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THE SIGNALING VALUE OF GOVERNMENT ACTION:
THE EFFECT OF ISTANBUL CONVENTION ON FEMALE MURDERS

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The Signaling Value of Government Action: The Effect of Istanbul Convention on Female Murders

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ABSTRACT

We analyze the expressive content of government action, focusing on the Istanbul Convention—an international treaty aimed at protecting women against violence, signed and ratified by 39 countries. In 2021 the Turkish government withdrew from the Convention, 10 years after signing it. Although the withdrawal did not alter existing laws, women's rights advocates viewed it as a signal of increased tolerance for violence against women. Using four datasets on domestic violence, and female murders, including one from the police, we investigate the impacts of both Turkey's exit from the Convention and its initial entry. Analyses, including a difference-in-difference model using male homicides as control, show that the withdrawal resulted in about 65 additional female murders per year, primarily committed by intimate partners. The effect is more pronounced in provinces where the long-governing religious-conservative coalition parties have stronger voter support and in provinces with lower education levels. Conversely, Turkey's entry into the Convention in 2011 had the opposite impact, leading to a decrease in female murders. The signing of the Convention, which acted as a normative signal against violence, and the subsequent enactment of comprehensive legislation strengthening deterrence, had distinct effects. The signaling effect of the Entry was more significant in the same provinces that reacted more strongly to the Exit: those with lower education levels, stronger support for the governing party, and the Eastern region of the country. These findings support the premise that government actions are interpreted as signals by society.

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The Signaling Value of Government Action:
The Effect of *Istanbul Convention* on Female Murders

I. Introduction

There are substantial welfare losses associated with mortality related to violence (Soares, 2006). The estimated cost of risk to life and health is between \$1.2 and \$2.2 trillion per year in the U.S. alone. (Anderson, 2021). Violent behavior and the acceptance of violence in human interactions are particularly concerning for women. The World Health Organization reports that more than 730 million women, or about 30 percent of women worldwide, have experienced intimate partner violence or non-partner sexual violence (WHO, 2021). Relatedly, acceptance of violence against women is wide-spread. When asked “Please tell me whether you think it can always be justified, never be justified, or something in between for a man to beat his wife,” about 25 percent of men in Turkey and China respond that it may be justifiable for a husband to beat his wife. The rate goes up to 35 percent in Mexico and Taiwan, and to 40 percent in Serbia and Tunisia. Fifty percent of men in South Korea believe that it may be justified for a husband to beat his wife, and the rate is 73 percent in Tajikistan (Haerpfer et al., 2022).

Research in economics and other disciplines has revealed that differences in cultural norms can provide insights into variations in violence across societies. For example, Grosjean (2014) has extended the work of Nisbett and Cohen (1996) to show that the persistently high homicide rate in Southern U.S. compared to the rest of the country is attributable to the “culture of honor” inherited by the Southerners from their Scot-Irish ancestors. Cao et al. (2021) demonstrated that within a country, members of ethnic groups with historical backgrounds in herding, as opposed to agriculture, have developed cultural norms associated with conflict, retaliation and revenge-taking. Female genital mutilation, which has been declared as a human rights violation by the World Health Organization, is a cultural practice designed to control women’s perceived promiscuity. The prevalence of this violent practice varies greatly across societies, even among those within the same geographic region or sharing the same religious beliefs (Becker, 2024), pointing to deep-rooted sources of violent behavior. Similarly, Alesina et al. (2021) use Demographic Health Surveys from African countries and document the impact of cultural factors (ancestral anthropological and cultural practices of ethnic groups) on violence perpetrated by men against their spouses.

Because the certainty and severity of punishment are important determinants of crime (Corman and Mocan, 2000; Drago et al., 2009; Draca et al., 2011), a direct approach to addressing illicit violent behavior is through the enactment of laws to penalize offenders and deter those who, on the margin, are likely to engage in such acts. Importantly, it has been suggested that laws can influence behavior not only by increasing the costs associated with the behavior but also by providing a signal about desirable social norms (e.g. Cooter 1998, Posner 2002, 1998). For example, Posner (1998) presents a signaling model in which actions serve as signals, and government actions can become symbols to which that people respond. Similarly, Sunstein (1996) states that laws have an “expressive function,” which is defined as “*the function of law in “making statements” as opposed to controlling behavior directly.*” (Sunstein, 1996; p. 2024).

Along the same lines, when modeling the interplay between laws and norms, Benabou and Tirole (2011) write that “*Thus, imposing a heavy sentence for some offense or a zero price on certain transactions means both setting material incentives and sending a message about society’s values, and hence about the norms according to which different behaviors are likely to be judged.*”¹

It has also been argued that the enactment of a law alone does not ensure its effectiveness or the desired impact on social norms. Bicchieri and Mercier (2014) and Bicchieri (2017) contend that laws are more likely to influence social norms if they are aligned with existing societal values. A similar conclusion has been reached by Acemoglu and Jackson (2017) in their analysis of the interplay between laws and norms, who suggest that laws could be more effective in changing social norms if they are not too far away from the existing norms. These authors argue that laws in strong conflict with the existing norms may backfire, and that a gradual tightening the laws may be more effective in altering social norms.

Following this framework, in this paper we investigate the impact of a government action that may be perceived as a signal of leniency toward violence against women, holding constant the legal framework. More specifically, we ask whether the government's

¹ Sunstein (1996) makes the same point about the expressive content of law. When considering the meaning of the regulation of hate speech, he asks “Do such regulations “mean” that victims of hate speech require special paternalistic protections, are weak and thin-skinned, and unable to take care of themselves? Or do they “mean” that bigotry is utterly unacceptable in a liberal society?”

withdrawal from an international convention aimed at preventing violence against women has led to an increase in female murders, despite no changes to formal legal sanctions for violent crime.

In the next section we provide the conceptual background linking norms to behavior and summarize the related literature to place the contribution of this paper in context.

II. Theoretical Underpinnings and Related Work

It has long been proposed that to better explain observed human behavior and individuals' responses to incentives and context in which the decisions are made, utility functions should be specified to incorporate concepts such as altruism, inequality aversion, and reciprocity (e.g. Fehr and Charness 2025, Cox et al. 2008, Falk and Fischbacher 2006, Dufwenberg and Kirschsteiger 2004, Fehr and Schmit 1999). However, as a recent review highlights, utility functions that include dimensions of social preferences still fall short of fully explaining the regularities observed in laboratory experiments—such as variations of public goods games, ultimatum games, and others (Capraro et al. 2024).

A more recent branch of this literature has begun to incorporate moral preferences and the desire to follow social norms (e.g., Kimbrough and Vostroknutov 2018, 2016, Kessler and Leider 2012, Krupka and Weber 2013, López-Pérez 2008). In these models, utility functions explicitly account for the extent to which individuals adhere to prevailing social norms. Specifically, norm-dependent utility functions are specified, in which behaviors that deviate from prevailing social norms generate disutility. For example, Kimbrough and Vostroknutov (2016, p. 610) write

“When people judge behavior, they compare it to an external, socially defined normative standard, and individuals internalize this process, judging their own behavior according to its conformity to the norm. This can be modeled with a simple utility function in which deviations from norms generate a utility cost.

Several versions of such utility functions have been proposed, with a general formulation given by:

$$(1) \quad U(\omega) = V(\omega) - \phi N(\omega - \pi),$$

where ω stands for an action of the individual, $V(\omega)$ represents the utility value of that action, and π is the prevailing social norm. The function $N()$ captures the cost of violating the norm, where $N=0$ if $\omega \leq \pi$, and $N>0$ if $\omega > \pi$.

In this framework, there is no disutility from conforming to the norm or taking an action below the norm (e.g., consuming alcohol below the socially acceptable level), but there is a loss of utility if the action exceeds the norm (e.g., drinking above the norm). The parameter $\phi \geq 0$ reflects the sensitivity of the individual to the norm.

The origins and evolution of social norms have been widely studied across disciplines—including philosophy, psychology, and economics. A central finding is that individuals' perceptions of how others behave are key drivers in the formation and adjustment of norms.² This implies that one's assessment of a social norm is shaped by perceptions of others' actions. For example, when individuals receive media reports about the prevalence of corruption in their community, they begin to engage in dishonest behavior themselves. This pattern has been observed in various contexts—such as increased shoplifting in Italy (Masera and Gulino 2023) or cheating on exams in Mexico (Ajzenman 2021), arguably due to a realignment of the norm of honesty -- that is, a shift in what individuals perceive as the “normal” regarding dishonesty in their social environment. Similarly, multiple field experiments have revealed that when individuals observe increased littering and disorder in their environment, they start littering and stealing themselves. (Berger and Hevenstone 2016, Keuschnigg and Wolbring 2015, Dur and Vollaard 2015, Keizer et al. 2013, Keizer et al. 2008).

A related study demonstrates that misperceptions of social norms can significantly influence individual decision-making (Bursztyn et al. 2020). This research finds that young married men in Saudi Arabia substantially underestimate the extent to which other men support women working outside the home. Specifically, they perceive the prevailing social norm (π) favoring female labor force participation to be lower than it actually is. As a result, allowing their own wives to work outside the home (ω) is perceived as a greater deviation from the norm, thereby imposing a higher disutility. Providing these men with information about the actual prevailing norm of support significantly increases their willingness to help their wives search for jobs, as well as their wives' actual participation in the labor market.

As discussed in the previous section, it has been argued that laws can provide normative signals to society, shifting the parameter π . For example, it has been suggested that “... *government symbols endorsing or disapproving a religion will lower or raise the social costs from openly practicing that religion. Government expression is thus not so different than material subsidies or taxes of religion.*” (McAdams 2000, p. 388). However, analyzing

² See Mocan 2025, Chapters 8 and 10 for a synthesis.

the degree to which modifications of laws or actions of the government shape social norms is a challenging task, although recent studies provide experimental and empirical evidence for the impact of laws on norms. Lane et al. (2023) conducted vignette experiments in the UK, U.S., and China, where participants assessed the social appropriateness of various behaviors that are regulated by legal thresholds. The results suggest that in a controlled laboratory setting laws can have a causal impact on shaping social norms. Aksoy et al. (2020) analyzed data from multiple waves of the European Social Survey to examine the effects of legalizing same-sex relationships. Their findings indicate that legal recognition is associated with improved attitudes toward sexual minorities, suggesting that the legalization of same-sex relationships plays a significant role in shifting societal attitudes in a more accepting direction. Funk (2007) examined the impact of repealing mandatory voting laws in some of the Swiss cantons. Although voting had been compulsory, the fine for not voting was merely symbolic, equivalent to about \$1. When these cantons abolished mandatory voting, voter turnout significantly decreased compared to cantons where voting had never been mandatory. The substantial decline in voter turnout, despite the minimal change in the penalty (from \$1 to zero), suggests that the reduction in voting rates can be attributed to the signaling effect of the repeal, which appears to have sent the message that voting is unimportant and no more than an optional activity. Sanin (2024) found that a Rwandan domestic violence law, which criminalized domestic violence and permitted unilateral divorce, led to an increase in the divorce rate. Younger women—those aged 0-14 during the 1994 genocide—observing the rising divorce rate among the older cohort, display a lower tolerance for domestic violence, suggesting a shift in social norms regarding violence.

A growing body of related research has examined the impact of political and religious events, as well as the influence of political and religious leaders' speeches on existing norms. For instance, Ajzenman et al. (2023) demonstrated that the anti-scientific rhetoric of Brazilian President Jair Bolsonaro, which downplayed the risks of COVID-19, led to reduced social distancing during the pandemic. Müller and Schwarz (2023) found that Donald Trump's tweets about Muslims increased xenophobic tweets, cable news' mentions of Muslims, and hate crimes against Muslims in the following days. Bursztyn et al. (2020) provided experimental evidence that Donald Trump's victory in the 2016 U.S. Presidential election increased individuals' willingness to publicly express xenophobic views. Grosjean et al. (2023) analyzed traffic stops by the police and found that political rallies by Donald Trump during his 2015-2016 election campaign led to an immediate increase in the probability that a

stopped driver was Black, with a higher effect when Trump's speeches contained racial issues.

Three papers in this domain are particularly relevant as they illustrate how *a single event* can influence prevailing social norms. Bassi and Rasul (2017) analyzed the influence of Pope John Paul II's visit to Brazil in 1991, showing that the Papal visit reduced intentions to use contraception and increased the frequency of unprotected sex, resulting in a rise in births nine months after the visit. In other words, Pope's visit and his speeches appear to have triggered a norm adjustment pertaining to family planning, which in turn led to change in behavior. Similarly, Beach and Hanlon (2023) showed that the Bradlaugh-Besant trial in Britain in 1877 triggered a norm alteration in family planning, leading to a decline in fertility not only in Britain but also in culturally British households in Canada, the U.S., and South Africa.

A recent study reported that the murder of George Floyd by a police officer in Minnesota in May 2020 resulted in an increase in the number of gunshots but a decrease in the ratio of 911 emergency calls to gunshots in 13 major U.S. cities during the period following the incident, compared to the period prior (Ang et al. 2025).³ This suggests that George Floyd murder led to a decline in crime reporting by civilians despite a rise in disorder, possibly reflecting a change in civilian behavior when a norm of trust between the police and the public is breached.

In summary, the actions of social and political leaders as well as the enactment of laws can serve as signals indicating prevailing norms or shifts in them, thereby influencing individuals' behaviors. Along these lines, in this paper we address the following question: Holding constant the legal and the law enforcement landscape, what is the impact of government action that may symbolize leniency for violence against women? More specifically, does a government action, potentially perceived as a signal of tolerance toward violence against women, lead to an increase in the murder of women, even if legal sanctions for murder and violence have remained intact?

In the first part of the paper, we analyze the impact of Turkey's withdrawal from Istanbul Convention. The aim of the Convention, the details of which are described in the next section, has been to reduce violence perpetrated against women. Although Turkey was the first signatory of this convention in 2011 among the 39 nations that have committed to it,

³ The authors use a 73-day window before and after the murder of George Floyd, but they show graphically that the incidents of gunshots remained high and the 911 call-to-gunshot ratio remained low until the end of 2020.

it withdrew from the Convention 10 years later in March 2021 on the grounds that “*The Istanbul Convention, originally intended to promote women’s rights, was hijacked by a group of people attempting to normalize homosexuality- which is incompatible with Türkiye’s [the Turkish word for the country of Turkey] social and family values. Hence the decision to withdraw.*”⁴

We find that the withdrawal from the Convention had no impact on male murders, but it led to an 18 percent increase in female murders. It is important to underscore that there were no changes following the withdrawal to the infrastructure for preventing domestic violence and protecting victims, such as domestic violence hotlines and shelters. Importantly, as we discuss in Section VI, our analysis of the legislations passed in the Parliament, as well as the Executive Orders issued show that there were no changes in laws or regulations related to violence either before, during, or after the withdrawal. Furthermore, government ministers, including the Minister of Interior (responsible for the police), the Minister of Justice, and the Minister of Family and Social Services, repeatedly assured the public that there would be no changes in enforcement or penalties after the withdrawal. The president, Recep Tayyip Erdogan, also made statements about the withdrawal and argued that it had no effect on violence against women because criminal laws remained the same and that they were effective.⁵

To the extent that law enforcement, penalties for violence, and expected punishment stayed the same, our results are attributable to a perceived shift in social norms triggered by the withdrawal from the Convention. In other words, to the extent that the general public viewed the withdrawal as a signal for the society's tolerance for violence towards women, this would lead to behavioral change on the margin.

It could be argued, however, that although the legal framework and penalties for violent crimes remained unchanged after the withdrawal, enforcement practices may have nevertheless shifted. Police and prosecutors might have become less eager to pursue perpetrators of violence against women, thereby reducing the expected punishment and contributing to an increase in such incidents. In other words, *de facto* enforcement may have decreased although *de jure* enforcement remained the same. This can only happen if the

⁴ From the “Statement Regarding Türkiye’s withdrawal from the Istanbul Convention” at the web site of Presidency of The Republic of Türkiye, Directorate of Communications. Accessed on April 8, 2024.

⁵ An example of these statement is the one President Erdoğan made during a speech on November 25, 2023 to commemorate the International Day for the Elimination of Violence Against Women. [Cumhurbaşkanı Erdoğan: “Kadına yönelik şiddetle mücadeleyi, aileyi yüceltme mücadelemizin ayrılmaz bir parçası olarak görüyoruz” | Türkiye Cumhuriyeti | İletişim Başkanlığı \(iletisim.gov.tr\)](#)

police, prosecutors, and judges perceived the exit from the Convention as a signal of shifting norms toward leniency, and it would reflect a perceived shift in social norms in the criminal justice system.

The upshot is that the rise in violence against women (but not against men) following the withdrawal from the Convention is likely due to it being perceived as a signal of greater tolerance for such violence—whether by the public, law enforcement, or both. In Section VI, titled *Interpretation of Evidence*, we discuss various mechanisms that could explain the findings presented in the paper and argue that the perceived shift in social norms regarding violence is the primary mechanism driving the results. We also show that the results cannot be attributed to a Covid-19 effect.

To explore further whether Istanbul Convention was perceived as a signal of societal norms regarding the *unacceptability* of violence against women, we also analyze its initial adoption in the second part of the paper. Turkey officially joined the Convention on November 24, 2011, following its ratification by the Turkish Parliament. This act, along with the surrounding publicity, likely signaled a shift in societal attitudes toward violence against women, even though penalties for such violence were not enhanced until March 2012, when Parliament passed Law 6428. This legislation, mandated by the Convention, criminalized previously unpunished acts, such as spousal rape, and introduced new penalties. It also provided protections for female victims of domestic abuse. The time gap between the Convention's ratification by the Parliament and the subsequent enactment of the law allows us to assess the potentially separate effects of signaling societal change versus the implementation of stronger legal penalties on violence against women.

Our findings reveal that joining the Convention led to a 23 percent decrease in female murders, while the passage of Law 6428 brought about an additional 54 percent reduction. This indicates that while stronger penalties played a key role in reducing violence against women, the signaling effect of the shift in societal norms also had a significant impact in driving this decline.

We also find that the effects of both the Exit and the Entry were more pronounced in provinces with below-median education levels and in those where voter support for the long-ruling religious-conservative coalition parties is above the median. The fact that the overlap between these two groups is imperfect, and that the Eastern part of the country, with its traditional conservative culture, responded strongly to both the Entry and the Exit, suggests that the results are not driven by some unobserved local-geographic factor.

The next section describes the institutional details of Istanbul Convention. Section IV describes the data; Section V presents the empirical analysis and the results. Section VI displays the results pertaining to the impact of the Entry to the Convention. Section VII is the conclusion.

III. Istanbul Convention and the Background

Istanbul Convention is the common name for the *Council of Europe Convention on Preventing and Combating Violence Against Women and Domestic Violence*. The Convention is a comprehensive legal framework aiming to prevent all forms of violence against women, including domestic violence and gender-based violence. The treaty sets out minimum standards and measures that must be implemented by signatories to prevent violence, prosecute perpetrators, to protect victims, and provide support and services to survivors.

The Convention is considered one of the most comprehensive legal frameworks for addressing violence against women and domestic violence. Key provisions of the Istanbul Convention include: i) defining various forms of violence against women, including physical, sexual, psychological, and economic violence, as well as stalking and harassment; ii) requiring the signatories to take comprehensive measures to prevent violence, protect victims, and prosecute perpetrators, including the establishment of support services, shelters, hotlines, and legal assistance; iii) promoting gender equality and non-discrimination as fundamental principles in combating violence against women, iv) recognizing the role of education and awareness-raising in challenging gender stereotypes and promoting respectful relationships, v) addressing the need for international cooperation and coordination to combat violence against women effectively. The Convention also establishes monitoring mechanisms to ensure compliance by signatories, including the Group of Experts on Action against Violence against Women and Domestic Violence (GREVIO), which evaluates the implementation of the Convention by member states.

Istanbul Convention was opened for signature in May 2011 in Istanbul, Turkey, and Turkey was the first country to ratify the convention in the domestic parliament on March 14, 2012, followed by the 38 member states of the Council of Europe and the European Union.⁶

⁶ According to Council of Europe Chart of Signatures and Ratifications, the countries that ratified the Convention, in addition to Turkey, are Albania, Andorra, Austria, Belgium, Bosnia and Herzegovina, Croatia, Cyprus, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Iceland, Ireland, Italy, Latvia, Liechtenstein, Luxembourg, Malta, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland,

On March 8, 2012, Turkish Parliament passed the Law No. 6284 which implemented the framework for protection and support obligations of the Convention in compliance with other domestic laws. For instance, the new law defined domestic violence as any form of physical, sexual, psychological, or economic abuse between the victim and the perpetrator, who could be a family member or someone regarded as such, regardless of whether they share the same residence. This new law was a significant improvement over the existing one by accepting domestic violence as a human rights violation, and by recognizing non-consensual sex, psychological abuse and financial harm in a household or partnership as acts of domestic violence crimes (Cakmut, 2016). The law also provided protective measures for victims of violence without the requirement for any evidence or documentation. In other words, a woman's statement about experiencing violence was sufficient to trigger legal processes under the new law, allowing for quicker protective measures (e.g. a restraining order) without requiring immediate evidence for the claim. The new law also provided financial assistance, legal counselling, and shelter for victims.

Since the ratification of the Istanbul Convention in 2011, conservative circles in Turkey have been trying to discredit it, claiming that the Convention is a threat to Turkish family structure. The opponents argue that the Istanbul Convention "damages family unity and encourages divorce, and that its reference to equality is being used by the LGBT community to gain broader acceptance in society."⁷ These claims are raised in reference to the fact that the Convention presents an alternative interpretation of gender defining it as "the socially constructed roles, behaviors, activities, and characteristics deemed suitable for individuals by a specific society" in contrast to the conventional definition based solely on an individual's biological sex.⁸ Moreover, the Convention extends its scope to include boys and men, alongside girls and women, as potential victims, particularly concerning issues like domestic violence and forced marriage (European Parliament, 2017).⁹

On 20 March, 2021 Turkish officials announced a presidential decree to withdraw from the Istanbul Convention. The official withdrawal from EU conventions entered into

Portugal, Republic of Moldova, Romania, San Marino, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom. Source: <https://www.coe.int/en/web/conventions/full-list?module=signatures-by-treaty&treatynum=210>

⁷ See the official statement by the Presidency of Turkey, Directorate of Communications <https://www.iletisim.gov.tr/english/haberler/detay/statement-regarding-turkeys-withdrawal-from-the-istanbul-convention>

⁸ European Council has several leaflets clarifying that the word gender does not replace "women" or "men" and the Convention does not promote any gender ideology. See

<https://ec.europa.eu/justice/saynostopvaw/downloads/materials/pdf/istanbul-convention-leaflet-online.pdf>

⁹ [https://www.europarl.europa.eu/RegData/etudes/ATAG/2018/630297/EPRS_ATA\(2018\)630297_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2018/630297/EPRS_ATA(2018)630297_EN.pdf)

force following the three-month period from the date on which the notification is delivered to the Secretary General of the Council of Europe. However, the upheaval in the country started immediately after the President's decision to withdraw in March, with protests and public demonstrations in many cities against the decision, as depicted in Appendix Figure A1. Women's and Human Rights organizations stated that the decision to withdraw from the convention would trigger violence against women. To this date, Turkey stands as the only country that denounced and exited the Convention among all 39 member countries.¹⁰

Meanwhile, Law 6284, which covers legal procedures regarding protection and prosecution rather than all the articles of the Istanbul Convention, has stayed in force despite the country's withdrawal from the Convention. Government officials have repeatedly stated that Turkey's domestic laws were sufficient to protect women from violence and that the withdrawal from the convention would not affect legal enforcement. On October 9, 2024, President Tayyip Erdogan stated in a speech that

*“Our withdrawal from the Istanbul Convention hasn't had the slightest negative impact on women's rights or the fight against violence toward women. In Turkey, the iron shield against violence is not the Convention in question, which contains problematic elements, but it is Law No. 6284. The ongoing propaganda on this issue is entirely baseless and lacks even the slightest foundation in fact.”*¹¹

IV. Data Sources

We utilize four different data sources. Detailed statistics or administrative records on the incidence of domestic violence against women, or female murders are not publicly available in Turkey. However, Turkish Police Academy Press has published country-level aggregate data on female murders at monthly frequency between June 2019 and June 2022. The same source also published province-level data (covering 80 of the 81 provinces of the country) at annual frequency between 2016 and 2022. Although the structure of these data is not ideal (as they are either high-frequency but for the whole country, or at the province level but reported annually) we document that the trends of these official data match the trends of our two primary data sources (termed Data Source-1 and Data Source-2), described below.

¹⁰ <https://www.coe.int/en/web/conventions/full-list?module=signatures-by-treaty&treatynum=210> and Council of Europe: <https://www.coe.int/en/web/istanbul-convention/key-facts> Accessed on April 8, 2024

¹¹ The actual statement is available at Haberturk's youtube channel, a national news outlet (watch after minute 2.03): <https://www.youtube.com/watch?v=Kl0mQyS6I2U>

Furthermore, regressions using the official province-level data provide results that are consistent with the results obtained from these two data sources.

Our two primary datasets are derived from unique daily media reports on murders, compiled by two independent organizations. Finally, as a fourth data set, we also utilize two available waves of a national survey on domestic violence against women, conducted by Turkish Statistical Institute in 2008 and 2014 (before and after the country's entry into the Istanbul Convention).

Data Source: 1

Our first data source is Bianet, an outlet dedicated to documenting male violence against women, LGBTI+ individuals, and children.¹² It provides daily updates on gender-based homicides, as well as physical and sexual assaults, drawing from both national and local press sources.¹³ Information collected from various media outlets across Turkey is cross-verified with the Turkish Bar Association and law enforcement agencies when necessary. The Male Violence Monitoring Portal of Bianet is part of the "Journalism for Rights, Rights for Journalists" project, conducted by the IPS Communication Foundation with financial support from the Swedish International Development Agency (SIDA). Because the portal's objective is to document gender-based crimes, the Bianet database excludes incidents that are not related to gender issues, even if the victim is a woman.¹⁴ For instance, a woman murdered by another woman would not be included in the dataset.

The Male Violence Monitoring Portal provides detailed information on each incident, including the date, city, and type of perpetrator (e.g., current partner, ex-partner, family member). It also includes information on whether the victim had previously reported the perpetrator to law enforcement or had any judicial records, such as a restraining order. The portal reports suicides and suspicious deaths, but these cases are not included in the daily homicide counts by Bianet until they are resolved judicially.

To construct a dataset on female murders, we collected all daily news from the Bianet Male Violence Monitoring Portal focusing on the period from January 1, 2010 to December

¹² We are not the first ones to rely on Bianet data for gender related crimes. Asik and Nas Ozen (2021) investigate the impact of Covid-19 related social distancing measures on female homicides whereas Kavakli (2022) explore the relationship between geographical distribution, economic development and female homicides in Turkey using the Bianet Male Violence Monitoring Portal.

¹³ For an example see [Erkek siddeti Temmuz 2024 \(bianet.org\)](https://bianet.org/erkek-siddeti-temmuz-2024)

¹⁴ A description of the methodology (in Turkish) can be found here: https://static.bianet.org/system/uploads/1/files/attachments/000/003/244/original/erkek_%C5%9Fiddeti_%C3%A7etelesi_y%C3%B6ntemii.pdf?1606088136

31, 2022. The analysis of the exit is done using the period 2014-2022, which is based on a balanced panel of daily female murders data across 81 provinces of Turkey, consisting of 266,328 daily observations. We did not include data from earlier years to avoid the influence of the entry into the Istanbul Convention, a topic that will be discussed later in the paper.

The data collection ends in December 31, 2022 due to the devastating 7.8 magnitude earthquake that struck southern and central Turkey on February 6, 2023, resulting in at least 53,000 deaths. The earthquake also triggered significant social disruptions, including widespread migration out of the affected areas. As a result, the 2023 homicide data would not be comparable to previous years for most provinces.

There were 2,727 female murders from 2014 to 2022, averaging 303 homicides per year. Of these, 2,086 were committed by intimate partners. Additionally, we identified that 466 murders involved a prior judicial record or police complaint. We aggregate the data to province-month level, obtaining a final panel with 8,748 observations. The average number of female murders in the country is 25 per month.

Figure 1 displays total female murders (Panel A) and female murders by intimate partners (Panel B) by month. The vertical line marks March 2021, when Turkey announced its withdrawal from the Istanbul Convention. The bold line represents a two-sided 3-point moving average, calculated to reduce noise and better reveal the underlying time-series pattern. There is an upward shift in female murders shortly after the withdrawal from the Convention, which is more pronounced in female murders committed by intimate partners. Figure A2 in Appendix displays female murders by current partners (Panel A), and the number of women killed by individuals with a judicial record related to the relationship between the victim and the killer, such as a restraining order (Panel B).

Data Source: 2

The advantage of the First Data Source, described above, is that it provides a systematic and consistent approach to counting gender-based violence. Its disadvantage is that it does not record male victims. To address this limitation, we utilize another source that tracks both female and male murders. Our second data source is Umut Foundation which was established in 1993 as an NGO focusing on gun violence. Under its mandate of promoting a society without violence, Umut Foundation aims to draw attention to the issues of firearms, and raises awareness by disseminating information on gun violence. To this end, Umut Foundation collects data on homicides and assaults for both male and female victims and the

type of weapon involved in the incident.¹⁵ Data collection methodology of Umut Foundation is similar to that of Bianet. It screens daily national and local news portals, and the type of crime weapon in an incident. One drawback of this second data source is that the data do not include crimes committed without a weapon such as poisoning or strangling.

The data from this second source are also available at a daily frequency but begin on January 1, 2015. To ensure that these data are consistent with the one provided by the first source (Bianet), we retain only gender-based homicides pertaining to women. This means, for example, that we exclude women killed as a bystander in an incident unrelated to herself. Similarly, we drop cases such as a women killed by a burglar, by a random bullet or during a drug transaction. For men, we exclude murders such as those related to gang conflicts, armed attacks and other organized crime to ensure comparability with female murders. The rationale for excluding these categories is that the motivation for these crimes is different in nature than gender-based crimes and are likely to be driven by several other factors. Along the same lines, we exclude suicides and suspicious deaths.

Our dataset from this second source reveals that the total number of male murders was 7,839 whereas there were a total of 2,055 female murders between 2015 and 2022. Of these 2,055 female murders, 1,285 were committed by intimate partners. The average number of male murders is 81.4 per month whereas the average number of total female murders is 21.4 per month in this second data set.

Figure 2 presents female murders as recorded by the second data source. Since only homicides involving a weapon are recorded here, the number of homicides is lower compared to those reported by Bianet in Figure 1, but the time-series pattern is the same in both datasets. Panel B of Figure 2 displays the number of women murdered by intimate partners as reported by the Umut Foundation, revealing an upward trend after the country's withdrawal from the Convention. This pattern is consistent with the behavior of intimate partner murders in the first dataset (Bianet) shown in Figure 1.¹⁶

Panel C of Figure 2 illustrates the time-series behavior of male murders from Data Source 2, exhibiting a cyclical pattern. Male homicides decreased between 2017 and 2019, and have remained relatively stable since, with no noticeable increase following the withdrawal from the Convention.

¹⁵ For more information, see <https://umut.org.tr/turkiye-nin-siddet-haritasi2/>

¹⁶ [Aile ve Sosyal Hizmetler Bakanımız Derya Yanık Başkanlığında, “Kadına Yönelik Şiddetle Mücadelede 2022 Yol Haritası” Konulu Basın Toplantısı Gerçekleştirildi | Kadının Statüsü Genel Müdürlüğü | şiddet, kadın,](#)

Data Integrity and the Police Data

It is not inconceivable that the first nonprofit organization that compiles female homicide data (Bianet) may have become more "proactive" in its data collection efforts following the withdrawal from the Convention. It may have classified some female murders as gender-based, even if they were not. If this is the case, any observed effect of the withdrawal on female murders might be due to changes in the way female murders were classified rather than an actual increase.

There are several pieces of evidence that challenge this conjecture. First, while the primary focus of the first data source, is on violence against women, the second data source, the Umut Foundation, does *not specifically focus on female victims*. Instead, its mission is to collect and disseminate information on violence involving weapons, reporting incidents with both male and female victims. Despite their differing focuses, the dynamics of female murders from both sources closely align, as shown in Figures 1 and 2.

Second, on April 22, 2021, one month after the withdrawal from the Convention and the controversy it sparked, the Minister of Interior publicly stated that the Exit did not lead to an increase in female homicides, but rather a decrease. He reported, "*Between February 13 and March 19 [2021], when the Istanbul Convention was still in effect, 34 women lost their lives. From March 19 to April 22, after the withdrawal, 25 women lost their lives, marking a 26 percent decrease.*" When comparing this statement to our data, we find that both data sources support this announcement. The second source, the Umut Foundation, recorded a drop in female murders from 27 to 21, a 22 percent decrease. The first source, Bianet, shows an even bigger decline, with murders falling from 41 to 22, a 46 percent decrease. In other words, both data sets align with the government's reporting of a reduction in female homicides immediately following the withdrawal, which contradicts the idea that these data sources might have inflated the number of female murder after the exit.

Third, although Turkey does not release detailed, disaggregated data on homicides to the public, at a press conference on January 10, 2022, Turkish Minister of Family and Social Services, Derya Yanik, reported that there were 301 female homicides in 2016. She added that the number rose to 353 in 2017, dropped to 279 in 2018, reached 336 in 2019; and that there were 268 female homicides in 2020 and 307 in 2021.¹⁷ These official figures closely

¹⁷ Press release, Jan 10, 2020. The Republic of Turkey, The Ministry of Family and Social Services, General Directorate of the Status of Women, The Press Conference titled "The 2020 road Map in the struggle against Violence toward women" was held under the lead of our Minister of Family and Social Services, Derya Yanik.

align with our data, as shown in Figures 1 and 2.¹⁸ Furthermore, these numbers cited by the Minister closely match the police data, differing by few murders in certain years. These police data are described below.

Police Data

We obtained official data on country-level female murders published by the Turkish Police Academy Press for the period between June 2019 and June 2022. This dataset includes female murders recorded by the Gendarmerie General Command and the General Directorate of Security Forces (Police).¹⁹ Figure 3 presents these data alongside those from Data Source 1 and Data Source 2, revealing a similar trend across all three sources. Among them, Data Source 2 consistently reports the lowest number of female murders. This is because the foundation compiling Data Source 2 focuses specifically on violence involving weapons. As a result, cases where women were murdered without a weapon—such as by strangulation, poisoning, or being pushed from a balcony—are excluded from this dataset.

The number of female murders in Data Source 1 is higher than those reported in the official police data. This discrepancy arises because the police do not classify a particular female death as gender-based murder unless it falls under the criteria of Law 6284 (enacted following the entry to Istanbul Convention, and remained in place after the exit). Specifically, for a case to be counted as a gender-based murder, the police must determine that the incident resulted from domestic violence or violence committed by a family member, household member, or extended family member. Alternatively, the case must involve violence inflicted solely because the victim was a woman. If no suspect fitting this profile is identified, the case is not classified as a gender-based female murder.

In contrast, data Source 1 (Bianet) includes all female murders, regardless of whether there was a suspect in the case. Exceptions are cases where murder was clearly not gender-related (e.g. being a by-stander of a shooting, being murdered during a robbery, etc.) However, if a death is not officially classified as murder, it is not recorded in Data Source 1 either. For example, if a woman is found drowned on a beach, it is not counted as murder in

¹⁸ A detailed comparison of the government figures and the two data sources is as follows. 2016: (Government: 301, Source 1: 283, Source 2: 248), 2017: (Government: 353, Source 1: 289, Source 2: 249), 2018: (Government: 279, Source 1: 271, Source 2: 218), 2019: (Government: 336, Source 1: 341, Source 2: 272), 2020: (Government: 268, Source 1: 296, Source 2: 238), 2021: (Government: 307, Source 1: 344, Source 2: 262). The figures from the second source (Umut Foundation) are consistently lower than the government's because, as mentioned earlier, the foundation tracks only weapon-related violence.

¹⁹ Öz-Yıldız and Özüdoğru-Erdoğan (2023)

Data Source 1 unless the police confirm it as such. Even if the case is later determined to be a murder rather than an accident, official data would still not classify it as a gender-based murder unless a suspect fitting the criteria, described above, is identified. Data Source 1 updates its records based on the location, date of the incident, and the victim's name. For instance, if a woman is found dead under unclear circumstances, it is initially not classified as a female murder. However, if months later media reports confirm that a suspect has been arrested for her murder in that location on that date, the case is retroactively updated as a female murder. For these reasons, the level of murders differs slightly between the three data sets, but again, they exhibit similar behavior over time, and analyses using each one provide the same inference.²⁰

V. Empirical Analysis

To investigate the impact of the exit from the Convention on female murders, we first estimate models as depicted by Equation (1) below.

$$(2) \quad M_{ptm} = \alpha + \beta \text{Withdrawal}_t + \Omega'X_{ptm} + \gamma_{pt} + \delta_p + \psi_m + \varepsilon_{pt}$$

where M_{pt} stands for the number of female homicides (or subcategories such as homicides by intimate partners) in province p , time t , and month m . The country is divided into 81 administrative provinces, with major cities such as Istanbul, Izmir and Ankara are classified as their own provinces. *Withdrawal* is a dichotomous indicator which takes the value of one for all months including and after March 2021. To capture any potential Covid effect, vector X in Equation (1) includes Covid related deaths.²¹ Later in the paper we discuss a potential Covid effect in detail and demonstrate that adding local Covid closures has no effect on the results. Also included are the province level real GDP per capita (in logs), hospital beds per 100K residents (in logs), monthly provincial unemployment claims (in logs), female population of the province (in logs) and first lag of provincial real per capita public investment expenditures budget allocated from the central government (in logs). The model includes province fixed effects (δ_p), province-specific monthly time trends (γ_{pt}), and month

²⁰ Mean number of annual province-level female murders between 2016-2022 is 3.79 in police data, whereas the province mean is 3.81 in Data Source 1 and it is 3.17 in Data Source 2.

²¹ Asik and Nas-Ozen (2021) reported a reduction in female homicides in Turkey during the COVID-19 curfews, which may be attributed to the curfews limiting contact between victims and their intimate or former partners. In addition, the pandemic may have led to fewer women leaving their current partners due to challenges in finding employment, thereby potentially reducing aggression from these men. In contrast, Agüero (2021) found that stay-at-home orders during the Covid pandemic led to a rise in domestic violence.

dummies to capture seasonality (ψ_m). Eighty-one provinces of the county are divided into 12 standard statistical regions (NUTS-1) and the model also includes region-specific annual time trends. Error terms are clustered at the province level.

The first set of results are presented in Panel A of Table 1, where the murder data from the first source (Bianet) are employed. Columns (1) and (2) report the results from the models where the outcomes are monthly female murders, and the number of women killed by intimate partners, respectively. Columns (3) and (4) display the results where the dependent variables are female murders committed by victims' current partners, and by offenders who had a judicial record involving the victim (e.g. restraining order). The values in {curly brackets} are the p-values that account for multiple hypothesis testing.

The estimated coefficients are all positive and different from zero in Table 1. Column (1) reveals that monthly number of female murders rose by about 0.067 in a province following the withdrawal from Istanbul Convention. This point estimate represents a 22 percent increase in female murders, which amounts to an additional 65 female murders per year. Column (2) indicates an increase of female murders by intimate partners by 52 women per year, suggesting that the entire increase in female homicide, due to the withdrawal from the Convention, is attributable to murder committed by intimate partners. In column (3) the estimated coefficient of the Post-Withdrawal dummy indicates a 27 percent increase in murders committed by current partners, and column (4) implies a 63 percent increase in murders by perpetrators with judicial records.

Panel B of Table 1 displays the results obtained from the same regressions, but estimated between 2015 and 2022. This adjustment allows for comparison with the results based on the homicide data from Data Source 2, which only begin in 2015. The results are very similar to those reported in Panel A.

Panel C of Table 1 presents the estimation results based on our Data Source-2. Recall that data from this source include information on both male and female murders, but only if the offender used a weapon. Column (1) reveals that the withdrawal from the Convention led to an increase in females murdered by a weapon by 0.076 per month per province (equivalent to 74 female murders per year). This represents a 29 percent rise, given the sample average of 256 annual female homicides involving weapons. Column (2) reveals that the withdrawal led to an additional 0.056 female murders committed by intimate partners using a weapon, per province per month, marking a 34 percent increase.

Column (5) of Panel C in Table 1 presents the results of the regression analysis using male murders involving weapons as the dependent variable, and shows that the withdrawal

from the Istanbul Convention had no impact on male murders.²² This serves as a placebo test because the Convention specifically aimed to protect women, not men. In other words, if the withdrawal from the Convention has coincided with certain socio-economic events that impacted the overall aggression and violence in the country, these events would likely have affected male murders. The fact that the Post-Withdrawal period has an impact on female murders but not on male murders indicates that this is not the case.

Comparison with the Results from Police Data

Recall that the official data from the Police Academy are available at the province level (with the exception of one province, the omission of which is unexplained in the data source), from 2016 to 2022. Using these data we ran the same regression, shown by Equation (1), using the police data. We also aggregated monthly data from Data Sources 1 and 2 to the annual frequency to make them compatible with the police data, and ran regressions using these two data sources as well. The regressions include the same set of control variables as the ones used in Table 1, except for month dummies.

Table 2 presents the results obtained from these regressions. Panel A is based on time span 2016-2022, which is the period covered by the police data. Columns (1) and (2) are based on data from Data Source 1, and display the results where the dependent variable is female murders, and female murders by intimate partners, respectively. Columns (3) and (4) do the same using Data Source 2. Column (5) pertains to the regression where the outcome is male murders, obtained from Data Source 2. Column (6) displays regression result where female murders recorded by the police is the dependent variable.

As shown in Column (6), female murders, recorded by the police, went up by 0.97 murders per province-year after Turkey withdrew from Istanbul Convention, indicating an increase by 77 murders per year. The effect of the withdrawal is observed in other data sets as well, although the impact on female murder in in column 1 (Data Source-1) is not statistically significant from zero.²³ Column (5) shows that the withdrawal had no impact on male murders. Thus, Panel A of Table 2 demonstrates that all three data sets, including the

²² The coefficient for Exit in the case of male murders is -0.094. Although these coefficients are similar in absolute terms, the mean value of male murders is approximately four times larger than that of female murders. This indicates that the estimated coefficient of male murder is not only statistically indistinguishable from zero, but also small in magnitude.

²³ As we show in Appendix A8, the Poisson estimates using the same specification point out to a statistically significant increase of 23 percent in female murders in Data Source 1, whereas the increase in female murders in police records is 31 percent.

official police data, reveal the same pattern and indicate a rise in female murders following the exit from the convention.

To analyze the sensitivity of the results to the time period analyzed, we re-estimated the models going back to 2015 (Panel B), and to 2014 (Panel C). Because police data start in 2016, column (6) of Panel B is blank. Similarly, data from Source-2 start in 2015; so, regressions spanning 2014-2022 can use only data from Data Source-1. Panels B and C reveal that regardless of the time period analyzed, the impact of the exit on female murders is observed in annual data as well, and it exists in both Data Sources 1 and 2, with point estimates remaining stable across sample periods.

In summary, Table 2 shows that using annual data leads to the same inference, with a similar impact of the exit across both two data sets. Furthermore, estimating the model using official police data generates the same result.

Difference in Differences

In this section we present the results of the analysis that uses the behavior of male murders post-withdrawal as a counterfactual for female murders. Since no economic, social, or law enforcement factors changed during the period surrounding Turkey's decision to withdraw from the Convention, any differences in male and female murder rates during the post-withdrawal period can reasonably be attributed to the impact of leaving the Istanbul Convention. The difference-in-differences specification is described by Equation (3).

$$(3) \quad M_{fptm} = \alpha + \beta \text{Withdrawal}_t + \theta \text{Female}_{fptm} + \lambda \text{Withdrawal}_t * \text{Female}_{fptm} + \Omega' X_{prtm} + \gamma_{pt} \delta_p + \psi_m + \varepsilon_{pt}$$

For each of the 81 regions, we have data on male and female murders involving the use of a weapon, as reported by the Second Data Source. In Equation (2), the variable *Female* is an indicator that takes the value of one if the observation represents female murders, and λ represents the difference-in-differences coefficient.

The estimated difference-in-difference coefficients are reported in Table 3. The regressions in the first panel are based on the entire data span: 2015 to 2022. The first column presents results based on total female and male murders obtained from Data Source 2. Column (2) uses the same specification but uses female murders committed by intimate partners. In both cases the difference-in-differences coefficients are positive and highly

significant, indicating that female murders involving a weapon increased compared to male murders with a weapon after Turkey's withdrew from the Istanbul Convention.

Columns (3) and (4) present the results from models utilizing female murder data from the First Data Source (Bianet) and matching it with male murder data from the Second Data Source, as Bianet does not collect information on male murders. Once again, there is a significant effect on both female murders and female murders by intimate partners.

It may be argued that the withdrawal from the Convention also fueled animus against gay men, potentially leading to increased violence against them. If so, the data on male murders would include cases of gay men killed as a result of the withdrawal. This would imply that the coefficients reported in Table 3 underestimate the true impact of the exit.

As shown in the third panel of Figure 2, male murders exhibit a downward trend between 2017 and 2019. To ensure the results in Panel A of Table 2 are not influenced by this trend, we estimate the difference-in-differences specifications by restricting the data to the periods 2018-2022 and 2019-2022. These results, presented in Panels B and C of Table 2, reveal, once again, a rise in female murders, compared to male murders, following the Withdrawal from the Convention. Thus, the results consistently show that regardless of the time period analyzed or the data source used, female murders and female murders by intimate partners increased after the withdrawal from the Istanbul Convention.

The event study graphs for the four specifications reported in Table 3 are displayed in Figure 4. For this analysis, data were aggregated to quarterly frequency, using the fourth quarter of 2020 as the base. The top row in Figure 4 displays the event study graphs pertaining to total female murders and murders by intimate partners using Data Source 1. The second row presents the same graphs based on Data Source 2.

The graphs reveal that the impact of the Exit from the Convention on the difference between female and male murders starts in 2021 and persists until the end of 2022, which is the end of the available data. The event study graphs for the models covering 2019-2022 are very similar and are presented in Figure A3 in the Appendix.

Heterogeneity

The country has been governed continuously since 2002 by the Justice and Development Party (AKP), led by Recep Tayyip Erdogan. AKP maintains a conservative, religious-oriented identity. Its political ally, the Nationalist Movement Party (MHP), is a pan-Turkish nationalist party. Ideologically the two parties are closely aligned, and their elected members typically vote in unison on most issues in Parliament, and they have been de facto

coalition partners for many years. These parties also collaborate in local elections, nominating joint candidates in several districts.

We used the vote shares of these parties in each province at the 2018 general Parliamentary elections as a measure of the conservative political tendency of provinces. The median of their combined vote share in 2018 was 59.7 percent.²⁴ As we show in Appendix Table A1, running the difference-in-difference specification in the 2018-2022 time frame using the sample of 40 provinces where the vote share of the two conservative/religious parties are *above the median*, we obtain a statistically significant coefficient of 0.214. The corresponding coefficient in the sample of provinces where the vote share of these two parties is *below the median* is 0.112. The average number of murders is smaller and the gap between male and female murders is also smaller in more conservative provinces. Specifically, the difference between monthly average male and female murders was 0.63 before the Exit in provinces with above-median support for the governing religious-conservative parties, whereas it was 0.72 in provinces with below-median vote share of these parties. Thus, the estimated coefficient of 0.214 suggests that the impact of the Exit was relatively stronger in politically more conservative provinces.

To assess the heterogeneity of the results based on education, we ranked provinces by their average education levels and estimated the same model separately for those above and below the median.²⁵ The findings reveal that the impact of the exit was relatively stronger in provinces with below-median education levels. The difference-in-difference coefficient is insignificant in the sample of 40 provinces where the average education level is *above the median*. In contrast, the same coefficient in the sample of 40 provinces with *below-median*

²⁴ Provinces that have above median ruling coalition voting shares are; Adiyaman, Afyonkarahisar, Aksaray, Bartin, Bayburt, Bingol, Bolu, Cankiri, Corum, Duzce, Elazig, Erzincan, Erzurum, Gaziantep, Giresun, Gumushane, Isparta, Kahramanmaras, Karabuk, Karaman, Kastamonu, Kayseri, Kilis, Kirikkale, Kocaeli, Konya, Kutahya, Malatya, Nevsehir, Nigde, Ordu, Osmaniye, Rize, Sakarya, Samsun, Sanliurfa, Sinop, Sivas, Tokat, Trabzon, and Yozgat. Provinces that have below median ruling coalition voting shares are; Adana, Agri, Amasya, Ankara, Antalya, Ardahan, Artvin, Aydin, Balikesir, Batman, Bilecik, Bitlis, Burdur, Bursa, Canakkale, Denizli, Diyarbakir, Edirne, Eskisehir, Hakkari, Hatay, Igdir, Istanbul, Izmir, Kars, Kirklareli, Kirsehir, Manisa, Mardin, Mersin, Mugla, Mus, Siirt, Sirnak, Tekirdag, Tunceli, Usak, Van, Yalova, and Zonguldak.

²⁵ Provinces that have above median average education are; Adana, Ankara, Antalya, Artvin, Aydin, Balikesir, Bayburt, Bilecik, Bingol, Bolu, Bursa, Canakkale, Denizli, Duzce, Edirne, Elazig, Erzincan, Eskisehir, Hakkari, Isparta, Istanbul, Izmir, Karabuk, Karaman, Kayseri, Kilis, Kirikkale, Kirklareli, Kirsehir, Kocaeli, Malatya, Mersin, Mugla, Osmaniye, Rize, Sakarya, Tekirdag, Trabzon, Tunceli, and Yalova. Provinces that have below median average education are; Adiyaman, Afyonkarahisar, Agri, Aksaray, Amasya, Ardahan, Bartin, Batman, Bitlis, Burdur, Cankiri, Corum, Diyarbakir, Erzurum, Gaziantep, Giresun, Gumushane, Hatay, Igdir, Kahramanmaras, Kars, Kastamonu, Konya, Kutahya, Manisa, Mardin, Mus, Nigde, Ordu, Samsun, Sanliurfa, Siirt, Sinop, Sirnak, Sivas, Tokat, Usak, Van, Yozgat, and Zonguldak.

education is highly statistically significant and is equal to 0.204, reflecting a 33 percent reduction in the male-female murder gap as female murders increased.

Finally, we repeat the same exercise for the five regions of the country as classified by the Demographic Health Surveys (DHS). The regions are East, West, Central, North and South. The results reveal that the impact of the Exit is largest in the Eastern region of the country. The difference-in-difference coefficient is 0.27 in the East, which implies a 45 percent reduction in the pre-exit gap between male and female murders. The estimated coefficient for the Western provinces is statistically insignificant.

The locations of provinces with above-median voter support for the governing coalition parties and with below-median education levels are provided in Appendix Figures A4 and A5. As these maps show, there is imperfect overlap between the two groups. Only 18 provinces fall into both the top 40 for voter support and the bottom 40 for education levels, and they are not concentrated in any specific geographical area, except for parts of the northern region of the country. The five DHS regions are displayed in Appendix Figure A6. Seven of the 16 cities in the Northern region have both above-median voter support for the governing coalition and below-median education levels. However, excluding the Northern region from the sample had no influence on the results.

Figures A4 and A6 show that the Eastern region does not strongly support the religious-conservative governing coalition, as much of the political backing in the East goes to a Kurdish-focused minority party. Nevertheless, this region is arguably the most traditional and conservative part of the country, and most of its provinces have below-median education levels (as shown in Appendix Figure A5).

The upshot is that, the increase in female murders after the country's withdrawal from the Istanbul Convention was more significant in provinces with stronger political support for the ruling religious/conservative parties and in provinces with lower education levels.

It is Not a Covid-19 Effect

Turkey's withdrawal from Istanbul Convention took place on March 20, 2021, during the Covid-19 pandemic. While the onset and severity of Covid-19 may be endogenous, Covid-19 is *exogenous* to the country's exit from the Convention. In other words, neither the timing of the outbreak in a given location nor the number of deaths were influenced by Turkey's decision to withdraw from the Convention or by the timing of the withdrawal.

Nevertheless, the overlap between the Withdrawal and the pandemic is potentially concerning, as research indicates that pandemic-related restrictions on physical mobility have

led to social isolation, increased stress, and worsened mental health outcomes. For instance, Altındağ et al. (2022), using phone interviews, found that lockdown orders specifically targeting individuals aged 65 and older in Turkey caused significant mental distress in this group. Similarly, Bau et al. (2022) used phone surveys and reported that the pandemic led to feelings of sadness, depression and hopelessness among women in India. More relevant to our study, Agüero (2021) found that calls to domestic violence hotlines rose significantly in Peru during a period of strict nationwide Covid-19 lockdowns. Aşık and Özen (2021) used data on female murders in Turkey at daily frequency between January 1, 2014 and July 31, 2020, obtained from the first data source used in our study. The authors reported that the likelihood of a woman being killed by an intimate partner *declined* by about 57 percent during periods of strict social distancing and by 84 percent during curfews, compared to the same period from 2014 to 2019. They detected no impact on female homicides committed by other types of perpetrators. The authors suggested that this decrease was likely due to the difficulty faced by ex-partners in accessing victims during curfews, as well as fewer women leaving current partners due to economic challenges and fear of Covid-19 infection.

Recall that all regressions estimated in our paper include the total number of Covid-19 deaths to account for the time-varying severity of the pandemic. Covid-19 deaths are associated with the strictness of Covid-19 policies, such as social distancing measures and curfews, as well as with mental distress related to the economic hardship resulting from the pandemic's intensity. Nevertheless, to further investigate whether curfews and closures during the pandemic has an impact on the results, we collected detailed, province-specific data from Ministry of Interior.

In the early days of the pandemic, lockdowns were initially imposed in only 31 metropolitan cities. However, the scope and intensity of lockdown measures quickly expanded to cover all provinces. Although lockdown stringency varied across provinces, the government periodically adjusted the type and duration of restrictions based on the severity of the pandemic in each area. In March 2021, the government started implementing a classification system with four categories, that determines the Covid-19 threat in each of the 81 provinces. These categories are: 1) Low risk, 2) Medium risk 3) High risk, and 4) Very high risk. Each of these risk levels corresponded to specific restrictions of curfews and closures, which the government adjusted periodically. For instance, from April 1 to April 14 2021, provinces that were classified as Low Risk had nightly stay-at-home orders from 9 pm and 5 am. In contrast, provinces in the Very High risk category faced the same nightly lockdowns along with additional full curfews for Saturdays and Sundays. In addition, on

national holidays and in special circumstances, the government imposed nationwide curfews that applied uniformly across all provinces, regardless of their risk classification. For instance, from April 15 to April 30, 2021, a full lockdown was enforced throughout the country. This system of curfews and stay-at-home orders created variation in the stringency of restrictions across provinces on any given date, with the level of strictness also changing over time within each province. The initial closures were implemented on April 10, 2020, and the final ones occurred on June 30, 2021.

We obtained this province-specific lockdown information from the website of the Ministry of Interior, and created a measure of lockdown intensity, calculated as the number of lockdown days per month. For example, a stay-at-home order between 9 pm and 5 am every day combined with a full weekend lockdown results in 88 hours of restrictions per week, or 14.6 days of restrictions over the course of a month. Figure A7 of the Appendix presents the monthly count of Covid-19 deaths and the number of lockdown days each month. As the figure reveals, the number of Covid-19 related deaths is a more accurate measure of the intensity of the pandemic than the lockdowns as the Turkish government did not impose any lockdowns during the third wave of the pandemic.

Replacing Covid deaths with the lockdown measure has no effect on either the magnitude or statistical significance of the estimated impact of the Exit as shown in Appendix Tables A2 to A4. Including both the lockdown measure and Covid deaths does not change the results either.²⁶

Note that in these regressions the coefficient of the province-specific lockdown measure is negative and significant at the 5 percent level (Appendix Table A2). This finding is consistent with Aşık and Özen (2021), who demonstrated a significant decline in female homicides from March to July 2020 due to reduced mobility and nationwide curfews. Due to significantly tighter police controls during lockdowns, it arguably became more difficult for perpetrators to reach victims, commit homicides, and dispose of bodies, as the risk of being caught was higher. This applies to homicides by current partners as well, as retaining a body within a residence was considerably more challenging during weeks of curfews. Although global evidence indicates that domestic violence increased during lockdowns, our findings consistently show a negative impact of lockdown on female murders, the most extreme form

²⁶ Including both the Covid-19 related deaths and lockdown measure provides a coefficient estimate of 0.062 (pval=0.019) in Table 1, Column 1, Panel A (Data Source 1); and 0.075 (pval=0.008) in Table 1, Column 1, Panel C (Data Source 2) for female murders. As for male murders, the estimated coefficient is -0.098 (pval=0.139) in Table 1, Column 5, Panel C (Data Source 2). Including both Covid-19 measures in Table 2 for police data provides an estimated coefficient of 1.006 (pval=0.016) in Column 6, Panel A.

of violence, during these periods. This point is also made by Ravindran and Shah (2023) who made use of the variations in the strictness of government-mandated lockdowns in India. They found that domestic violence complaints increased significantly in districts with the most stringent restrictions, but reports of rape and sexual assault decreased in these same areas. The authors attribute the decline in rape and sexual assault to the limited mobility during lockdowns.

These findings suggest that excluding a measure of Covid-19 intensity would have led to an underestimation of the Exit's impact. Indeed, the regressions presented in Tables 1 and A2 yield smaller estimates for the Exit effect (ranging from 0.049 to 0.052 using Data Source 1 and Data Source 2, respectively) when Covid deaths are not included in the models.

VI. Interpretation of the Evidence

These analyses reveal that the country's withdrawal from the Istanbul Convention has led to an increase in female murders, despite no changes in legal sanctions against violence. This could be because

1. The withdrawal prompted changes in laws regarding violence.
2. The laws themselves did not change, but the government instructed law enforcement agencies not to enforce them fully.
3. There were no change in social norms or law enforcement regarding violence, but the public *incorrectly* believed that perpetrators would face less pursuit or punishment after the withdrawal even though laws and enforcement remained unchanged.
4. The withdrawal signaled to law enforcement agencies and the judiciary that societal norms had shifted, which reduced enforcement efforts and lowered expected punishment.
5. The withdrawal led to a change in social norms in a way that increased the acceptability of violence against women among the general public.

Regarding mechanism (1): Turkey withdrew from Istanbul Convention in March 2021. We analyzed all laws passed by the Turkish Parliament, as well as all Presidential Decrees and Decisions between January 1, 2020 and December 31, 2022. During this period 228 laws have been enacted. None of these laws reduced penalties for any crimes—let alone for violent crimes. On the contrary, several legislative changes *strengthened* penalties for violence against women. Law No. 7331, enacted on July 14, 2021, amended the Turkish penal code so that crimes committed against a *former spouse* would carry the same

aggravated/qualified penalties as crimes against a current spouse—explicitly mentioning crimes of aggravated intentional killing, intentional injury, torment/ill-treatment, and deprivation of liberty.²⁷ Law No. 7406 further amended the Turkish penal Code on 27 May 2022 by explicitly classifying the intentional killing of a woman now punishable by life imprisonment, which is associated with serving more years before eligibility for parole and harsher incarceration conditions.²⁸ The same law raised minimum sentences for violent crimes like intentional injury, torture, and threats when committed against women.²⁹

We also reviewed the contents of 2,322 Presidential Decisions, which are decisions issued by the President, typically addressing administrative matters, appointments, or specific issues authorized by the Constitution or applicable laws. Similarly, we examined 61 Presidential Decrees (executive orders with the force of law) issued between 2020 and 2022. None of these decisions or decrees were related to the penal code or criminal sanctions.

Thus, there were no changes in legislation or executive action during this period that reduced punishments for violent crime.

Regarding mechanism (2): We reject the underlying hypothesis of this mechanism on fundamental humanitarian grounds. We consider it ethically unacceptable to assume that any government would intentionally act against its own citizens in the manner proposed by this hypothesis.

Regarding mechanism (3): It is unclear why the general public would believe that the criminal justice system has become more lenient toward crimes against women if no changes have been made to the relevant laws and if enforcement of these laws has remained intact. As discussed above, the laws themselves have not changed. Moreover, as emphasized throughout this paper, numerous high-level government officials—including the President, the Minister of the Interior, the Minister of Justice, and the Minister of Family and Social Services—have repeatedly assured the public that enforcement of laws against violence remains strict and vigilant. If enforcement practices have indeed remained the same, as the

²⁷ Link of the Official Gazette (the equivalent of U.S. Federal Register) dated April 15, 2020 (in Turkish) <https://www.resmigazete.gov.tr/eskiler/2021/07/20210714-8.htm>

²⁸ Link of the Official Gazette dated May 27, 2022 (In Turkish) <https://www.resmigazete.gov.tr/eskiler/2022/05/20220527-7.htm>

²⁹ Law No. 7242, passed on April 2020, was enacted to release some non-violent convicted criminals from prison to avoid the spread of Covid-19 in prisons. The law made parole-eligibility more generous for inmates convicted for property crimes, allowing them to be parole-eligible after having served half of their sentence, instead of the previously required two-thirds. However, this change did not apply to the crimes of homicide, aggravated injury, torture, sexual offenses, and terrorism-related crimes. Therefore, it has not changed the expected punishment for female homicide,

government consistently asserts, then a widespread shift in public perception toward weaker expected punishment would appear unlikely.

Regarding mechanism (4): Although no laws were changed and government officials consistently emphasized that sanctions for violence against women remained in place, law enforcement and judicial actors may have nevertheless perceived the withdrawal from the Convention as a signal of greater leniency. This perception could have led to less rigorous enforcement, lowering the certainty and severity of punishment and contributing to an increase in female murders. In other words, while sanctions and expected punishment remained intact *de jure*, they may have weakened *de facto* if criminal justice actors interpreted the withdrawal as a sign of greater tolerance for violence against women.

This idea can be incorporated into the utility function demonstrated in Equation (1) as follows

$$(4) \quad U(\omega) = V(\omega) - \phi N(\omega - \pi) - P(\pi)\omega$$

where the notation is as the same as in Equation (1), but the last term in Equation (4) captures cost of action ω , stemming from law enforcement. $P(\pi)$ represents the cost of apprehension and punishment associated with enforcement of the relevant law for action ω . Note that for any given action ω , this last term can be zero, while the second term (the norm-related disutility) could still be negative. For example, consuming a large amount of alcohol and becoming visibly intoxicated may violate the social norm π , resulting in disutility captured by the second term, but if the consumption occurs at home, it is not punishable by law—hence the third term is zero. On the other hand, drinking and driving is typically punishable by law, and if it also violates a social norm, then both the second and the third terms in Equation (4) would be nonzero.

Note that the cost associated with punishment is modeled as a function of the social norm, π , holding constant the law. This implies that even if *de jure* sanctions remain constant, the enforcement and the *de facto* cost of the action—represented by $P(\pi)\omega$ —can be influenced by changes in the norm related to that action. To see this, consider the following example: suppose $P(\pi)$ represents the likelihood or severity of sanctions for public drunkenness and drunk driving. On certain days of the year, the social norm surrounding drunkenness and related behavior may become more relaxed. Examples include holidays associated with public celebrations and alcohol consumption, such as Mardi Gras in Louisiana, Fasching in Germany, or Carnival in Brazil. During these periods, the probability of apprehension and punishment for alcohol-related offenses may decrease—not because the

laws have changed, but because law enforcement perceives the social norm to be more tolerant during those days, and adjusts their behavior accordingly.

In our case, insights into whether de facto enforcement has declined could be gained from data on cases of violence against women handled by police, referred to prosecutors, or processed by courts; but such data are not available.

Thus, mechanism (4) cannot be dismissed. However, because Mechanisms (1) and (2) have been ruled out, the plausibility of this mechanism implies *a change in social norms guiding law enforcement behavior*. Put differently, in the absence of any legal changes (Mechanism 1) and ruling out a coordinated government conspiracy against women (Mechanism 2), the most meaningful explanation for Mechanism (4) to hold is a behavioral shift among law enforcement actors following Turkey’s withdrawal from the Convention—reflecting a change in how the exit was interpreted within the context of a changing social norm.³⁰ In Section VIII, we provide, arguably indirect evidence supporting this point by analyzing cases in which police officers committed murders of intimate female partners, showing that the Convention’s withdrawal has influenced their behavior as well.

Regarding mechanism (5): The withdrawal may have signaled to the public a shift in societal norms toward greater tolerance of violence against women, leading to an increase in female murders. In other words, the exit could have influenced societal attitudes toward the acceptability of violence. This mechanism cannot be ruled out and it is consistent with the burgeoning theoretical work and empirical evidence about the signaling effect of laws, cited in the first two sections of the paper.

³⁰ This viewpoint has been echoed by attorney Birsen Baş Topaloğlu, the former spokesperson and Vice President of Istanbul Bar Association’s Center for Women’s Rights, and a co-author of Bar Association’s bi-annual reports on the application of Protection and Restraining Orders related to Law 6284 of Istanbul Convention.³⁰ She stated:

“The withdrawal from the Istanbul Convention has cemented the perception in society that violence against women is a private matter between a woman and a man, or a family matter, which does not necessarily require the intervention of the authorities. This has negatively affected the response of the police and the judicial system to such cases.”

She added that,

“It was also reported that some individuals convicted of crimes related to violence against women and serving prison sentences believed they would be released after the withdrawal — despite the fact that no such amnesty was ever proposed or even considered.”

(Personal communication on September 7, 2025).

Furthermore, there is a parallel between Mechanisms (4) and (5) in that, because members of law enforcement are part of society, it is highly likely that if perceived norms have shifted in the law enforcement community following the withdrawal from the Convention, they have also shifted for the broader society. Relatedly, if the exit from the Istanbul Convention triggered a shift in social norms toward greater tolerance for violence against women, such a change can only be sustained if it aligns with real-world enforcement practices. In other words, if perpetrators continue to be caught and punished without leniency, the emerging norm of tolerance would likely be corrected or reversed. This implies that for a broader social norm shift to take hold, a parallel change in the attitudes and behavior of law enforcement must also occur. In summary, mechanism (4) and (5), both of which point to an explanation based on change in norms, are the most likely reasons behind the rise in female murder following Turkey's withdrawal from Istanbul Convention.

VII. The Impact of the Entry into Istanbul Convention

Further insights can be gained by examining the impact of Turkey's initial entry into the Istanbul Convention. This is because, during the entry process two separate steps are taken. First, the country officially entered the Convention by ratifying it. Second, a few months later, the law 6284 was enacted which increased sanctions for gender-based violence. These events, both of which received significant publicity, allow for an analysis of the signaling impact of the convention (the signing) and the deterrence effect (the enactment of the law which criminalized increased penalties, provided protections for women, and criminalized acts such as spousal rape). In this section we demonstrate that the entry led to a decline in male murders. The signal value of the entry, and the enhanced sanctions had their separate effects.

Analysis of Micro Data on Domestic Violence

The Turkish Statistical Institute conducted two waves of a nationally representative micro survey on domestic violence titled the "National Research on Domestic Violence against Women." The first survey was conducted in 2008, prior to Turkey's entry into the Istanbul Convention, and the second one in 2014, after the country's entry into the Convention. These surveys collected data on physical, sexual, and emotional violence or abuse experienced by women aged 15 to 59, perpetrated by their spouses, partners, or others.

The dataset also includes information on socio-economic background, labor market variables, and partner characteristics.³¹

We constructed a binary variable indicating whether a woman reported experiencing at least one type of physical violence listed in the survey over the past 12 months. The prevalence of physical violence within the last year was 10 percent in the 2008 wave and decreased to 7.8 percent in the 2014 wave. After controlling for factors such as the woman's age, both her and her partner's education, interview language, labor market status, and fixed effects for province and region-by-year, we show in Appendix Table A5 that the likelihood of a woman experiencing at least one form of physical violence decreased by 0.6 percentage points (or 6 percent) in 2014 compared to 2008. The probability of being punched or hit with an object by a partner declined by 0.9 percentage points (22.5 percent), and the likelihood of facing threats or actual use of a gun or knife dropped by 0.4 percentage points (57 percent). Although these reductions might be influenced by other changes between the two survey waves, they could also reflect the impact of Turkey's entry into the Istanbul Convention.

Analysis of Female Murders

Our second analysis of the Entry centers on female murders. Homicide data prior to 2015 are unavailable from Data Source 2, but we utilize data from Data Source 1 (Bianet) covering 2010 to 2014. Turkey joined the Istanbul Convention after the Turkish Parliament ratified it on November 24, 2011. Figure 5 displays female murders and female murders by intimate partners along with their smoothed values. Female murders dropped noticeably following Turkey's entry into the Convention, although they rose again after a couple of years.

Social Unrest of Gezi Park Protests

The increase in female homicides starting in the Summer of 2013 coincides with the Gezi Park protests, a significant period of social unrest in the country. In June 2013, environmental groups initiated a sit-in at Gezi Park—a major green space in central Istanbul—to protest the government's plan to replace the park with a shopping mall. The protests quickly escalated into a broader movement against the government and its policies,

³¹ The sample sizes of the quantitative research were 24,048 households in the 2008 wave and 15,084 in 2014 wave, representing 12 regions, and urban and rural areas. Detailed information can be found here https://hips.hacettepe.edu.tr/en/national_research_on_domestic_violence_against_wom-319 and https://hips.hacettepe.edu.tr/en/national_research_on_domestic_violence_against_wom-315

drawing tens of thousands of participants over more than a month. The demonstrations spread across the country, leading to repeated clashes with police, resulting in 22 deaths and thousands of injuries.

The Gezi Park protests exposed deep-seated polarization in Turkey between religious conservatives and other supporters of Tayyip Erdogan's government, and the diverse opposition groups backing the protesters. The protesters and their allies formed a broad coalition, including environmentalists, social democrats, feminist groups, college students, the LGBTQ+ community, some workers' unions, and far-left political factions. This polarization was underscored by Prime Minister Erdogan's statement during the protests, where he remarked, "*We are barely managing to keep the 50 percent (that voted for us) at home,*" suggesting that the government's supporters were prepared to physically confront the protesters.

The Protests subsided by the end of July 2013 after the government abandoned its plans to demolish Gezi Park. However, it has been pointed out that Gezi Park Protests marked a turning point in the ruling AKP party's approach to its opposition, leading to a more confrontational and less compromising stance. The political and social ramifications of the Gezi Park Protests have been extensively studied by sociologists and political scientists.³² These studies highlight the cultural divide that became very salient between groups advocating for environmental protection, women's and LGBT rights, as well as feminists, on one side, and the culturally conservative supporters of the ruling party on the other, each group focusing on different societal grievances.³³

More broadly, it has been argued that the government and its supporters, on one side, and the Gezi protesters, on the other, each constructed their own narratives to interpret the events and the policies leading to them, and that "*these framing contests led to competition for cultural legitimacy between the [Gezi protesters] and the government.*"³⁴ For example, On June 30, 2013, amid the ongoing Gezi Protests, an LGBT parade in Istanbul drew around

³² There are 4,600 articles listed in Google Scholar with "Gezi Protests" in title.

³³ More broadly, Gezi Protests have been seen as an example of global social movements in response socio-economic inequalities. For instance, it has been argued by Kılıçoğlu (2021) that "*In Turkey's context, neoliberal restructuring policies are accompanied by the promotion of religious, familial and heterosexual values along with the state's penetration into private space, which affects women disproportionately. Turkish feminists in the local Gezi Park protests responded to such regional and national contexts, whilst also defining power relations, injustices and demands in line with international frameworks of feminist antiglobalisation activism.*"

³⁴ Yusuf Sarfati "Dynamics of Mobilization during Gezi Park Protests in Turkey" in I. Epstein (ed.), *The Whole World is Texting*, 25-43. Sense Publishers, 2015

100,000 participants. The BBC described it as the largest LGBT parade in Eastern Europe and Turkey up to that time. The visibility of the LGBT rights movement in Turkey significantly increased following the Gezi protests (Unan, 2015). In the wake of these events, aggression towards women and female murders rose rapidly as shown in Figure 5.

The Signaling Effect and the Effect of Enhanced Penalties

The analysis of female homicides during the period surrounding the entry into the Convention enables us to evaluate the Entry's impact as well as the impact of the subsequent legislation that strengthened legal sanctions against violence towards women. We conducted the same monthly province-level regressions presented in Table 1 (based on Equation 1) for the period from 2010 to 2013, which includes the timeframe around the entry into the Convention. We also extended this sample window to December 2014 to encompass one year of data following the conclusion of the Gezi Park protests. To assess the influence of the entry, we created a dichotomous indicator that is set to one starting in November 2011 (when Parliament ratified the Convention) and continuing thereafter. A second indicator is assigned a value of one for March 2012 (when the law 6284 was enacted) and for the subsequent period.

The results, presented in Table 4, reveal a significant decline in female murders, including those committed by intimate partners, current partners, and those with a previous judicial record, following the entry into the Convention. Specifically, the coefficient of the Post-Entry dummy in column (1) of Panel A is -0.063, which indicates that female murders decreased by 24 percent compared to pre-entry levels (pre-entry mean=0.261) during the first three years after entering the Convention, despite an uptick following the Gezi Park Protests. Similarly, the coefficient of -0.075 in column 2 reflects a 44 percent reduction in intimate partner homicides (with a pre-entry mean of 0.17).

Panel A also shows that the enactment of Law 6248, which established a comprehensive legal framework and specified sanctions for violence against women, had an additional impact on reducing female homicides. The coefficient of -0.142 in column (1) indicates that female homicides declined by an additional 54 percent following the law's passage. Panel B presents similar results based on data from 2010 to 2014, and the inference does not change. The adoption of the Convention reduced female murders, and the enactment of the law had an additional effect.

These results reveal that female murders went down following Turkey's entry into the Istanbul Convention. Both the signal value of the Entry, and the legal measures and sanctions

implemented under the Convention's framework were effective in reducing violence against women.³⁵ It is noteworthy that President Erdogan acknowledged the shift in norms and the change in people's mindset following Turkey's entry into the Convention, stating that "...the real tangible tools [in the fight against violence towards women] are, first, Law 6284, which we have made available to the legal system, *and the transformation we have brought about in people's minds.*" (emphasis added).³⁶

As with our analysis of the Exit from the Convention, we tested for heterogeneity in the results regarding the Convention's Entry, uncovering an interesting nuance (as shown in Appendix Table A6). The signaling effect of the Entry was more pronounced in provinces with stronger support for the governing conservative-religious coalition parties and in those with below-median education levels. For instance, female murders decreased following the Entry, and the subsequent legislation further reduced female murders in provinces where support for the governing coalition was above the median. In contrast, in provinces with below-median support for the governing coalition, the deterrent effect of the law was significant, but the impact of the Entry itself was not statistically different from zero, despite a negative and sizable estimated coefficient. Similarly, the Entry had a significant effect in the East, while the law had little impact, whereas in the West, the reverse was true. This pattern is mirrored in provinces with below-median and above-median education levels: Entry had a significant effect in the former, while the law's impact was stronger in the latter.

These results suggest that in provinces where the governing party has a stronger following, the actions of the President, who also leads the governing party, have a greater influence in shaping individuals' behavior. This is likely because actions by the President and the government, such as the Entry into the Istanbul Convention, serve as a more credible signal of changing norms for supporters of the government.

As a final exercise, we re-estimate the Entry and Exit regressions using a Poisson specification. As Appendix Tables A7-A10 show, the results remain consistent with the ones reported in Tables 1-4.

³⁵ However, the social upheaval of the Gezi Park Protests and the ensuing political polarization were associated with a rise in female homicides, nearly undoing the progress made post-Entry. As illustrated in Figure A5, the average number of female homicides per month decreased from 21.1 before the Entry to 15.8 between the Entry and December 2013. However, in 2014 and 2015, the average monthly number of female homicides rose to 23.6. In other words, the significant decline in female homicides following the Entry into Istanbul Convention was primarily driven by the period between the Entry and the Gezi Protests, with the subsequent rise in homicides in the wake of Gezi Protests upheaval in offsetting the earlier gains.

³⁶ From a speech delivered on November 25, 2023. [Cumhurbaşkanı Erdoğan: “Kadına yönelik şiddetle mücadeleyi, aileyi yüceltme mücadelemizin ayrılmaz bir parçası olarak görüyoruz” | Türkiye Cumhuriyeti | İletişim Başkanlığı \(iletisim.gov.tr\)](#)

VIII. Female Murders Committed by the Police

As discussed at the end of Section VI, a shift in social norms regarding violence against women is more likely to be sustainable if it is accompanied by a corresponding change in the norms held by members of the criminal justice system. Of course, because these individuals are part of society, a shift in their norms is expected to reflect changes in the social norms of the society. However, it remains an open question whether this group can remain insulated from the societal reaction triggered by the signal sent through the exit from the Convention.

We analyzed the effects of both the country's exit from and entry into the Convention on female murders committed by police officers (active or retired). Data Source 1 contains information about the perpetrator, including if he is or was a member of the police force. These are not homicides committed by the police in the line of duty against suspects. Rather, they are cases in which police officers killed women for personal reasons.

Following the model specification in Table 3, we estimated difference-in-differences models using male murders as the control group to analyze the impact of the exit. Because the maximum number of murders committed by police officers in any given month is small, we report Poisson regressions, although OLS regressions produced the same inference.³⁷ The results, presented in the top section of Table 5, show that across sample periods the number of women murdered by police officers increased by 30 to 50 percent after the withdrawal. The bottom panel presents the estimates obtained from the same model summarized in Table 4. It displays the effects of the entry into the Convention and the enactment of Law 6284 (which was adopted to comply with the Convention). While Law 6284 had no measurable impact on intimate partner murders committed by police officers, entry into the Convention reduced female murders by police officers by about one percent. These results indicate that police officers, much like the rest of the general public, responded to the Convention.

³⁷ The maximum number of women murdered in a month by individuals who are active or retired members of the police force is three.

IX. Summary and Discussion

Individuals respond to sanctions generated by laws and legal enforcement. It has also been documented that social norms affect behavior. Legal scholars and economists argue that the effectiveness of laws in changing individuals' behavior stems, in part, from laws representing societal standards regarding what is acceptable. The enactment of laws can change preferences and behaviors by establishing new benchmarks for what constitutes socially acceptable norms. However, empirical evidence on how laws alter behavior by signaling a change in norms is challenging to obtain. This is because the enactment of laws typically changes the costs and benefits of the targeted behavior in a variety of domains ranging from tax evasion to hate crimes.

In this paper we take advantage of a unique circumstance where Turkey withdrew from the Istanbul Convention in 2021, 10 years after signing it. The Istanbul Convention aims to protect women against violence by providing a legal, law enforcement, and logistical framework (databases, call centers, shelters, etc.) Although Turkey left the Convention, a particular law, enacted during the entry process, providing these protections, remained intact. Government officials, including cabinet ministers and the President, have repeatedly stated that existing laws remained unchanged and that the withdrawal would have no impact on violence against women. We analyzed all laws passed between January 1, 2020, and December 31, 2022, along with every Presidential Decision and Executive Order during the same period, and confirmed that none of them altered the penal code in a way that would reduce sanctions for violent crime. Nevertheless, the withdrawal has been perceived by human rights and women's groups as a signal of tolerance towards violence against women, leading to widespread and lasting demonstrations and protests.

To analyze the impact of the withdrawal, we employ three distinct data sets. The first two of these are collected separately by two independent nonprofit organizations. The detail of the data allows us to identify each murder, including information on its location, date, the sex of the victim, the relationship to the accused perpetrator, whether there was a restraining order by the victim against the perpetrator when the murder was committed. The third data set contains official information on female murders recorded by government security forces (the police and the gendarme). Although less detailed than the first two data sets, the police data allow for a comparison of results across these three sources.

Analyses of the two primary data sets in the form of province-level monthly panel reveal that the withdrawal from the Istanbul Convention resulted in approximately 65

additional female murders per year. This effect is driven by intimate partner murders. The police data indicate an increase in female murders by 77.

While the first data source focuses exclusively on women and contains data on female murders only, the second source provides data on both male and female murders. This enables us to investigate whether the withdrawal from the Convention had an impact of male murders. The results reveal that homicides involving male victims were unaffected by the government's withdrawal decision. A difference-in-differences analysis using both male and female homicides confirms that female homicides increased compared to male homicides following the withdrawal from the Convention.³⁸ We find that the impact of the Exit on female murders is more pronounced in provinces with below-median education levels, in provinces with above-median voter support for the governing religious-conservative coalition parties, and in the culturally conservative and least educated Eastern region of the country.

These analyses show that the country's withdrawal from the Istanbul Convention was followed by an increase in female murders, despite no changes in legal sanctions against violence. As explained in Section VI, the laws related to violent crime remained unchanged, and government officials repeatedly emphasized this point, stressing that sanctions and enforcement had not changed. Nevertheless, the public may have believed that expected punishment for violence against women had declined, which could help explain the rise in female murders. Such a perception could have arisen if people assumed that law enforcement had become less vigilant, despite officials' assurances to the contrary. Of course, it is unclear how such a misperception could persist in the absence of any actual change in enforcement. Although laws and law enforcement did not change *de jure*, they may have changed *de facto* if members of the criminal justice system interpreted the exit from the Convention as a signal of greater tolerance for domestic violence and violence against women more generally. Indirect evidence for this interpretation comes from the analysis of female intimate partner murders committed by active and retired police officers. These murders also increased after the country's withdrawal, suggesting that even law enforcement officers reacted to the exit and the accompanying shift in perceived norms. Along the same lines, the withdrawal may have been understood by the broader public as a shift in societal norms toward greater tolerance of such violence, thereby contributing to the rise in female murders. The discussion

³⁸ When we analyze the impact of the entry to the Convention in 2011, we find that it led to a significant decline in female homicides. This decline was driven by intimate partner homicides. Analysis of two waves of a domestic violence survey provides supportive evidence of the Entry, and shows that the likelihood of becoming a victim of physical violence has declined between 2008 and 2014.

in Section VI points to a shift in society's perception of norms pertaining to violence against women following the country's withdrawal from the Convention.

We also analyze Turkey's entry into the Istanbul Convention in 2011. As the fourth data set, we use two available waves of the National Research on Domestic Violence Against Women. The first survey was conducted in 2008, before Turkey entered the Istanbul Convention, and the second in 2014, after the country had joined it. We find that the likelihood of a woman experiencing at least one form of physical violence was lower by 6 percent in 2014 compared to 2008. The probability of being punched or hit with an object by a partner, and the likelihood of facing threats or actual use of a gun or knife dropped by 23 percent and 57 percent, respectively after the country joined Istanbul Convention. Although these reductions in women's domestic violence experience might reflect other changes between the two survey waves rather than the influence of Turkey's entry into the Istanbul Convention, they echo the results reported by Mocan and Orak (2025). These authors analyze Eurobarometer surveys from 2010 and 2016 across 27 European countries that are involved in the Istanbul Convention, focusing on views regarding the acceptability of domestic violence against women. By comparing individuals in countries that signed and ratified (thus officially joined) the Convention to those in countries that signed but did not ratify, they find that joining the Istanbul Convention reduces the likelihood of men finding domestic violence against women acceptable.³⁹

The entry into the Convention took place in two steps: first, the Parliament ratified the Convention, and second, a law was enacted to enhance penalties for gender-based violence, as required by the Convention. The ratification signaled the country's stance on violence against women, holding laws constant. Four months later, the enactment of the law increased protections and sanctions, raising the cost of committing such violence for potential perpetrators while Convention was already in effect. The timing difference of these two events allows us to gain further insights into the mechanism that generated behavioral change.

Analysis of our first dataset, which extends far enough back to cover the period of Turkey's entry into the Convention, reveals a decline in female murders following the entry. This decline is the result of two distinct effects that we identified separately: the signaling effect of joining the Convention and the deterrence effect of enhanced penalties introduced

³⁹ The Eurobarometer Survey does not cover Turkey. The DHS survey, which contains questions about attitudes, covers Turkey, but the latest wave is dated 2018.

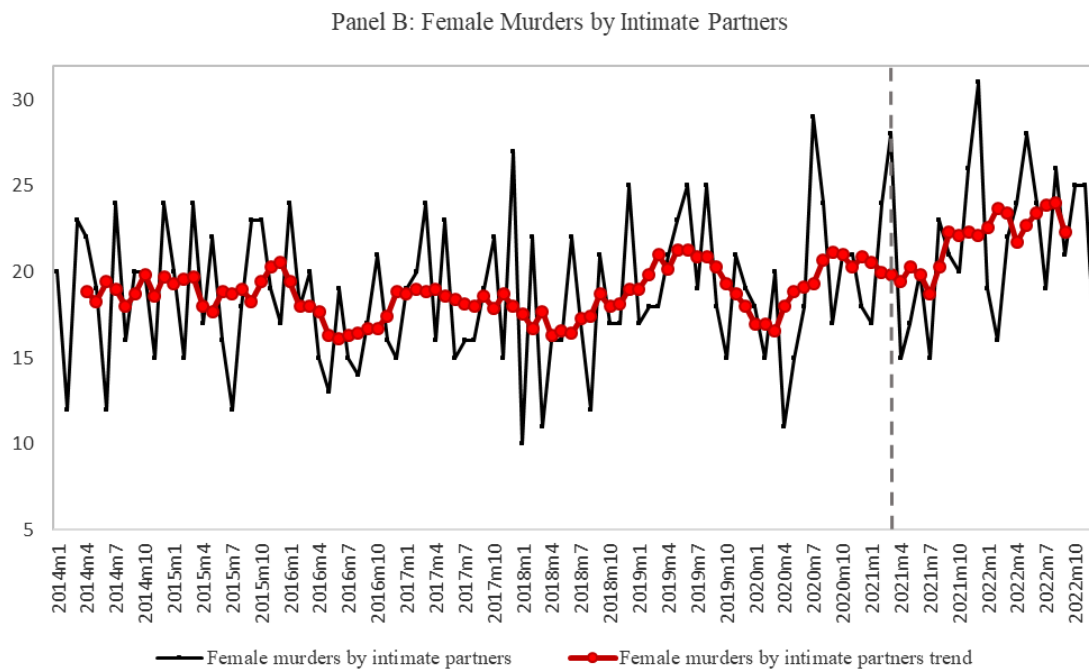
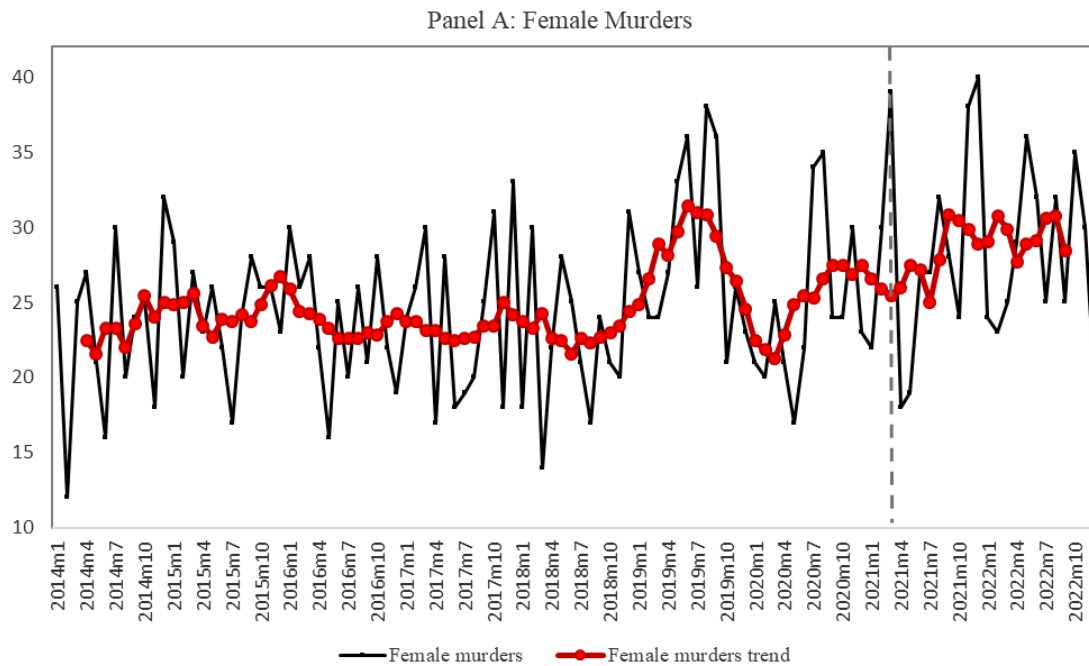
by Law 6284, enacted four months later.⁴⁰ We find that the signaling effect of the Entry was more pronounced in the same provinces that responded more strongly to the Exit: those with lower education levels, stronger support for the governing party, and the Eastern region of the country. Notably, the same political party (AKP, led by Tayyip Erdogan) has been in power continuously since 2002, having both entered the Convention and then exited it ten years later. To the extent that residents in less educated provinces and areas with stronger government support tend to follow its leadership, it is likely that both the Entry and the Exit were perceived as more meaningful signals in these regions.

The country's President Tayyip Erdogan acknowledged the shift in societal mindset towards violence against women following Turkey's entry into the Convention, though he primarily credited this change to the implementation of Law 6284, which was enacted as a result of the entry to the Convention. In 2023, he stated that "...the real tangible tools [in the fight against violence towards women] are, first, Law 6284, which we have made available to the legal system, *and the transformation we have brought about in people's minds.*" (emphasis added). Our findings suggest that this transformation in people's mindset was reversed following the signal provided by the withdrawal from the Convention.

These findings, taken together, indicate that government actions are interpreted by society as normative signals, regardless of the government's intent. It would be useful to extend this type of analysis to other domains. One obvious example is the U.S. government's withdrawal from the Paris Accord may have carried a symbolic meaning—signaling disbelief in the extent of human impact on climate change and skepticism about the effectiveness of human efforts to address it. It would be interesting to analyze whether this withdrawal influenced U.S. residents' behavior regarding energy conservation and air pollution.

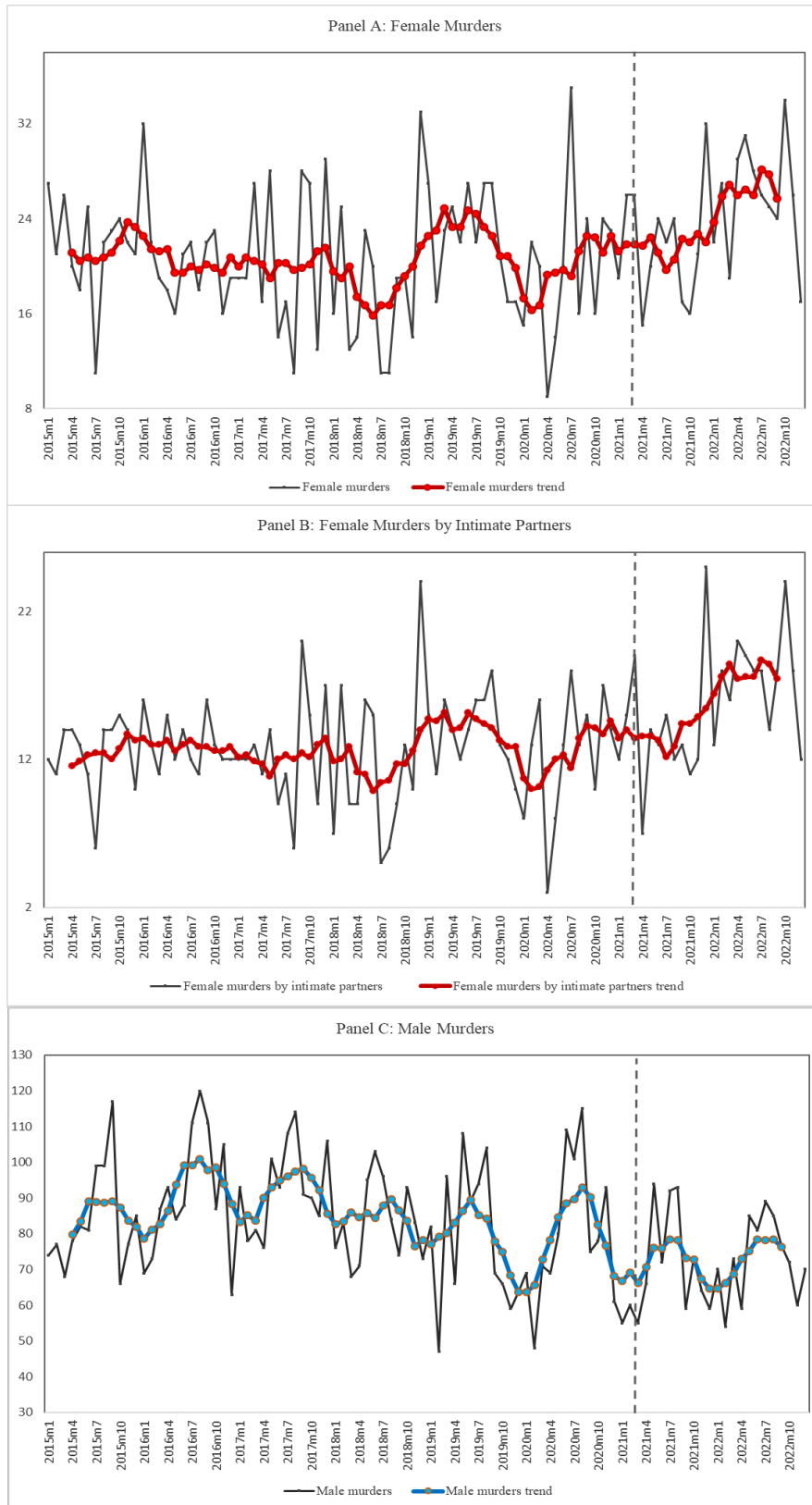
⁴⁰ However, this positive effect was later offset by a rise in female murders in the aftermath of the Gezi Park Protests—a significant social upheaval that highlighted the country's deepening political and cultural polarization.

Figure 1
Female Murders (Data Source: 1) 2014-2022
Trend: Seven-Point Moving Average



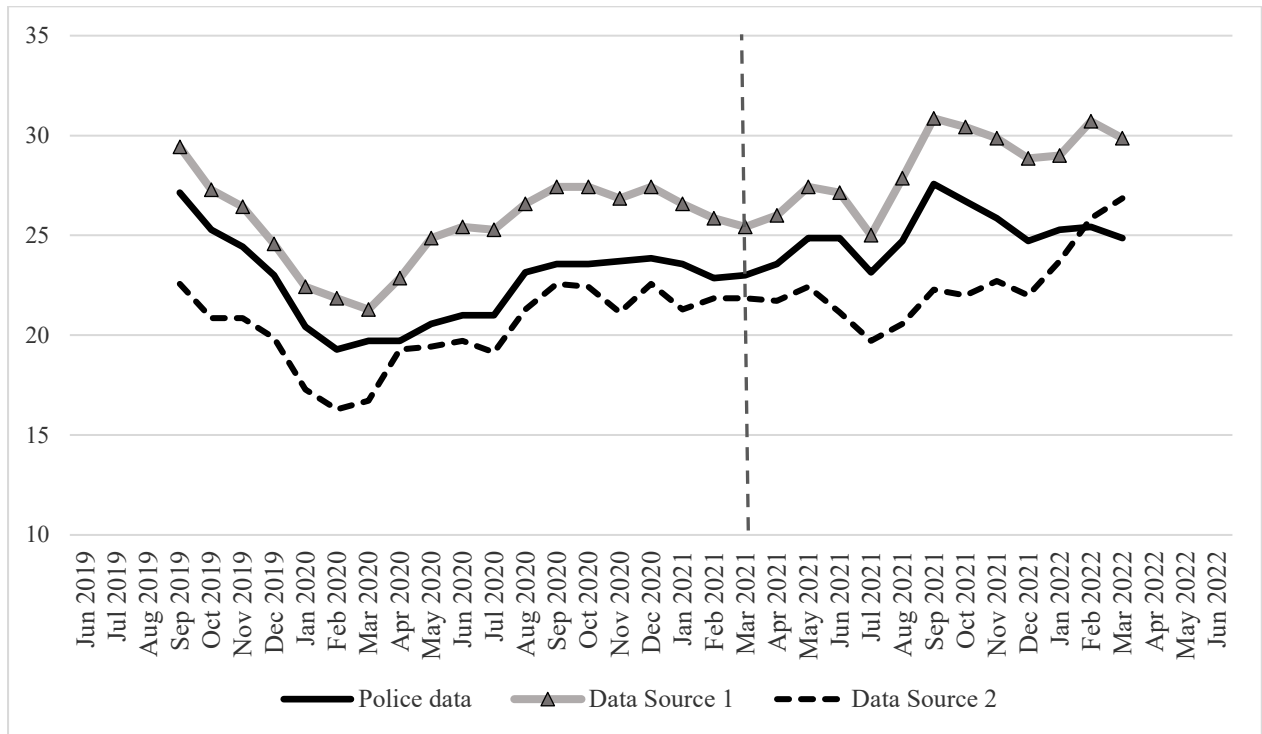
Source: Bianet Male Violence Portal Data

Figure 2
Female and Male Murders (Data Source: 2) 2015-2022
Trend: Seven-Point Moving Average



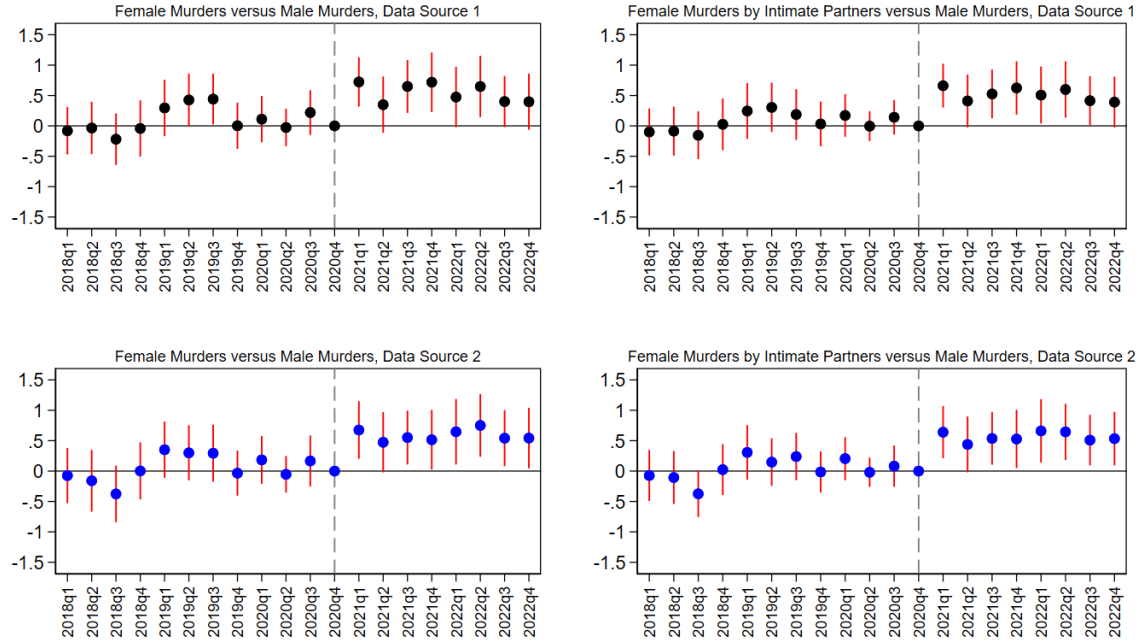
Source: Umut Foundation Data

Figure 3
Female Murders from Data Sources 1 and 2, and Police Data
7 Point Moving Average (June 2019-June 2022)



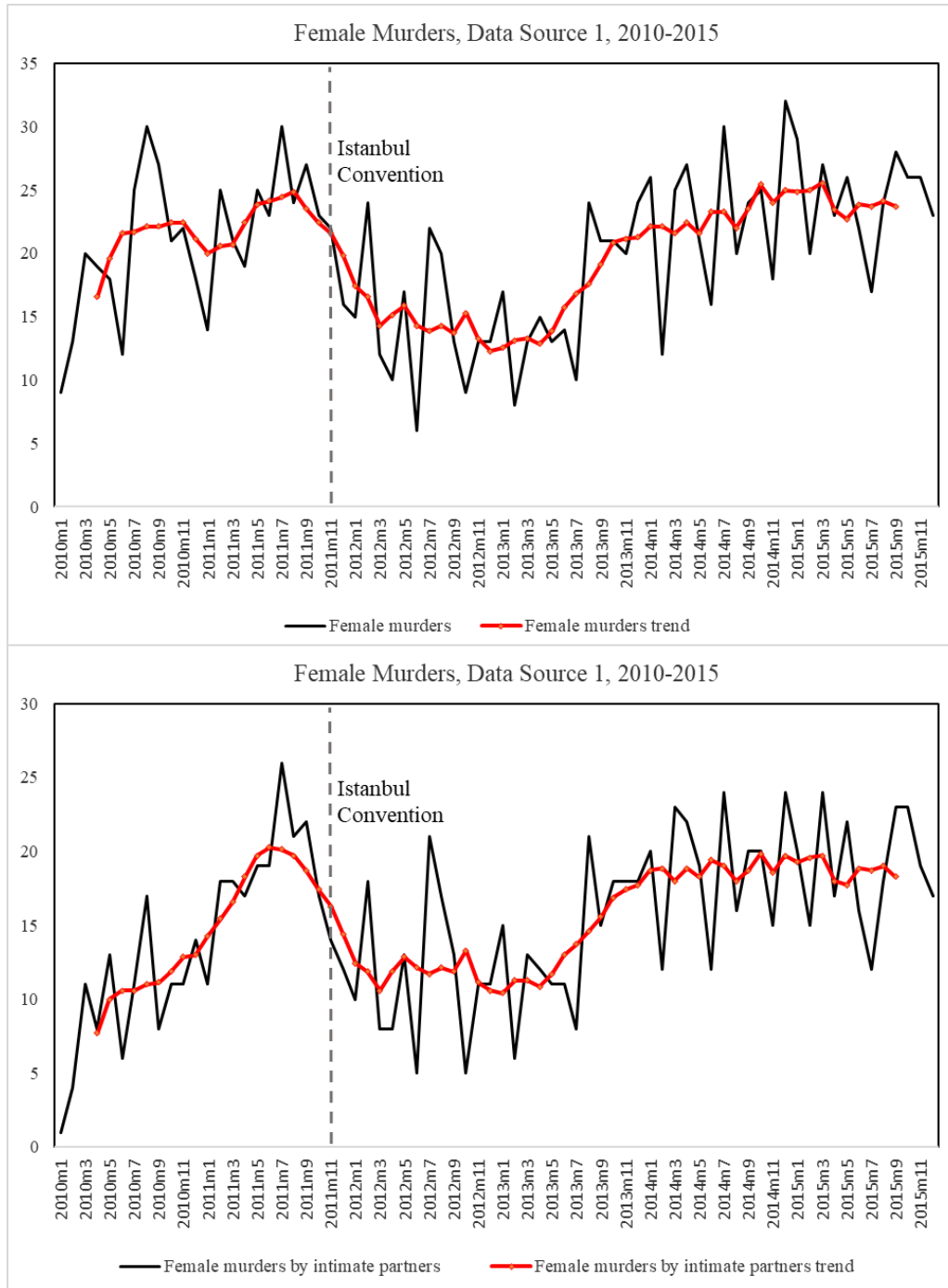
Notes: Data source for police records is “*Statistics on Female Homicides in Türkiye: 2019-2022*” published by the Police Academy Press, 2023. Other data sources are Bianet Male Violence Portal (Data Source1) and Umut Foundation (Data Source 2). Monthly police data (at the national level) is only available between June 2019 and June 2022.

Figure 4
Event Study Graphs, Quarterly Data 2018-2022



Note: Data sources are Bianet Male Violence Portal (Data Source1) and Umut Foundation (Data Source 2). The dependent variable is quarterly total murders per province between 2018 and 2022. The figures represent the regression coefficient plots of the interaction between female and quarter dummies. Covid-related deaths (monthly flows), gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs), monthly unemployment claims (in logs), province fixed effects, year fixed effects and province specific linear trends are included. The vertical lines for each coefficient show 95 percent confidence intervals, clustered at province level. The reference week is the last quarter of 2020.

Figure 5
Entry to Istanbul Convention and Female Murders (Data Source: 1) 2010-2015
Trend: Seven-Point Moving Average



Source: Bianet Male Violence Portal Data

Table 1
Withdrawal from Istanbul Convention and Female Murders

	Female Murders	By Intimate Partners	By Current Partners	Previous Judicial Record	Male Murders
<i>Panel A: Data Source 1, 2014-2022</i>	(1)	(2)	(3)	(4)	(5)
Post-Withdrawal Period	0.067** (0.026) {0.039}	0.054** (0.022) {0.039}	0.041** (0.019) {0.039}	0.033** (0.015) {0.039}	
Mean of the dependent variable	0.31	0.237	0.151	0.053	
Observations	8,748	8,748	8,748	8,748	
R-squared	0.459	0.392	0.285	0.131	
<i>Panel B: Data Source 1, 2015-2022</i>					
Post-Withdrawal Period	0.069** (0.027) {0.039}	0.055** (0.024) {0.039}	0.043** (0.020) {0.039}	0.032** (0.015) {0.039}	
Mean of the dependent variable	0.314	0.238	0.151	0.054	
Observations	7,776	7,776	7,776	7,776	
R-squared	0.459	0.396	0.289	0.130	
<i>Panel C : Data Source 2, 2015-2022</i>					
Post-Withdrawal Period	0.076*** (0.028) {0.017}	0.056** (0.022) {0.017}			-0.094 (0.069) {0.162}
Mean of the dependent variable	0.264	0.165			1.008
Observations	7,776	7,776			7,776
R-squared	0.366	0.294			0.579
Controls	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes	Yes

Notes: Data sources are Bianet Male Violence Portal (Data Source 1) and Umut Foundation (Data Source 2). The dependent variable is monthly homicides in a province (81 provinces). Each regression controls for covid-related deaths (monthly flows), gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors (in parentheses) are clustered at the province level. The values in {curly brackets} are the adjusted p-values that account for multiple hypothesis testing using Simes procedure. *** p<0.01, ** p<0.05, * p<0.1.

Table 2
Withdrawal from Istanbul Convention and Female Murders
Regressions with Annual Data, including Police Records

	Female Murders, Data Source 1	By Intimate Partners, Data Source 1	Female Murders, Data Source 2	By Intimate Partners, Data Source 2	Male Murders, Data Source 2	Female Murders Police Records
<i>Panel A: 2016-2022</i>	(1)	(2)	(3)	(4)	(5)	(6)
Post-Withdrawal Period	0.626 (0.417)	0.666* (0.365)	1.191** (0.527)	0.974** (0.428)	-1.131 (1.066)	0.970** (0.409)
Mean of the dependent var.	3.81	2.87	3.17	2.0	12.1	3.79
Observations	560	560	560	560	560	560
R-squared	0.937	0.914	0.909	0.866	0.951	0.927
<i>Panel B: 2015-2022</i>						
Post-Withdrawal Period	0.759** (0.377)	0.790** (0.325)	1.219** (0.477)	0.978** (0.395)	-1.616 (1.087)	
Mean of the dependent var.	3.77	2.86	3.17	1.98	12.1	
Observations	640	640	640	640	640	
R-squared	0.934	0.910	0.906	0.863	0.947	
<i>Panel C : 2014-2022</i>						
Post-Withdrawal Period	0.771* (0.425)	0.774** (0.336)				
Mean of the dependent var.	3.73	2.85				
Observations	720	720				
R-squared	0.930	0.905				
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Data source for police records is “*Statistics on Female Homicides in Türkiye: 2019-2022*” published by the Police Academy Press, 2023. The dependent variable is annual murders in a province. There are 80 provinces in these models(as opposed to 81) as information is not recorded in one province in the Police data. Each regression controls for covid-related deaths, gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and unemployment claims (in logs) at province level. Standard errors (in parentheses) are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table 3
Difference in Difference Estimates of the Impact of Withdrawal from Istanbul Convention

	Murders	By Intimate Partners	Murders	By Intimate Partners
	Data Source 2	Data Source 2	Data Source 1	Data Source 1
<i>Panel A: 2015-2022</i>	(1)	(2)	(3)	(4)
Female*March 2021 Dummy	0.196*** (0.042)	0.199*** (0.043)	0.190*** (0.041)	0.183*** (0.040)
Observations	15,552	15,552	15,552	15,552
R-squared	0.463	0.440	0.561	0.564
<i>Panel B: 2018-2022</i>				
Female*March 2021 Dummy	0.147*** (0.039)	0.146*** (0.039)	0.123*** (0.039)	0.121*** (0.038)
Observations	9,720	9,720	9,720	9,720
R-squared	0.466	0.439	0.555	0.556
<i>Panel C: 2019-2022</i>				
Female*March 2021 Dummy	0.107** (0.045)	0.111** (0.045)	0.088* (0.044)	0.092** (0.043)
Observations	7,776	7,776	7,776	7,776
R-squared	0.473	0.446	0.562	0.561
Controls	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes

Notes: Data sources are Bianet Male Violence Portal (Data Source 1) and Umut Foundation (Data Source 2). Each regression controls for covid-related deaths (monthly flows), gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table 4
Entry into Istanbul Convention, Adoption of Law 6284, and Female Murders

	Female Murders	By Intimate Partners	By Current Partners	Previous Judicial Record
<i>Panel A: Data Source 1, 2010-2013</i>	(1)	(2)	(3)	(4)
Post-Entry period	-0.063* (0.034) {0.085}	-0.075*** (0.026) {0.011}	-0.045** (0.022) {0.054}	-0.023** (0.010) {0.037}
Adoption of Law 6284	-0.142*** (0.039) {0.003}	-0.130*** (0.033) {0.003}	-0.093*** (0.027) {0.003}	0.001 (0.009) {0.893}
Pre-entry mean	0.261	0.17	0.123	0.024
Observations	3,888	3,888	3,888	3,888
R-squared	0.396	0.315	0.230	0.171
<i>Panel B: Data Source 1, 2010-2014</i>				
Post-Entry period	-0.070** (0.032) {0.048}	-0.060** (0.025) {0.036}	-0.019 (0.020) {0.38}	-0.022** (0.009) {0.035}
Adoption of Law 6284	-0.143*** (0.041) {0.003}	-0.112*** (0.030) {0.003}	-0.076*** (0.024) {0.005}	-0.003 (0.010) {0.805}
Pre-entry mean	0.261	0.17	0.123	0.024
Observations	4,860	4,860	4,860	4,860
R-squared	0.403	0.332	0.240	0.169
Controls	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes

Notes: Data source is Bianet Male Violence Portal (Data Source 1). The dependent variable is monthly murders in a province (81 provinces). Each regression controls for gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors (in parentheses) are clustered at the province level. The values in {curly brackets} are the adjusted p-values that account for multiple hypothesis testing using the Simes procedure. *** p<0.01, ** p<0.05, * p<0.1.

Table 5.
The Impact of Entry and Exit on Intimate Partner Murders
Committed by Law Enforcement Officers

	(1)	(2)	(3)
	Intimate Partner Homicide by Law Enforcement Officers	Intimate Partner Homicide by Law Enforcement Officers	Intimate Partner Homicide by Law Enforcement Officers
<i>Panel A: Exit</i>	2015-2022	2018-2022	2019-2022
Female*March 2021 Dummy	0.271** (0.122)	0.399** (0.181)	0.436* (0.224)
Observations	15,552	9,720	7,776
Controls	Yes	Yes	Yes
Nuts1-Year Trends	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes
	Intimate Partner Homicide by Law Enforcement Officers	Intimate Partner Homicide by Law Enforcement Officers	
<i>Panel B: Entry</i>	2010-2013	2010-2014	
Post-Entry period	-0.009* (0.005)	-0.009* (0.005)	
Adoption of Law 6284	-0.004 (0.004)	-0.000 (0.006)	
Observations	3,888	4,860	
Controls	Yes	Yes	
Nuts1-Year Trends	Yes	Yes	
Province Fixed Effects	Yes	Yes	
Month Fixed Effects	Yes	Yes	
Province Linear Trends	No	No	

Data source for intimate partner homicide committed by law enforcement officers are from Bianet Male Violence Portal (Data Source 1). Data source for male homicides is Umut Foundation (Data Source 2). The entries are Poisson estimates. In Panel A, the dependent variable is monthly intimate partner murders committed by law enforcement officers vis-à-vis male homicides in a province (81 provinces). Control variables are the same as used in other tables. The dependent variable in Panel B is the monthly intimate partner homicides committed by law enforcement officers. Standard errors (in parentheses) are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1. In Panel B, province linear trends are excluded due to convergence issues in Poisson estimations, however, the results are almost identical when province linear trends are included along with same controls in a regular OLS regression.

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Appendix

Figure A1

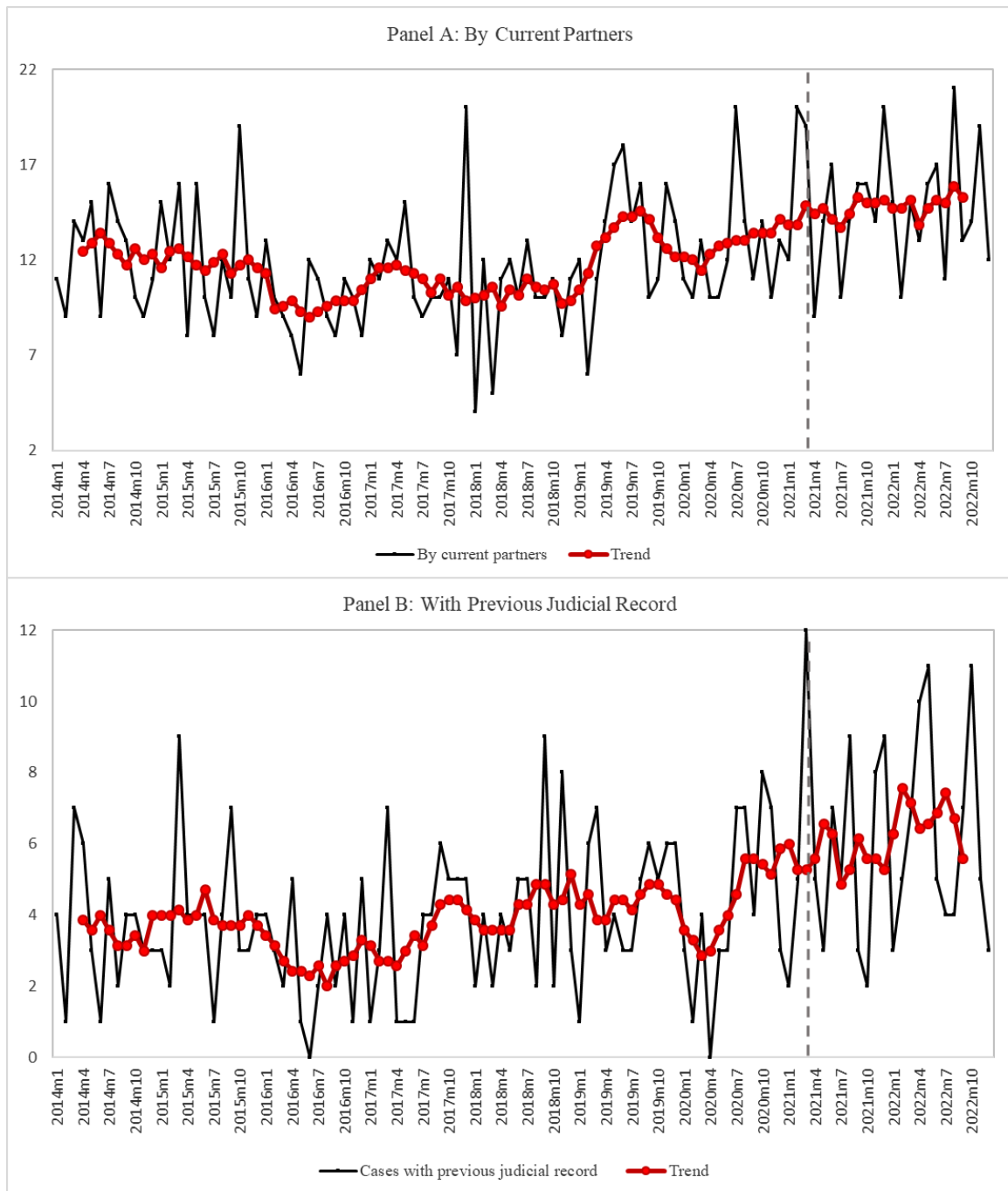


Source: Bianet, <https://bianet.org/haber/demokrasi-icin-birlik-istanbul-sozlesmesi-derhal-uygulansin-216285>



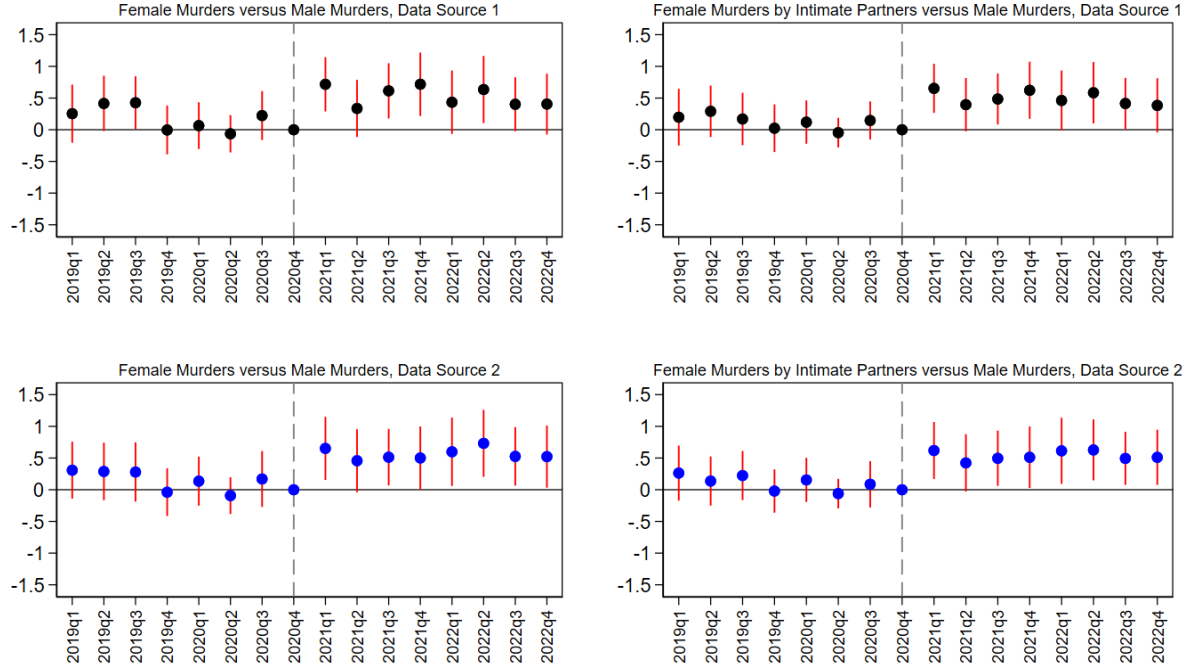
Source: <https://www.istabip.org.tr/7205-vazgecemeyiz-cunku-istanbul-sozlesmesi-yasatir-selma-gungor.htm>

Figure A2
Female Murders by Intimate Partner Type (Data Source 1) 2014-2022



Source: Bianet Male Violence Portal Data

Figure A3
Event Study Graphs, Quarterly 2019-2022



Note: Data sources are Bianet Male Violence Portal and Umut Foundation. The dependent variable is quarterly total murders per province between 2019 and 2022. The figures represent the regression coefficient plots of the interaction between female and quarter dummies. Covid-related deaths, gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs), monthly unemployment claims (in logs), province fixed effects, year fixed effects and province specific linear trends are included. The vertical lines for each coefficient show 95 percent confidence intervals, clustered at province level. The reference week is the last quarter of 2020.

Figure A4
Provinces where the Vote Share of the Governing Religious-Conservative
Coalition Parties is Above-Median

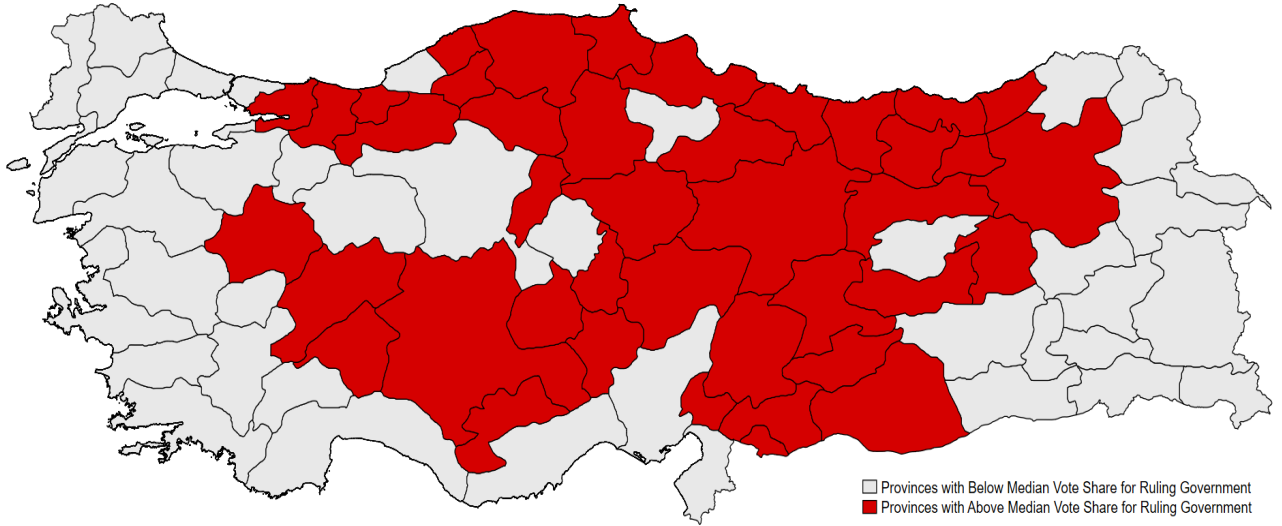


Figure A5
Provinces where the Average Years of Education is Below-Median

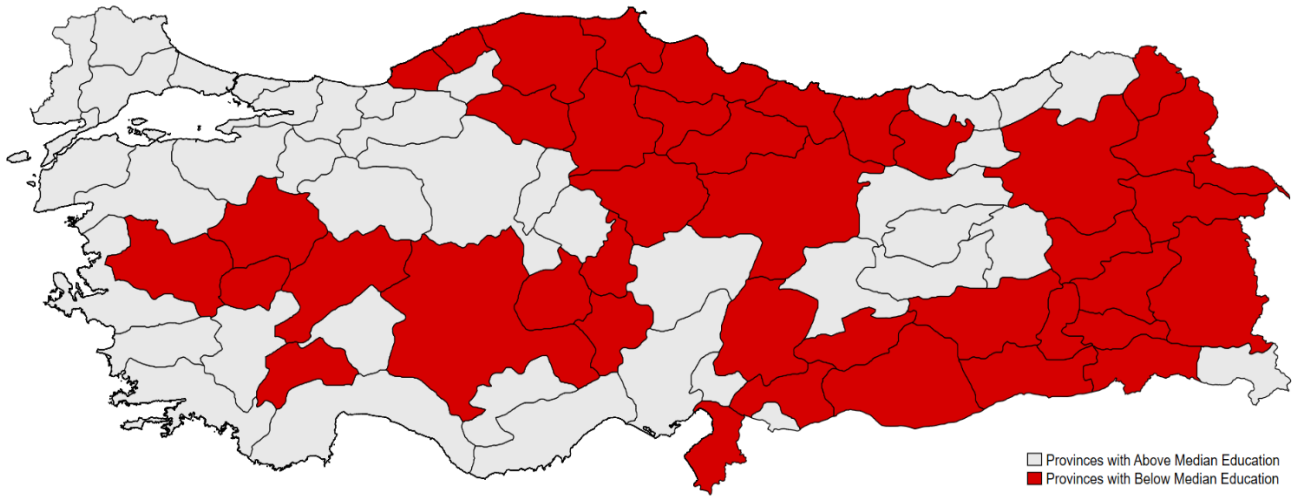


Figure A6
Five DHS Regions of the Country

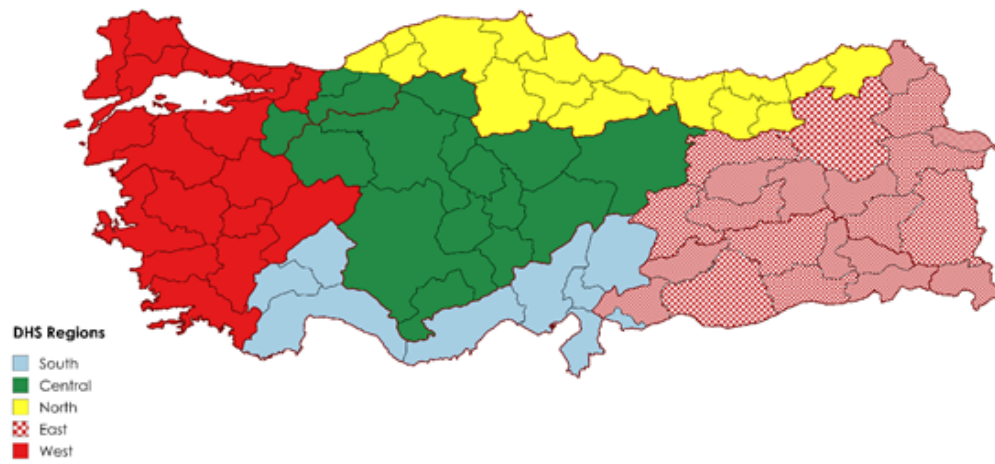
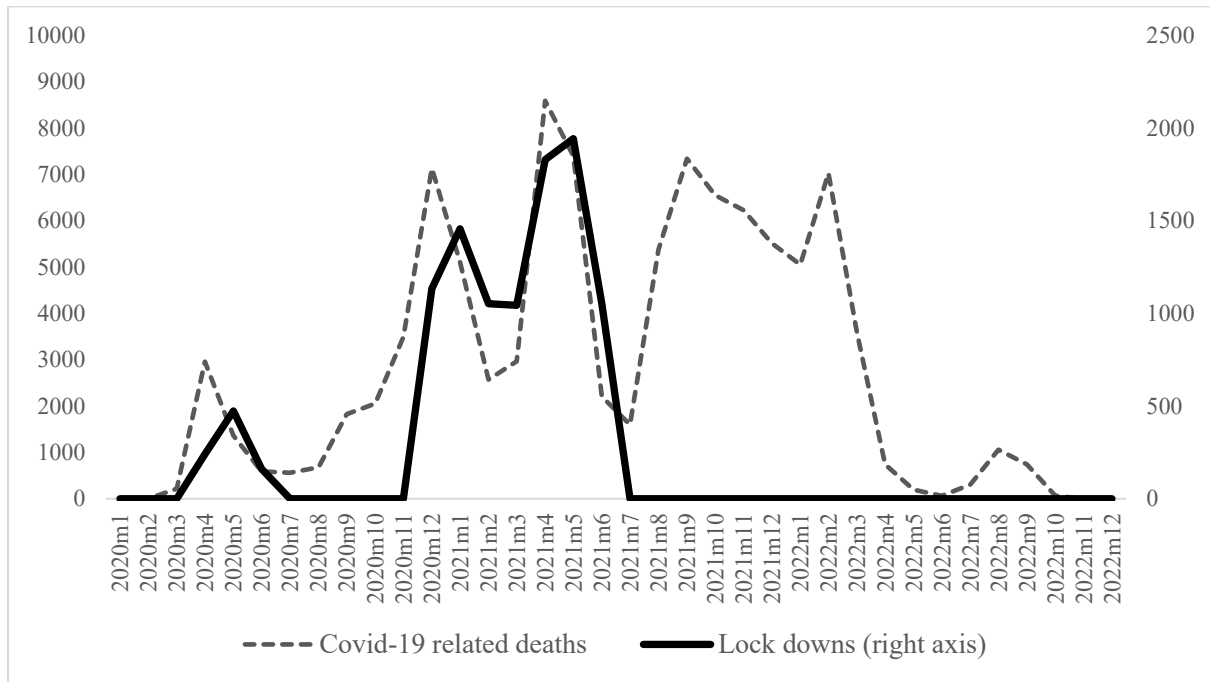


Figure A7
Covid-19 Lockdowns and the Count of Covid-19 Deaths



Source: Republic of Türkiye, Ministry of Interior and Worldometer Coronavirus Statistics. Lockdowns are measured as the sum of province-specific number of days of closures per month.

Table A1
The Impact of the Exit on Female Murders
by Vote Shares, Regions and Education
2018-2022

	Ruling Coalition Vote Share Above Median	Ruling Coalition Vote Share Below Median	Eastern Provinces by DHS Classification	Western Provinces by DHS Classification	Provinces with Below Median Education	Provinces with Above Median Education
	(1)	(2)	(3)	(4)	(5)	(6)
Female*March 2021 Dummy	0.214*** (0.055)	0.112** (0.051)	0.272*** (0.090)	0.234 (0.139)	0.204*** (0.051)	0.097 (0.060)
Observations	4,800	4,800	2,760	1,800	4,800	4,800
R-squared	0.304	0.548	0.347	0.586	0.326	0.534
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes	Yes	Yes
Mean of homicide, female	0.169	0.357	0.144	0.590	0.178	0.359
Mean of homicide, male	0.801	1.08	0.743	1.796	0.805	1.117

Notes: Data source is Umut Foundation (Data Source 2). Each regression controls for covid-related deaths (monthly flows), gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1. See Appendix Figures A4-A6 for geographic location of the provinces.

Table A2
The Impact of the Exit on Female Murders
Controlling for Covid-19 Closures

	Female Murders	By Intimate Partners	By Current Partners	Previous Judicial Record	Male Murders
<i>Data Source 1, 2014-2022</i>	(1)	(2)	(3)	(4)	(5)
Post-Withdrawal Period	0.049** (0.024)	0.039* (0.020)	0.033* (0.019)	0.023* (0.012)	
Covid-19 Lockdowns	-0.004** (0.002)	-0.003** (0.001)	-0.001 (0.001)	-0.001 (0.001)	
Mean of the dependent variable	0.31	0.237	0.151	0.053	
Observations	8,748	8,748	8,748	8,748	
R-squared	0.459	0.393	0.285	0.131	
<i>Data Source 1, 2015-2022</i>					
Post-Withdrawal Period	0.051** (0.024)	0.040** (0.020)	0.034* (0.018)	0.022* (0.012)	
Covid-19 Lockdowns	-0.004** (0.002)	-0.003** (0.001)	-0.001 (0.001)	-0.001 (0.001)	
Mean of the dependent variable	0.314	0.238	0.151	0.054	
Observations	7,776	7,776	7,776	7,776	
R-squared	0.460	0.396	0.289	0.130	
<i>Data Source 2, 2015-2022</i>					
Post-Withdrawal Period	0.052** (0.023)	0.036* (0.019)			-0.080 (0.071)
Covid-19 Lockdowns	-0.002* (0.001)	-0.002* (0.001)			-0.001 (0.003)
Mean of the dependent variable	0.264	0.165			1.008
Observations	7,776	7,776			7,776
R-squared	0.365	0.293			0.579
Controls	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes	Yes

Notes: Data sources are Bianet Male Violence Portal (Data Source 1) and Umut Foundation (Data Source 2). The dependent variable is monthly murders in a province (81 provinces). Each regression controls for province specific number of days of covid lockdowns, gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors (in parentheses) are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table A3
The Impact of the Exit on Female Murders
Controlling for Covid-19 Closures
Using Annual Police Records

	Female Homicide, Data Source 1	By Intimate Partners, Data Source 1	Female Homicide, Data Source 2	By Intimate Partners, Data Source 2	Male Homicide, Data Source 2	Female Homicide Police Records
<i>Panel A: 2016-2022</i>	(1)	(2)	(3)	(4)	(5)	(6)
Post-Withdrawal Period	0.584 (0.407)	0.650* (0.374)	1.235** (0.547)	1.025** (0.442)	-0.947 (1.117)	0.856** (0.399)
Covid-19 Lockdowns	-0.002 (0.005)	-0.004 (0.004)	-0.010** (0.005)	-0.010** (0.004)	0.005 (0.010)	-0.006 (0.004)
Observations	560	560	560	560	560	560
R-squared	0.914	0.907	0.909	0.867	0.951	0.927
<i>Panel B: 2015-2022</i>						
Post-Withdrawal Period	0.720** (0.361)	0.752** (0.322)	1.223** (0.474)	0.978** (0.391)	-1.553 (1.107)	
Covid-19 Lockdowns	-0.003 (0.004)	-0.005 (0.004)	-0.009** (0.004)	-0.009** (0.004)	0.006 (0.010)	
Observations	640	640	640	640	640	
R-squared	0.934	0.910	0.907	0.864	0.947	
<i>Panel C : 2014-2022</i>						
Post-Withdrawal Period	0.723* (0.407)	0.731** (0.330)				
Covid-19 Lockdowns	-0.003 (0.004)	-0.005 (0.004)				
Observations	720	720				
R-squared	0.930	0.905				
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Data source for police records is “*Statistics on Female Homicides in Türkiye: 2019-2022*” published by the Police Academy Press, 2023. The dependent variable is annual murders in a province (80 provinces). Each regression controls for province specific number of days of covid lockdowns, gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and unemployment claims (in logs) at province level. Standard errors (in parentheses) are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table A4
Difference-in-Difference Estimates of the Exit
Controlling for Covid-19 Closures

	Murders	By Intimate Partners	Murders	By Intimate Partners
	Data Source 2	Data Source 2	Data Source 1	Data Source 1
<i>Panel A: 2015-2022</i>	(1)	(2)	(3)	(4)
Female*March 2021 Dummy	0.196*** (0.042)	0.199*** (0.043)	0.190*** (0.041)	0.183*** (0.040)
Covid-19 Lockdowns	-0.002 (0.002)	-0.002 (0.002)	-0.003 (0.002)	-0.003 (0.002)
Observations	15,552	15,552	15,552	15,552
R-squared	0.463	0.440	0.561	0.564
<i>Panel B: 2018-2022</i>				
Female*March 2021 Dummy	0.147*** (0.039)	0.146*** (0.039)	0.123*** (0.039)	0.121*** (0.038)
Covid-19 Lockdowns	-0.002 (0.002)	-0.002 (0.002)	-0.004 (0.002)	-0.003 (0.002)
Observations	9,720	9,720	9,720	9,720
R-squared	0.466	0.439	0.555	0.556
Controls	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes

Notes: Data sources are Bianet Male Violence Portal (Data Source 1) and Umut Foundation (Data Source 2). Each regression controls for province specific number of days of covid lockdowns, gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table A5
The Impact of the Entry in the Istanbul Convention on Domestic Violence, 2008-2014

	Any Physical Violence	Punching or Hitting with an Object	Threat to Use or Actual Use of Gun or Knife
	(1)	(2)	(3)
Year 2014 Dummy	-0.006** (0.002)	-0.009*** (0.001)	-0.004*** (0.000)
Mean of the dependent variable	0.10	0.04	0.007
Observations	17,255	17,315	17,327
R-squared	0.041	0.025	0.012
Education FE	Yes	Yes	Yes
Partner's Education FE	Yes	Yes	Yes
Interview Language	Yes	Yes	Yes
Age FE	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes
Nuts2 Region-Year Fixed Effects	Yes	Yes	Yes

Notes: Data sources are 2008 and 2014 waves of National Research on Domestic Violence Against Women. Robust standard errors are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table A6
The Impact of the Entry into Istanbul Convention
by Vote Shares, Regions and Education, 2010-2014

	Ruling Coalition Vote Share Above Median	Ruling Coalition Vote Share Below Median	Eastern Provinces by DHS Classification	Western Provinces by DHS Classification	Provinces with Below Median Education	Provinces with Above Median Education
	(1)	(2)	(3)	(4)	(5)	(6)
Post entry period	-0.071* (0.041)	-0.063 (0.055)	-0.101** (0.043)	-0.031 (0.096)	-0.069* (0.039)	-0.059 (0.059)
Adoption of Law 6284	-0.069* (0.037)	-0.197*** (0.067)	-0.006 (0.027)	-0.337*** (0.098)	-0.071** (0.032)	-0.213*** (0.072)
Observations	1,920	1,920	1,104	720	1,920	1,920
R-squared	0.183	0.458	0.205	0.479	0.186	0.453
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes	Yes	Yes
Mean of homicide	0.144	0.323	0.143	0.498	0.157	0.322

Notes: Data source is Bianet Male Violence Portal (Data Source 1). Each regression controls gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1. See Appendix Figures A4-A6 for geographic location of the provinces.

Table A7
Poisson Estimates of the Impact of the Exit on Female Murders

	Female Murders	By Intimate Partners	By Current Partners	Previous Judicial Record	Male Murders
<i>Panel A: Data Source 1, 2014-2022</i>	(1)	(2)	(3)	(4)	(5)
Post-Withdrawal Period	0.198** (0.089)	0.198* (0.110)	0.209 (0.137)	0.457* (0.248)	
<i>Percent change</i>	22%	22%	23%	58%	
Observations	8,748	8,748	8,748	8,748	
<i>Panel B: Data Source 1, 2015-2022</i>					
Post-Withdrawal Period	0.199** (0.096)	0.187 (0.115)	0.182 (0.142)	0.436 (0.265)	
<i>Percent change</i>	22%	21%	20%	55%	
Observations	7,776	7,776	7,776	7,776	
<i>Panel C : Data Source 2, 2015-2022</i>					
Post-Withdrawal Period	0.244** (0.109)	0.274** (0.129)			-0.120 (0.083)
<i>Percent change</i>	28%	32%			13%
Observations	7,776	7,776			7,776
Controls	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes	Yes

Notes: Data sources are Bianet Male Violence Portal (Data Source 1) and Umut Foundation (Data Source 2). The dependent variable is monthly homicides in a province (81 provinces). Each regression controls for covid-related deaths (monthly flows), gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors (in parentheses) are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table A8
The Impact of the Exit on Female Murders using Annual Police Records

	Female Murders, Data Source 1	By Intimate Partners, Data Source 1	Female Murders, Data Source 2	By Intimate Partners, Data Source 2	Male Murders, Data Source 2	Female Murders Police Records
<i>Panel A: 2016-2022</i>	(1)	(2)	(3)	(4)	(5)	(6)
Post-Withdrawal Period	0.204** (0.101)	0.312*** (0.115)	0.350*** (0.129)	0.467*** (0.147)	-0.067 (0.093)	0.272** (0.116)
<i>Percent change</i>	23%	37%	42%	60%	-6%	31%
Observations	560	560	560	560	560	560
<i>Panel B: 2015-2022</i>						
Post-Withdrawal Period	0.206** (0.084)	0.297*** (0.097)	0.370*** (0.115)	0.431*** (0.138)	-0.089 (0.092)	
<i>Percent change</i>	23%	35%	45%	54%	-9%	
Observations	640	640	640	640	640	
<i>Panel C : 2014-2022</i>						
Post-Withdrawal Period	0.163* (0.090)	0.249*** (0.092)				
<i>Percent change</i>	18%	28%				
Observations	720	720				
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Data source for police records is “*Statistics on Female Homicides in Türkiye: 2019-2022*” published by the Police Academy Press, 2023. The dependent variable is annual murders in a province (80 provinces). The entries are passion estimates. Each regression controls for covid-related deaths, gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and unemployment claims (in logs) at province level. Standard errors (in parentheses) are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table A9
Poisson Estimates of the Impact of the Exit:
Difference-in-Differences Regressions

	Murders Data Source 2	By Intimate Partners Data Source 2	Murders Data Source 1	By Intimate Partners Data Source 1
<i>Panel A: 2015-2022</i>	(1)	(2)	(3)	(4)
Female*March 2021 Dummy	0.285*** (0.059)	0.364*** (0.068)	0.256*** (0.046)	0.271*** (0.052)
<i>Percent change</i>	33%	44%	29%	31%
Observations	15,552	15,552	15,552	15,552
<i>Panel B: 2018-2022</i>				
Female*March 2021 Dummy	0.248*** (0.069)	0.310*** (0.074)	0.158*** (0.058)	0.182*** (0.061)
<i>Percent change</i>	28%	36%	17%	20%
Observations	9,720	9,720	9,720	9,720
Controls	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes

Notes: Data sources are Bianet Male Violence Portal (Data Source 1) and Umut Foundation (Data Source 2). Each regression controls for covid-related deaths (monthly flows), gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.

Table A10
Poisson Estimates of the Impact of Entry into Istanbul Convention and
the Adoption of Law 6284

	Female Murders	By Intimate Partners	Female Murders	By Intimate Partners
	2010-2013	2010-2013	2010-2014	2010-2014
	(1)	(2)	(3)	(4)
Post-Entry period	-0.237*	-0.357**	-0.245*	-0.277*
	(0.137)	(0.149)	(0.134)	(0.148)
<i>Percent change</i>	-21%	-30%	-22%	-24%
Adoption of Law 6284	-0.754***	-0.915***	-0.690***	-0.696***
	(0.196)	(0.244)	(0.164)	(0.188)
<i>Percent change</i>	-53%	-60%	-50%	-50%
Observations	3,888	3,888	4,860	4,860
Controls	Yes	Yes	Yes	Yes
Province Fixed Effects	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes
Province Linear Trends	Yes	Yes	Yes	Yes
NUTS-1 Year Trends	Yes	Yes	Yes	Yes

Notes: Data source is Bianet Male Violence Portal (Data Source 1). The dependent variable is monthly murders in a province (81 provinces). Each regression controls for gender-specific province population (in logs), province level real GDP per capita (in logs), hospital beds per hundred thousand individuals per province (in logs), province level real public investments per capita (first lag, in logs) and monthly unemployment claims (in logs) at province level. Standard errors (in parentheses) are clustered at the province level. *** p<0.01, ** p<0.05, * p<0.1.