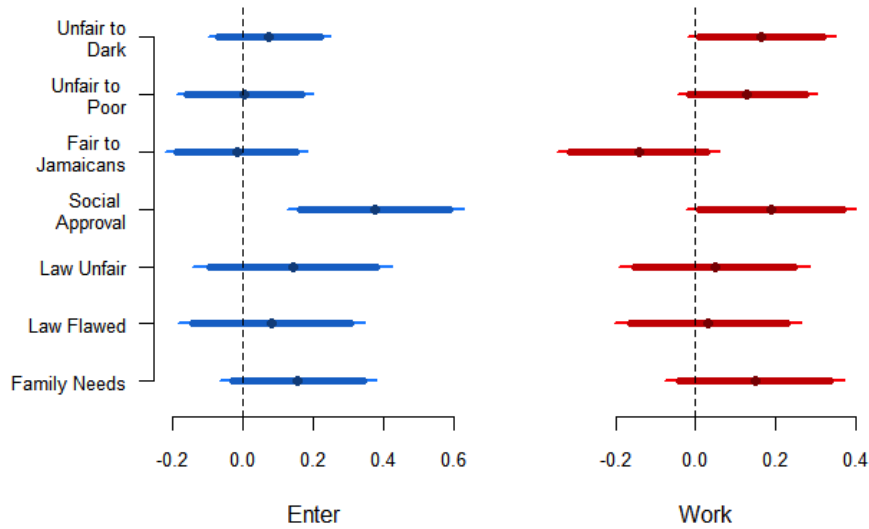
friendly individuals support undocumented entry and 21% support working under-the-table. These highly unsurprising results are significant at a p-value of 0.02 and 0.07 respectively.

Meanwhile, 23% of individuals who perceive a high risk in working under-the-table would disapprove of this action. While this finding appears unsurprising, it starkly contrasts with extant research that finds rates of apprehension to have no effect on illegal migration [Donato et al. 1992, Espenshade 1994, Ryo 2013]. Among the same subgroup, we find a point estimate in the opposite direction for the *Entry* models. That is, individuals who expect that most people get caught are *more likely* to support illegal entry. While this effect is not quite significant at the 90% level, these findings should not be disregarded. After all, even if the effect were null, it is certainly not negative as it is for *Work* and as would be predicted by the deterrence model of criminal behaviour. Indeed, it is possible that the diverging results for the two strategies are responsible for the null effects in prior research, which have conflated all illegal strategies into one indicator.

Finally, the punishment indicators are found to have no significant effects on support for either strategy. Indeed, the point estimates hover very close to 0. These findings are important precisely because they are found to have no effects. Individuals who perceive the punishments for these crimes as very severe are *not* less likely to commit the crime. This finding broadly concurs with the established literature, which argues that increasing punishment poses less of a deterrent than increasing apprehension [Ehrlich 1973]. However, in conjunction with the prior findings on the probability of apprehension, it appears that changes in policy may have little effect on support for illegal migration - especially illegal entry.

Finally, we test the theories on non-compliance norms. The most dramatic effect is clearly that of social approval. Indeed, social approval appears to play a very important role when it comes to support for both types of undocumented migration. This is particularly clear in the *Entry* experiment, where we find 38% support for this action

Figure 5: Norms



among individuals whose family and friends would also approve. We see a similar trend when it comes to social approval for working under-the-table, with 19% of individuals likely to support this action, with an associated p-value of 0.08. Although these findings are suggestive, they are not conclusive. After all, it is possible that individuals who support these behaviours are simply more likely to connect with other individuals who are similarly supportive. Thus, while there is a clear association, the effect of social networks is not necessarily causal.

There are also some compelling results for perceived legitimacy. Perceived illegitimacy (i.e. unfairness) is associated with higher support for for *Work*. That is, individuals who believe that immigration law is biased against Jamaicans, especially darker-skinned Jamaicans, are more likely to support working under-the-table. However, perceived legitimacy has no effect on *Entry*. It is possible that respondents are cognizant of the extra-legal costs associated with both forms of illegal migration. A migrant apprehended at the border is often perceived to lose very little [Donato et al. 1992, Espenshade 1994]. On the other hand, a migrant who is apprehended while working will presumably have a job and a life to leave behind.

The final models testing the morality hypotheses have no discernible effect on either outcome. Thus, although legitimacy and morality appear to be closely connected conceptually, but they have significantly different effects on legal non-compliance. The perception that a law is implemented unfairly can drive behaviour, but the moral foundation of that law does not.

## 6 Discussion

If undocumented migration is so risky and dangerous, why is it so common? Existing work on illegal migration is closely tied to economic incentives, and there has been little discussion of the underlying psychological motivations for undertaking this behaviour. By analysing two list experiments in Jamaica, we examine the extent to which perceived necessity, risk taking, and norms condoning law-breaking drive support for illegal migration.

This paper finds significant support for illegal migration. Approximately 15% to 20% of our sample would support migrating through illegal channels. Of course, this is not to say that every person who supports illegal migration has the resources and sufficient desire to do so. However, the high level of support would be troubling for policy-makers who hope to curb undocumented movement across borders.

We find evidence that risk taking and social approval drive support for illegal migration in general. However, different factors motivate different illegal migration strategies. We find that support for entering with false documents is highly related to perceived necessity, or the gap between aspiration and legal ability to migrate. We operationalised this gap in a number of different ways and find support for several models. None of the gaps that we measured were significant predictors of support for working under-the-table.

Meanwhile, we found that support for working under-the-table is significantly driven by perceptions of immigration law. Individuals are likely to support working illegally

when they do not believe that the risk of apprehension is high, and when they believe that immigration law is illegitimate. These are precisely the effects that policy-makers anticipate when designing immigration laws. However, these effects do not manifest themselves in the *Enter* models. We found no evidence to suggest that support for falsifying documents is driven by policy considerations. In fact, we find weak evidence to support the opposite. That is, individuals who believe that the probability of apprehension is high may be even more likely to support document falsification.

Our findings emphasize the importance of considering multiple strategies for illegal migration. While restrictive policies may decrease support for some strategies, they may be ineffective for others. Our results suggest that support for falsifying documents is highly conditional on the perceived necessity of following illegal channels. It is possible that such a strategy is driven by desperation, and legal repercussions are considered trivial.

These results suggest a number of avenues for further research. For example, we believe that more research will be necessary to tease out the causal argument behind social approval. Lab experiments might demonstrate that an individual's decision to migrate illegally can be influenced by perceiving illegal migration within their networks or even within weak ties. Also, we can only speculate about how our findings would differ if the sample were limited to serious potential migrants. Our sample is approximately evenly split between those who have seriously considered migrating and those who have not, but we simply do not have enough observations in each cell to test our theories for the subgroup of potential migrants only. The last point we will make refers to spatial-temporal substitution [Czaika and De Haas 2013]. If faced with legal barriers in one destination country, when might a migrant decide to change destinations rather than migrating through illegal channels? Or perhaps delay the decision to migrate? Further research will be necessary to compare alternative migration outcomes.

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