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

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ABSTRACT

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

We analyze the expressive content of government action, focusing on Istanbul Convention, an international treaty aimed at protecting women against violence, signed and ratified by 39 countries. In 2021, ten years after signing the Convention, the Turkish government withdrew from it, on the grounds that it “was hijacked by a group of people attempting to normalize homosexuality, which is incompatible with Turkey’s social and family values.” Although this withdrawal did not alter existing laws or law enforcement practices, women’s rights advocates viewed it as a signal of tolerance for violence against women. We use two separate datasets on female murders from independent sources. Analyses, including a difference-in-difference model with male homicide data, show that the withdrawal led to an additional 70 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. We also show that 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 indicate that government actions are interpreted as normative signals by society.

JEL Classification: D9, K4, Z1

Keywords: law, homicide, norms, culture, deterrence, domestic violence

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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. 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. To make this point, 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). Similarly, 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. Acemoglu and Jackson (2017) 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.

II. Related Literature and the Contribution of this Paper

Analyzing the degree to which modifications of laws 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

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?”

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. 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. 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.

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. 2024).² 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 the 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, 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.*"³

We find that the withdrawal from the Convention led to an increase in female murders, with no corresponding impact on male murders. There were no changes following

² 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.

³ 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.

the withdrawal to the infrastructure for preventing domestic violence and protecting victims, such as domestic violence hotlines and shelters. Importantly, there were no changes in laws related to violence at the time of, or after the withdrawal. 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 are effective.⁴ Therefore, to the extent law enforcement, penalties for violence, and expected punishments stayed the same, our results are attributable to a perceived shift in norms triggered by the withdrawal from the Convention.

It could be argued, however, that although the legal framework and penalties for violent crimes, including violence against women, remained unchanged after the withdrawal, enforcement practices may have shifted. Police and prosecutors might have become less inclined to pursue perpetrators of violence against women, thereby reducing the expected punishment and contributing to an increase in such incidents. If this is the case, it suggests a change in law enforcement norms following the withdrawal. In other words, if police, prosecutors, and judges began disregarding cases of violence towards women after the withdrawal, it would indicate that they perceived the exit from the Convention as a signal of shifting norms toward leniency, to the extent that they no longer enforced the law effectively despite government's assurances to the contrary. This implies that any reduction in expected punishment, despite unchanged legal sanctions, reflects a perceived shift in social norms within the criminal justice system. Naturally, such a mechanism would raise the question of why only the law enforcement community would interpret the withdrawal from the Convention as a signal of tolerance toward violence, while the broader society does not share this view.

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

⁴ An example of these statement is the one President Erdogan 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 mücadele, aileyi yüceltme mücadelemizin ayrılmaz bir parçası olarak görüyoruz” | Türkiye Cumhuriyeti | İletişim Başkanlığı \(iletisim.gov.tr\)](https://www.cumhurbaşkanligi.gov.tr/tr/iletisim/baskanligi/iletisim.gov.tr)

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 25 percent decrease in female murders, while the passage of Law 6428 brought about an additional 50 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 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 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.⁵ 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.

⁵ 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, 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>

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."⁶ 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.⁷ 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).⁸

On 20 March, 2021 Turkish officials announced a presidential decree to withdraw from the Istanbul Convention. The official withdrawal from EU conventions entered into 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.⁹

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

⁶ 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>

⁷ 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>

⁸ [https://www.europarl.europa.eu/RegData/etudes/ATAG/2018/630297/EPRS_ATAG\(2018\)630297_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2018/630297/EPRS_ATAG(2018)630297_EN.pdf)

⁹ <https://www.coe.int/en/web/conventions/full-list?module=signatures-by-treaty&treaty=210> and Council of Europe: <https://www.coe.int/en/web/istanbul-convention/key-facts> Accessed on April 8, 2024

“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.”¹⁰

IV. Data Sources

Detailed statistics or administrative records on the incidence of domestic violence against women in Turkey are not publicly available. While the Turkish Statistical Institute (Turkstat) released two waves of a national survey on domestic violence against women, conducted in 2008 and 2014 (which we utilize later in the paper), there have been no updates since. Turkstat’s annual judicial statistics do not include data on female murders or domestic violence against women, and disaggregated judicial statistics are also inaccessible. Therefore, we make use of two different data sources provided by independent media organizations, for unique daily female murder news.

Data Source: 1

Our first data source is Bianet, an outlet dedicated to documenting male violence against women, LGBTI+ individuals, and children.¹¹ It provides daily updates on gender-based homicides, as well as physical and sexual assaults, drawing from both national and local press sources.¹² 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

¹⁰ 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=Kl0mQyS6l2U>

¹¹ 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.

¹² For an example see [Erkek şiddeti Temmuz 2024 \(bianet.org\)](https://bianet.org/Erkek-siddeti-Temmuz-2024)

that are not related to gender issues, even if the victim is a woman.¹³ 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, 2014, to December 31, 2022, and compiled 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 2,718 female murders from 2014 to 2022, averaging 302 homicides per year. Of these, 2,076 were committed by intimate partners. Additionally, we identified that 468 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 total female murders and those committed by intimate partners. Figure A2 in Appendix displays female murders by current partners (Panel

¹³ 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

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.¹⁴ 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, death due to random shootings, unintentional manslaughter during celebrations (such as shooting during a wedding or after a soccer game victory), and murders with unknown reasons or perpetrators 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 7,396 whereas there were a total of 2,043 female murders between 2015 and 2022. Of these 2,043 female murders, 1,287 were committed by intimate partners. The average number

¹⁴ For more information, see <https://umut.org.tr/turkiye-nin-siddet-haritasi2/>

of male murders is 77 per month whereas the average number of total female murders is 21 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 1.¹⁵

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.

Data Integrity

It is possible that the two nonprofit organizations that compile female homicide data may have become more "proactive" in their data collection efforts following the withdrawal from the Convention. They 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, Bianet, is on violence against women, the second data source, the Umut Foundation, does not specifically target 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*

¹⁵ [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,](#)

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 sources might have inflated female murder numbers after the exit.

Third, as previously noted, Turkey does not release detailed, disaggregated data on homicides to the public. However, 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 2021.¹⁶ These official figures closely align with our data, as shown in Figures 1 and 2.¹⁷

V. Empirical Analysis

We begin the analysis by modeling the time-series pattern of aggregate female homicides using data up to March 2021, when Turkey withdrew from the Convention. We then generate out-of-sample forecasts for the post-withdrawal period. If the withdrawal from the Convention has not altered the homicide dynamics, the forecasted homicides should align with the actual homicides observed during the post-withdrawal period.

The univariate ARIMA model for the smoothed female homicide data, derived from the First Data Source (Bianet) is AR(1,4,8). Panel A of Figure 3 illustrates the female murders with the solid line representing actual values, the dotted line indicating the in-sample one-step-ahead forecasted values, and the vertical line marking March 2021. The forecasts beyond March 2021 are dynamic, meaning they do not make use of the actual post-March homicide values. Put differently, the whole sequence of the post-withdrawal forecasts is

¹⁶ 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 the Minister of Family and Social Services, Derya Yanik.

¹⁷ A detailed comparison of the government figures and the two data sources is as follows. 2016: (Government: 301, Source 1: 259, Source 2: 244), 2017: (Government: 353, Source 1: 280, Source 2: 249), 2018: (Government: 279, Source 1: 262, Source 2: 216), 2019: (Government: 336, Source 1: 314, Source 2: 272), 2020: (Government: 268, Source 1: 309, Source 2: 236), 2021: (Government: 307, Source 1: 355, Source 2: 261). 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.

generated by taking March 2021 as the last observation, and the forecasts for the months of April 2021 and beyond are produced using the estimated model and the data up to that point. As the graph reveals, the actual monthly female murders post-March 2021 are above their forecasted values. Thus, the model underpredicts the actual murders after the withdrawal from the Istanbul Convention, suggesting an upswing of female murders following the Withdrawal.

Panel B of Figure 3 presents the results of the same analysis for female murders obtained from the second source, the Umut Foundation.¹⁸ Once again, the in-sample, one-step-ahead, forecasts are accurate. However, as was the case in Panel A (based on Data Source 1) female murders in the post-withdrawal period exceed their out-of-sample dynamic forecasts for the same period, indicating that the withdrawal from the Convention triggered an upward movement in female murders.

Panel C of Figure 3 shows the graph for male murders, along with its ARIMA forecasted values.¹⁹ The post-withdrawal dynamic forecasts of male murders fairly accurate and do not indicate any alteration in its dynamics. Thus, Figure 3 suggests that while the withdrawal from the Istanbul Convention did not significantly impact male murders, it led to an increase in female murders.

Analysis of Province-level Panel Data

While the univariate time-series analyses are informative regarding a change that seems to have taken place in the dynamics of female murders, we now turn to the analysis of province level data, where monthly female murders are explained by province attributes and a dichotomous indicator that takes the value of one after the county withdrew from the Convention. More specifically, we estimate

$$(1) \quad M_{pt} = \alpha + \beta \text{Withdrawal}_t + \Omega'X_{prt} + \gamma_{pt} + \delta_p + \psi_m + \varepsilon_{pt}$$

where M_{pt} stands for the number of female homicides (or subcategories such as homicides by intimate partners) in province p and month t . 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

¹⁸ The identified model in this case is AR(1,7).

¹⁹ The model is an AR(1,4,7) of first-differenced male homicides (to induce trend-stationarity).

(1) includes Covid related deaths.²⁰ Also included are the real growth rate of province GDP, hospital beds per 100K residents, logarithms of the monthly provincial unemployment claims, female population of the province (interpolated from annual figures) and first lag of provincial real per capita public investment expenditures budget allocated from the central government. The model includes province fixed effects (δ_p), province-specific monthly time trends (γ_{pt}), and month dummies to capture seasonality (ψ_m). Eighty-one provinces of the country 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 0.07 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 66 female murders per year. Column (2) indicates an increase of female murders by intimate partners by 54, 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 30 percent increase in murders committed by current partners, and column (4) implies a 58 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.

²⁰ 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. Additionally, 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.

Panel C of Table 1 presents the estimation results based on our Second Data Source. Recall that data from this source include information on both male and female murders, but only if the offender used a weapon. Columns (1) reveals that the withdrawal from the Convention led to an increase in females murdered by a weapon by 0.075 per month per province (equivalent to 73 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 0.05 female murders committed by intimate partners using a weapon, per province per month, marking a 29 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.²¹ 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.

Difference in Difference

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 (2).

$$(2) \quad M_{fpt} = \alpha + \beta \text{Withdrawal}_t + \theta \text{Female}_{fpt} + \lambda \text{Withdrawal}_t * \text{Female}_{fpt} + \Omega' X_{prt} + \gamma_{pt} + \delta_p + \psi_m + \varepsilon_{pt}$$

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*

²¹ The coefficient for Exit in the case of male murders is -0.083, while for female murders, it is 0.075 in column (1). 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.

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 2. 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 involving a weapon 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.

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 2 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 is 59.7 percent.²² 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 coefficient of 0.235 (se= 0.05). The corresponding coefficient in the sample of provinces where the vote share of these two parties is below the median is 0.15 (se=0.06). 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 0.57 before the Exit in provinces with above-median support for the governing religious-conservative parties, whereas it was 0.65 in provinces with below-median vote share of these parties. Thus, the impact of the Exit is 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.²³ The findings revealed that the impact of the exit was relatively stronger

²² 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.

²³ 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,

in provinces with below-median education levels. The difference-in-difference coefficient was 0.16 (se = 0.06) in the sample of 40 provinces where the average education level was above the median, indicating a 24 percent narrowing of the male-female murder gap. In contrast, the same coefficient in the sample of 40 provinces with below-median education was 0.21 (se = 0.05), reflecting a 36 percent reduction in the male-female murder gap as female murders increased.

Finally, we repeated 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 followed by the Northern Region (the Black Sea Region). The difference-in-difference coefficient is 0.28 (se=0.087) in the East, which implies a 52 percent reduction in the pre-exit gap between male and female murders. The estimated coefficient using the provinces in the North is 0.16 (se=0.047), implying 46 percent reduction in the gap between male and female murders. In the central region of the country and in the West, which includes big cities such as Istanbul and Izmir, the impact was smaller, and it was zero in the South (the region of the Mediterranean and the surrounding areas).²⁴

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

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.

²⁴ Provinces in the Mid-Turkey and the West generated coefficients of 0.11 (0.042) and 0.33 (0.147) respectively, indicating a narrowing of the wedge between male and female murders by 23 percent and 31 percent. The estimated coefficient of the Southern region was 0.01 and statistically indistinguishable from zero.

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. Also, as will discuss further later, we also estimated the models using Poisson precipitation, which did not alter the results.

Is it a Covid-19 Effect?

Turkey's withdrawal from Istanbul Convention took place on March 20, 2021, during the Covid-19 pandemic. 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 of Turkey. 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 determined 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 example, 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 about 15 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. (see Appendix Tables A1 and A2). Including both the lockdown measure and Covid deaths, or using both of these variables and their interaction term does not change the results either.

Note that in these regressions the coefficient of the province-specific lockdown measure is negative and significant at the 5 percent level. 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. Because of 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 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 A1 yield smaller estimates for the Exit effect (ranging from 0.048 to 0.052 using Data Source 1 and Data Source 2, respectively) when Covid deaths or lockdown measures are not included in the models.

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 suggests that the withdrawal signaled a shift in societal norms towards greater tolerance of violence against women, which lead to more women being murdered by men.

The withdrawal may have also impacted the attitudes of law enforcement and the judiciary, potentially making them more lenient toward such crimes. Despite assurances from cabinet ministers and government officials, it is possible that the expected punishment has actually diminished because fewer domestic violence and female homicide cases are being arrested or prosecuted contributing to the rise in female murders. In this scenario, individuals may notice legal institutions becoming more lenient following the withdrawal thereby encouraging more violent behavior. Of course, this scenario prompts the question of why only the law enforcement community would interpret the withdrawal from the Convention as a signal of tolerance toward violence, while the broader society does not perceive it this way.

Insights into this conjecture could be obtained by analyzing data on the number of cases involving violence against women handled by the police, referred to prosecutors, or processed by courts. However, such data are unavailable. This lack of information prevents an analysis of whether changes in the criminal justice system occurred after the withdrawal that could have signaled a decline in expected punishment for such violence. Nevertheless, further insights can be gained by examining the impact of Turkey's initial entry into the Istanbul Convention. In the next section we demonstrate that the Entry lead to a decline in female murders and that the signal value of the entry and the enhanced sanctions had separate effects.

VI. What was the Impact of the Entry into Istanbul Convention?

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.²⁵

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 Table A3 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

²⁵ 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

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 One (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, 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.²⁶ 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.²⁷

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.*”²⁸ For example, On June 30, 2013, amid the ongoing Gezi Protests, an LGBT parade in Istanbul drew around 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.

²⁶ There are 4,600 articles listed in Google Scholar with “Gezi Protests” in title.

²⁷ 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.*”

²⁸ 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

The results, presented in Table 3, 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 -0.08, which indicates that female murders decreased by 30 percent compared to pre-entry levels (pre-entry mean=0.269) during the first three years after entering the Convention, despite an uptick following the Gezi Park Protests. Similarly, the coefficient of -0.10 in column 2 reflects a 57 percent reduction in intimate partner homicides (with a pre-entry mean of 0.176).

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 -0.147 in column (1) indicates that female homicides declined by an additional 55 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.²⁹ 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).³⁰

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. 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

²⁹ 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 21.5 before the Entry to 15.7 between the Entry and December 2013. However, in 2014 and 2015, the average monthly number of female homicides rose to 22.9. 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.

³⁰ 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 \(iletisim.gov.tr\)](#)

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 (as shown in Appendix Table A4). 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-estimated the Entry and Exit regressions using a Poisson specification. The results provided in Appendix Tables A5 and A6 remained consistent with the ones reported in Tables 1-3.

VII. Summary and Discussion

Individuals respond to sanctions generated by laws and legal enforcement. It has also been documented that 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.⁷

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. 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 two distinct data sets, 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.

Univariate time-series analyses of monthly female homicides in the country indicate a rise in female homicides during the post-withdrawal period. The analyses of both data sets in the form of province-level monthly panel reveal that the withdrawal from the Istanbul Convention resulted in approximately 70 additional female murders per year. This effect is driven by intimate partner murders.

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.³¹ 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.

When we analyze the country's entry into the Istanbul Convention in 2011 using two waves of a national domestic violence survey, we find a significant decrease in the likelihood of women experiencing domestic violence, including physical abuse or threats involving a gun or knife, between 2008 and 2014. 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

³¹ When we analyze the impact of the entry to the Convention in 2011, we find that it led to a 50 percent 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.

Mocan and Orak (2024). These authors analyze Eurobarometer surveys from 2010 and 2016 across 27 European countries 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.

Analysis of our monthly province-level data on female murders reveals that a decline in female murders took place following the Entry. This decline is the result of two separate effects: the signaling effect of the Entry, and the deterrence effect of enhanced penalties associated with a new legislation (Law 6284) enacted four months after the Entry.³²

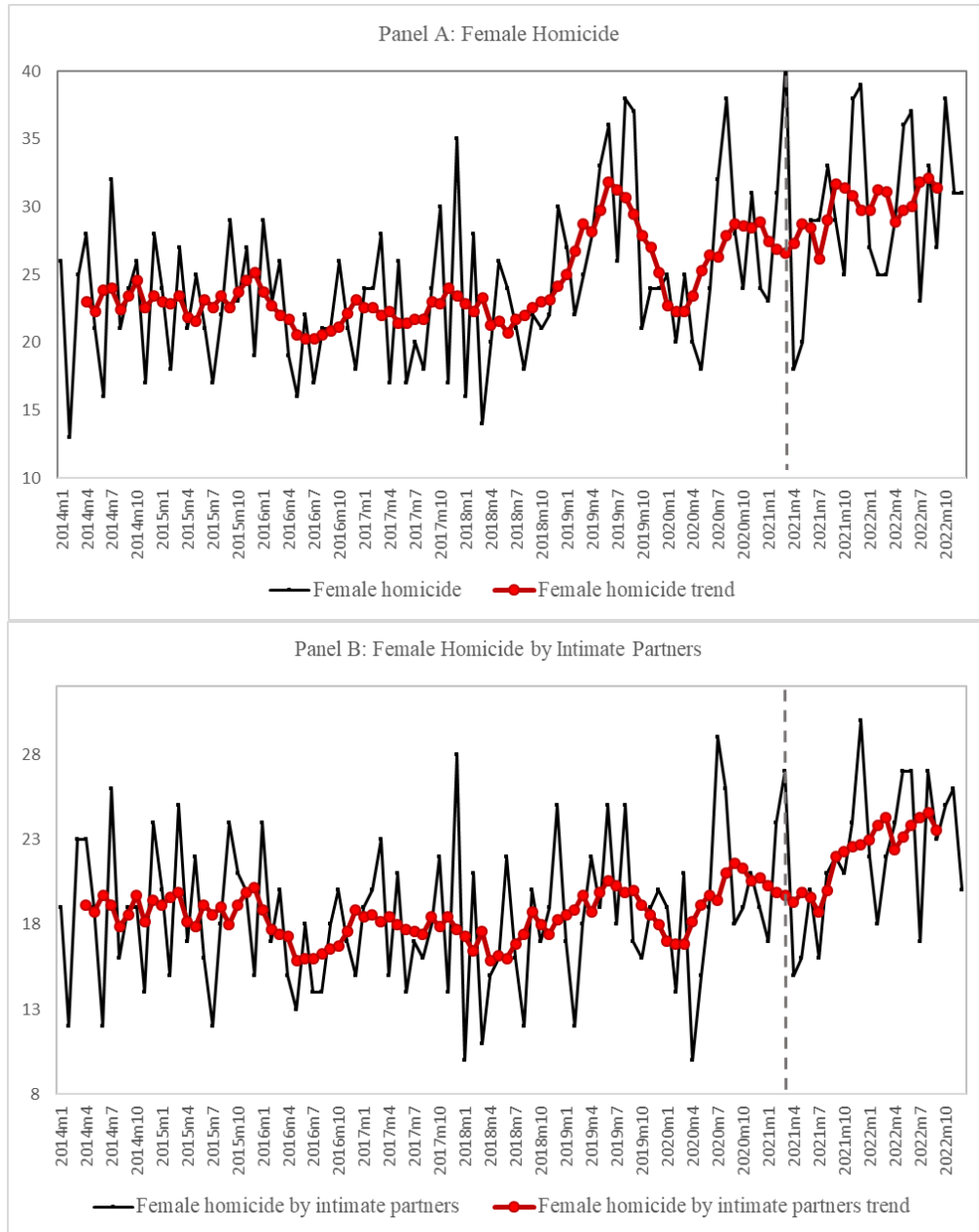
We find that the signaling effect of the Entry was more pronounced in the same provinces that responded more strongly to the Exit: those with lower education levels, stronger support for the governing party, and the Eastern region of the country. Notably, the same political party (AKP, led by Tayyip 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.

It is important to note that 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 laws have expressive function and that government actions are interpreted as normative signals by society, regardless of the government's intent.

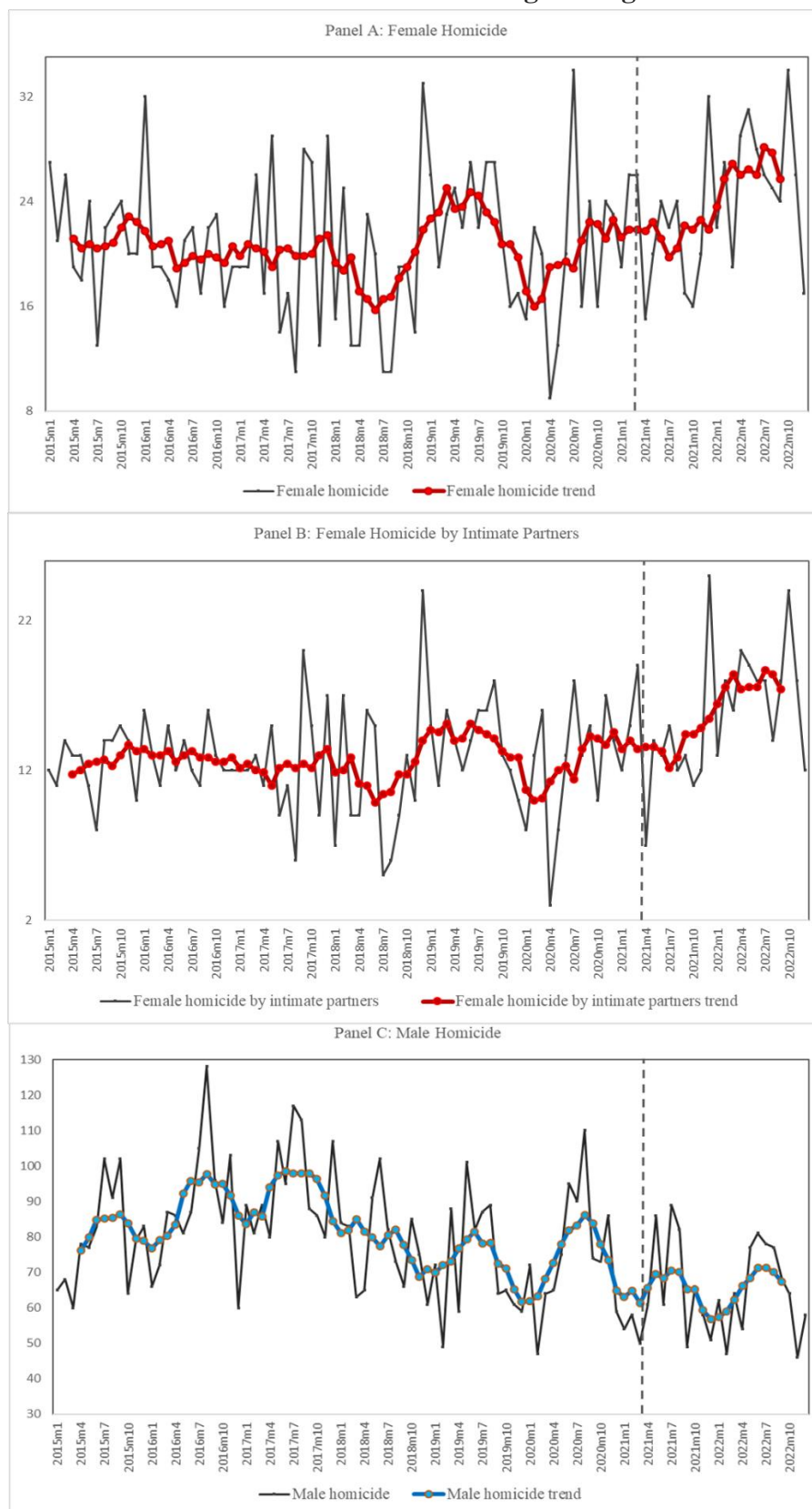
³² However, this positive effect was later offset by a rise in female murders in the aftermath of the Gezi Park Protests—a significant social upheaval that highlighted the country's deepening political and cultural polarization.

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



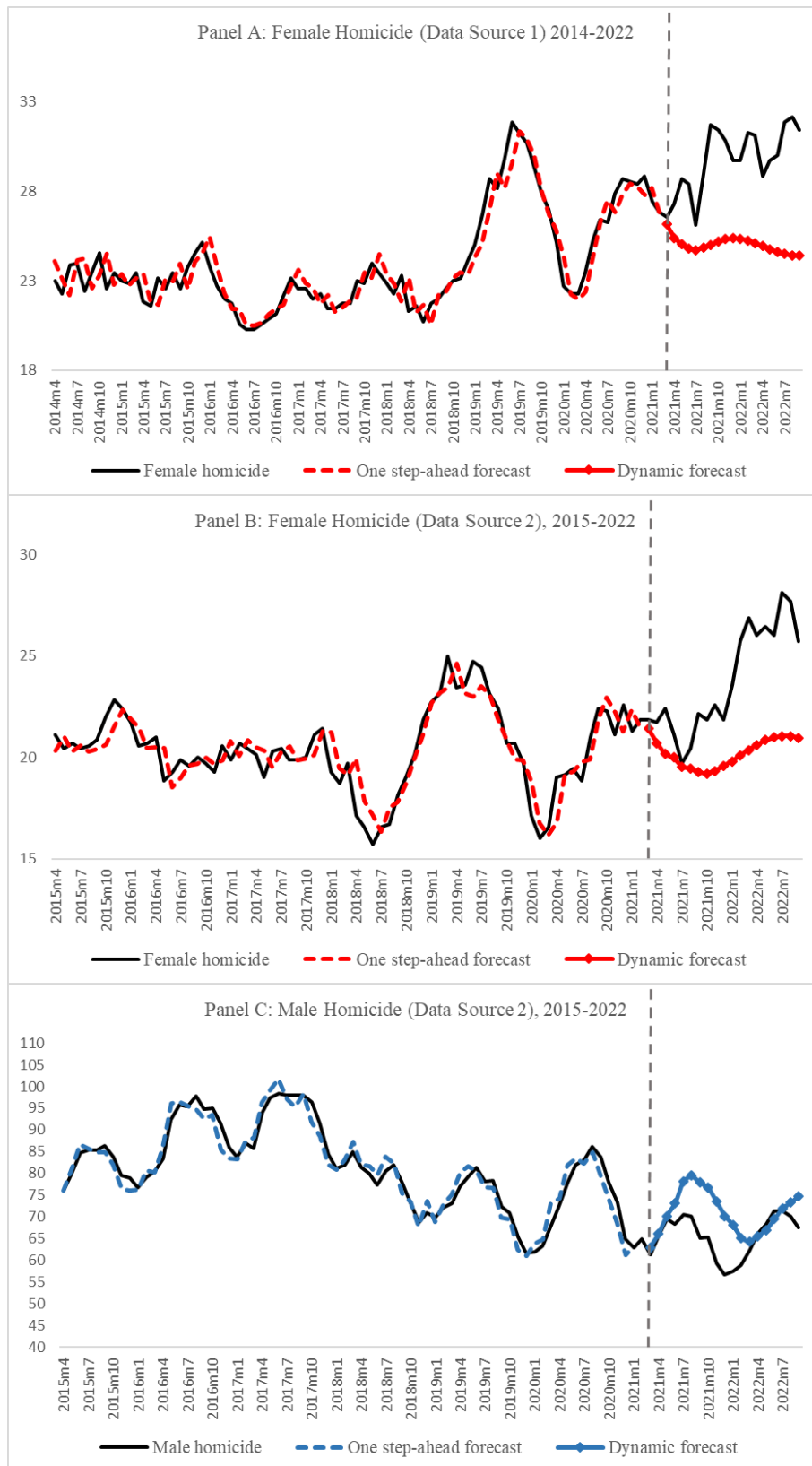
Source: Bianet Male Violence Portal Data

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



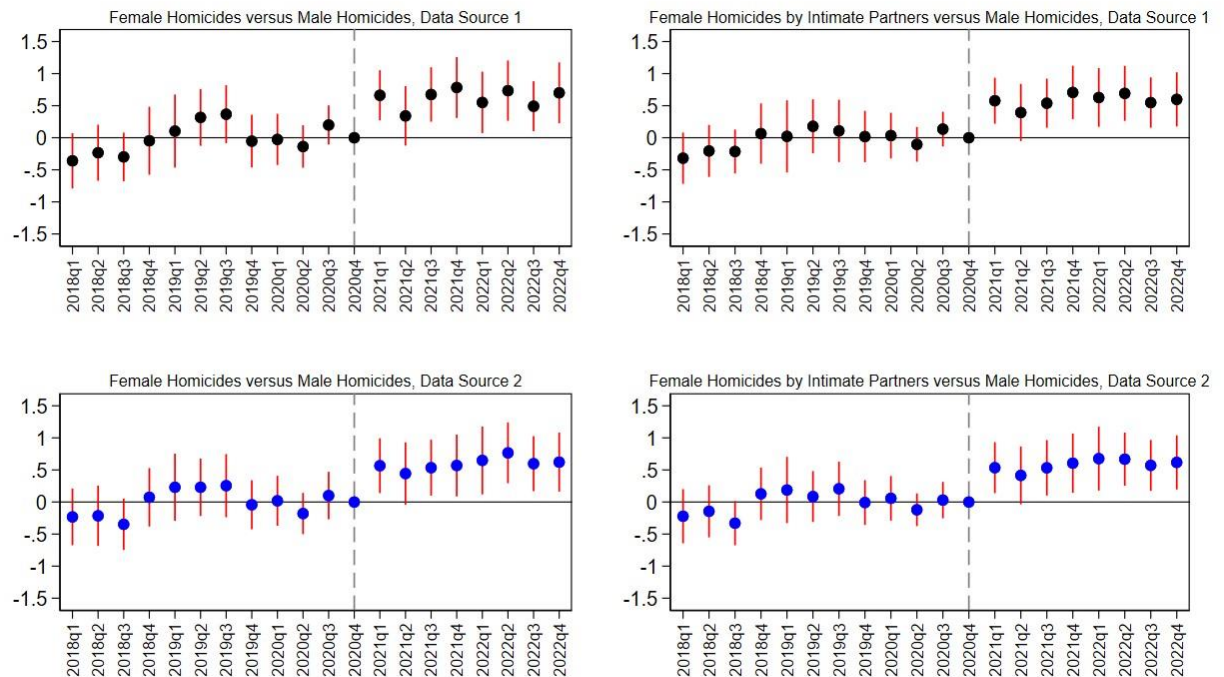
Source: Umut Foundation Data

Figure 3
Dynamic Forecast of Female and Male Homicide



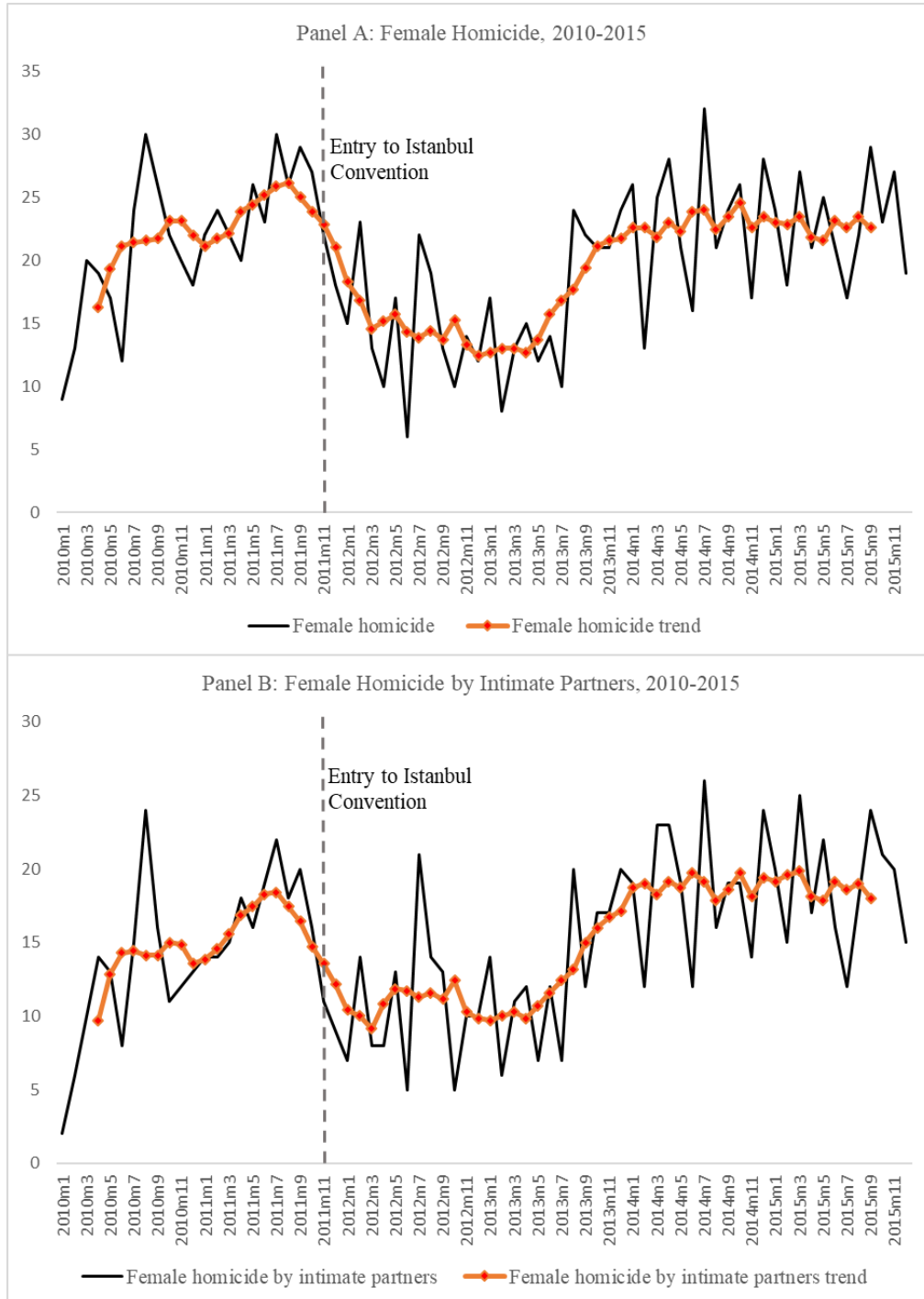
Source: Bianet and Umut Foundation Data

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 growth, hospital beds per hundred thousand individuals per province, 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 Homicide (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	0.068** (0.026) {0.028}	0.056*** (0.019) {0.028}	0.045** (0.018) {0.028}	0.031** (0.014) {0.034}	
Mean of the dependent variable	0.31	0.237	0.153	0.053	
Observations	8,748	8,748	8,748	8,748	
R-squared	0.457	0.387	0.288	0.134	
<i>Panel A: Data Source 1, 2015-2022</i>					
Post-Withdrawal Period	0.057** (0.023) {0.028}	0.052** (0.020) {0.028}	0.039** (0.018) {0.034}	0.030** (0.014) {0.034}	
Mean of the dependent variable	0.314	0.238	0.153	0.055	
Observations	7,776	7,776	7,776	7,776	
R-squared	0.460	0.390	0.293	0.134	
<i>Panel C : Data Source 2, 2015-2022</i>					
Post-Withdrawal Period	0.075*** (0.026) {0.014}	0.050** (0.020) {0.020}			-0.083 (0.064) {0.197}
Mean of the dependent variable	0.26	0.17			0.95
Observations	7,776	7,776			7,776
R-squared	0.365	0.295			0.567
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 growth, hospital beds per hundred thousand individuals per province, 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
Difference in Difference Estimates of the Impact of Withdrawal from Istanbul Convention

	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	0.246*** (0.045)	0.247*** (0.045)	0.278*** (0.048)	0.252*** (0.044)
Observations	15,552	15,552	15,552	15,552
R-squared	0.455	0.432	0.479	0.456
<i>Panel B: 2018-2022</i>				
Female*March 2021 Dummy	0.179*** (0.039)	0.176*** (0.039)	0.190*** (0.040)	0.181*** (0.037)
Observations	9,720	9,720	9,720	9,720
R-squared	0.455	0.427	0.484	0.456
<i>Panel C: 2019-2022</i>				
Female*March 2021 Dummy	0.145*** (0.043)	0.149*** (0.041)	0.149*** (0.041)	0.151*** (0.039)
Observations	7,776	7,776	7,776	7,776
R-squared	0.459	0.431	0.494	0.460
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 growth, hospital beds per hundred thousand individuals per province, 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 3
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	-0.083** (0.037) {0.056}	-0.100*** (0.031) {0.006}	-0.074*** (0.023) {0.006}	-0.017 (0.011) {0.154}
Adoption of Law 6284	-0.147*** (0.040) {0.003}	-0.064* (0.034) {0.108}	-0.045 (0.031) {0.173}	0.007 (0.011) {0.534}
Pre-entry mean	0.269	0.177	0.11	0.02
Observations	3,888	3,888	3,888	3,888
R-squared	0.398	0.317	0.245	0.166
<i>Panel B: Data Source 1, 2010-2014</i>				
Post-Entry period	-0.078** (0.035) {0.056}	-0.095*** (0.030) {0.006}	-0.060*** (0.022) {0.022}	-0.014 (0.010) {0.185}
Adoption of Law 6284	-0.152*** (0.041) {0.003}	-0.065** (0.030) {0.056}	-0.046* (0.026) {0.127}	0.005 (0.010) {0.654}
Pre-entry mean	0.269	0.177	0.11	0.02
Observations	4,860	4,860	4,860	4,860
R-squared	0.408	0.330	0.250	0.165
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 growth, hospital beds per hundred thousand individuals per province, 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.

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Appendix

Figure A1

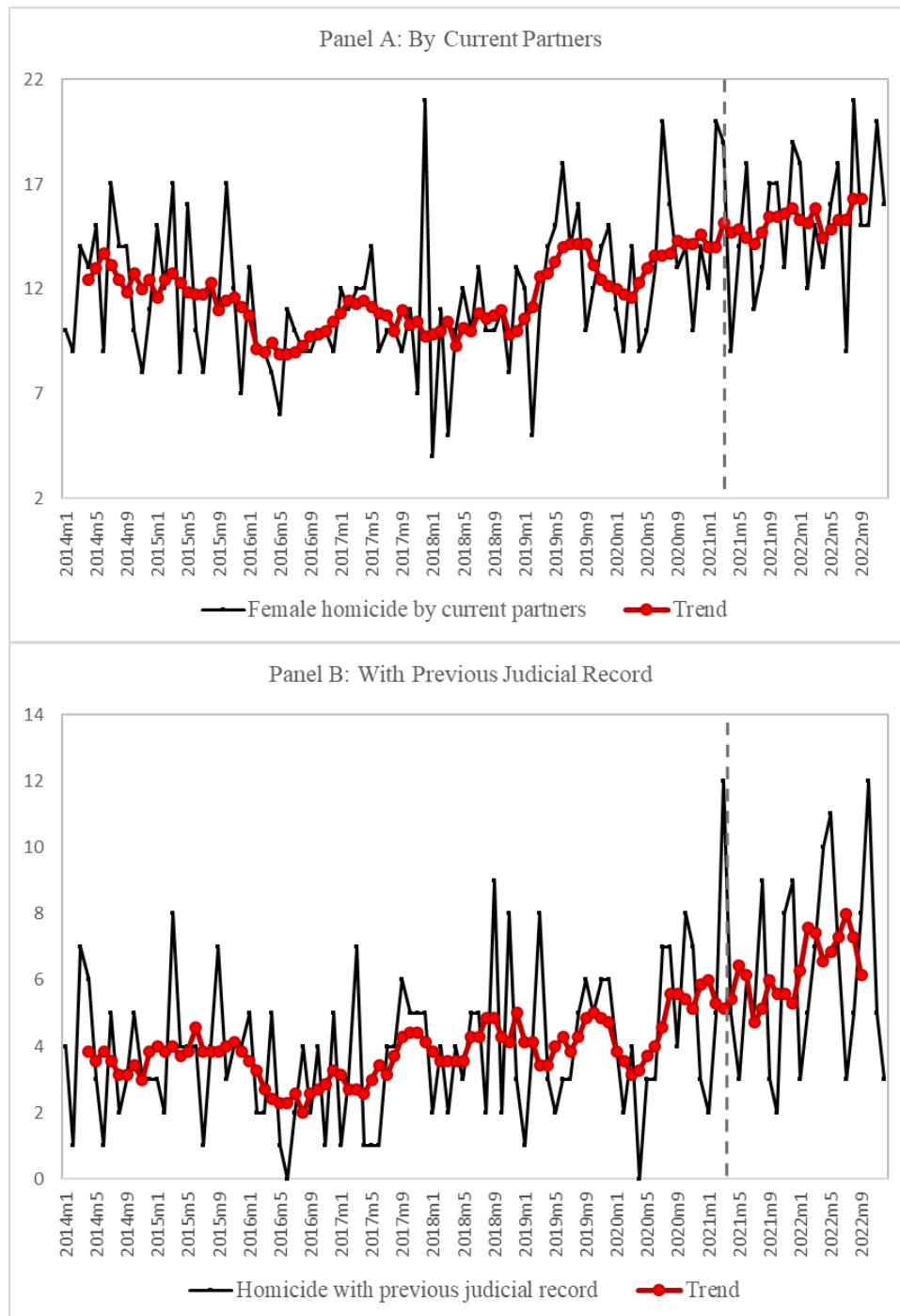


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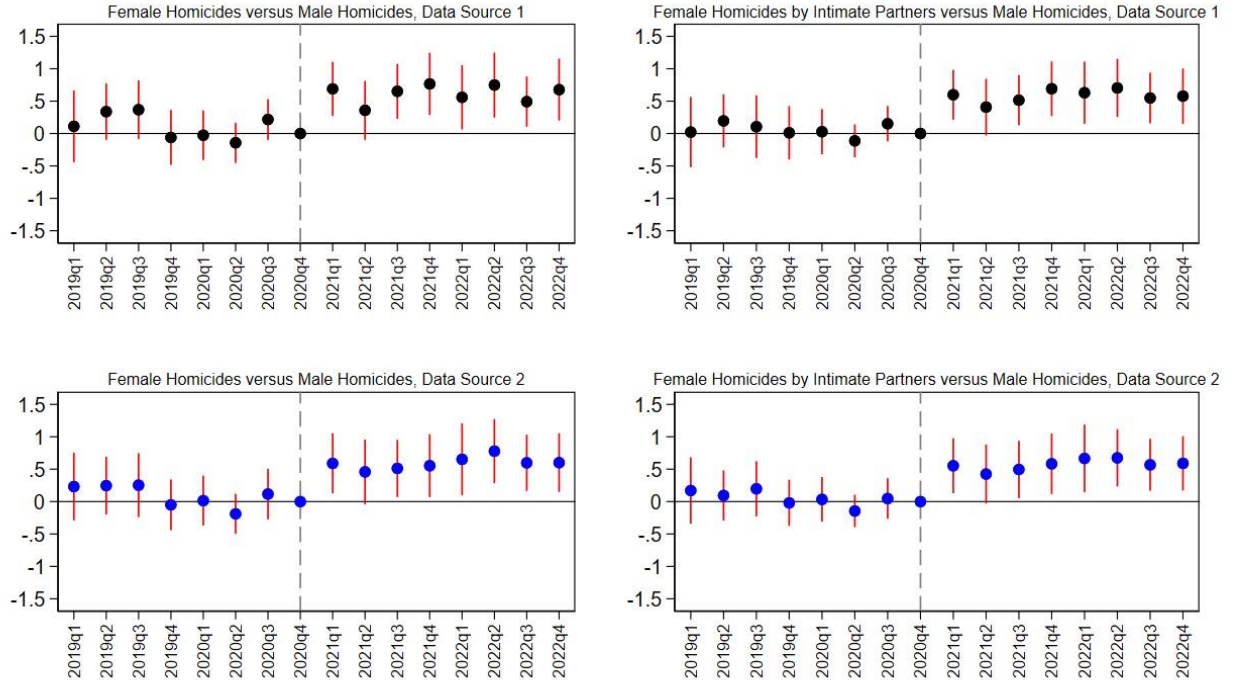
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Figure A2
Female Murders by Intimate Partner Type (Data Source 1) 2014-2022



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 (monthly flows), gender-specific province population (in logs), province level real GDP growth, hospital beds per hundred thousand individuals per province, 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

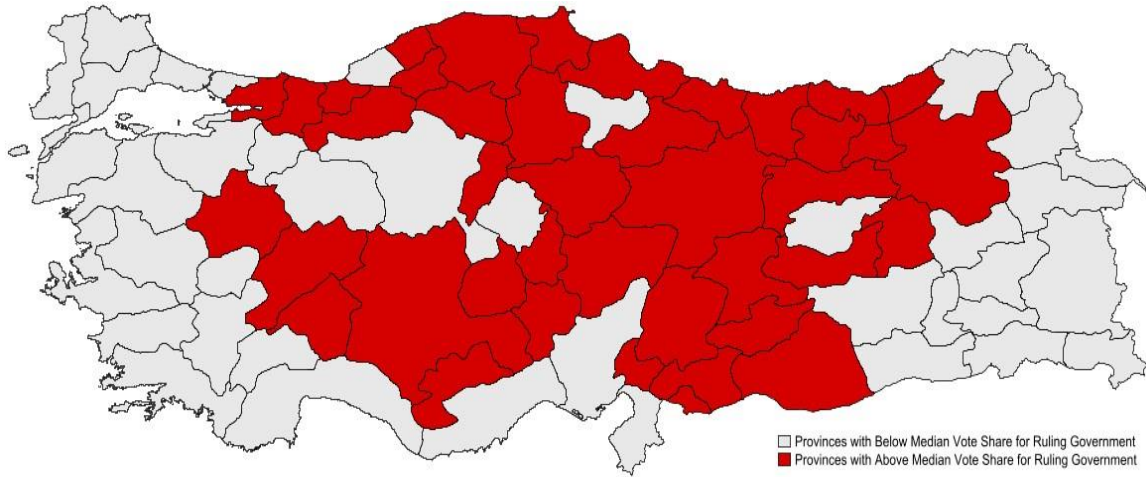


Figure A5
Provinces where the Average Years of Education is Below-Median

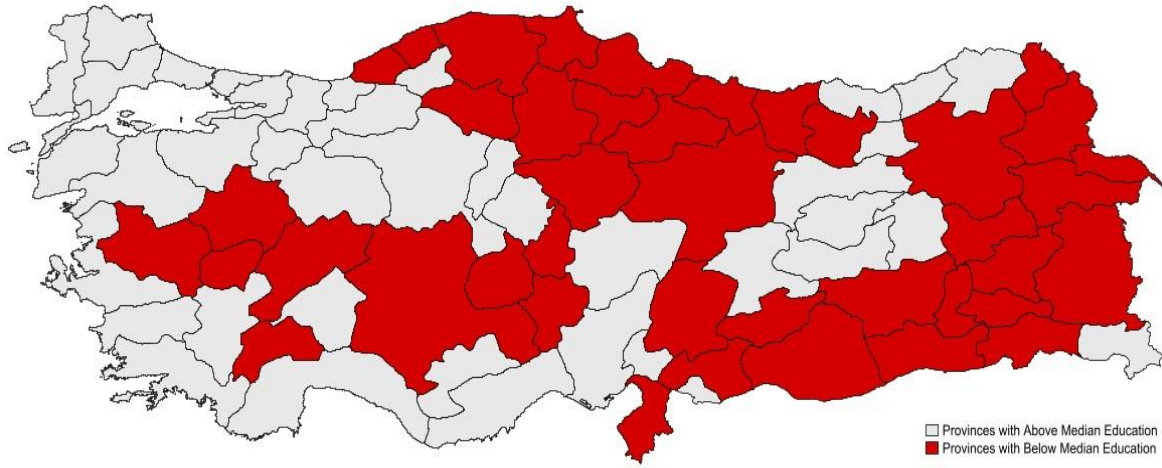
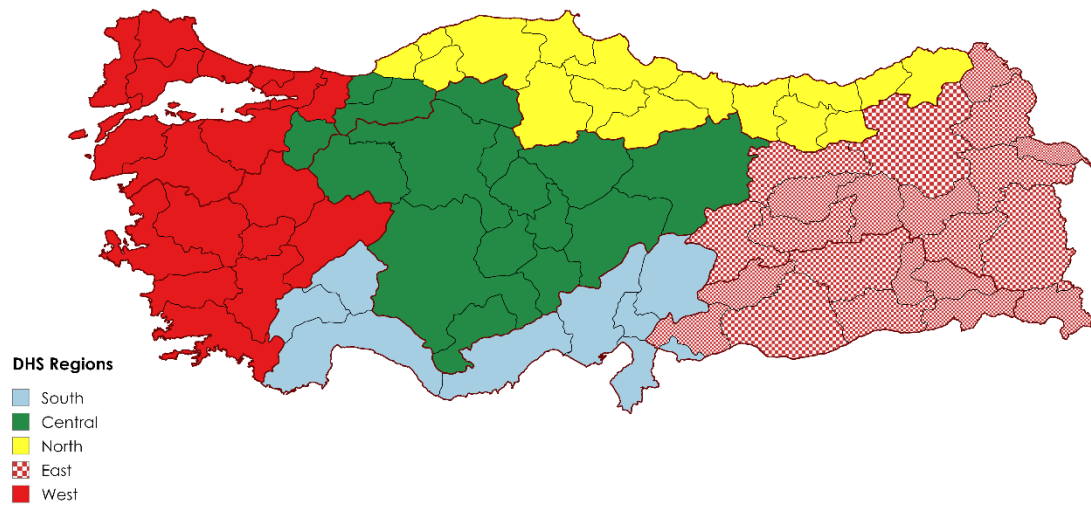
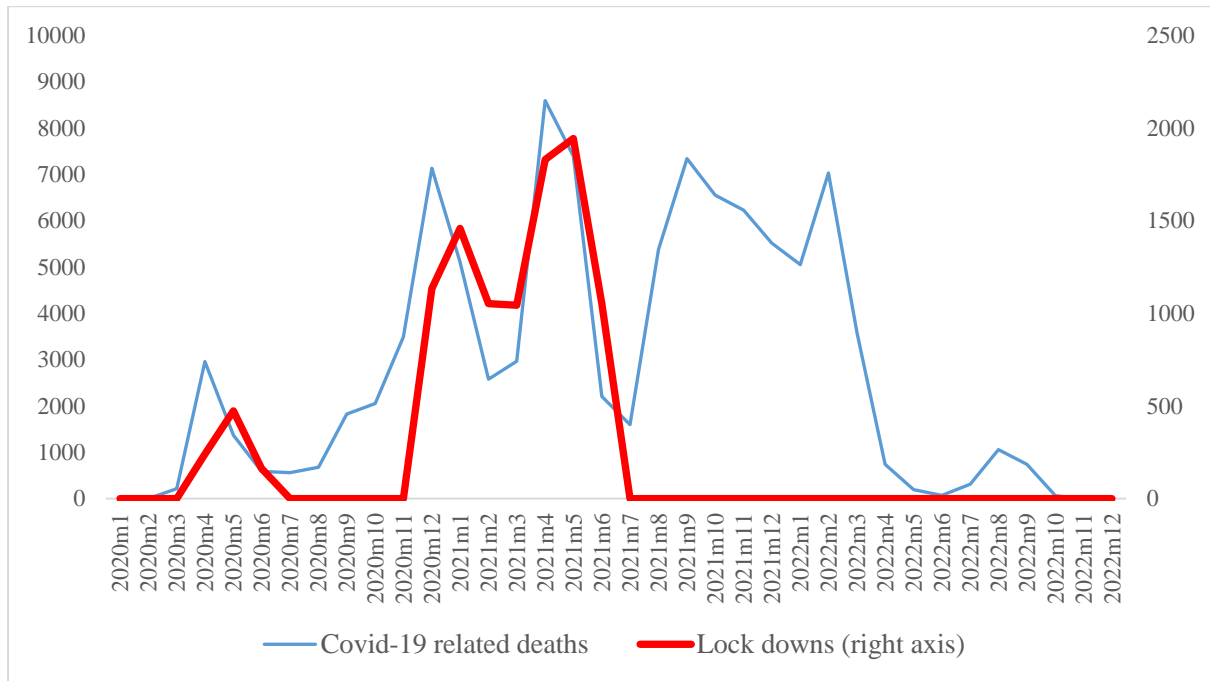


Figure A6
Five DHS Regions of the Country



Created with mapchart.net

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
Robustness Check: Murders Controlling for Covid-19 Closures

	Female Homicides	By Intimate Partners	By Current Partners	Previous Judicial Record	Male Homicides
<i>Data Source 1, 2014-2022</i>	(1)	(2)	(3)	(4)	(5)
Post-Withdrawal Period	0.050** (0.025)	0.044** (0.018)	0.040** (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	0.31	0.237	0.153	0.053	
Observations	8,748	8,748	8,748	8,748	
R-squared	0.457	0.387	0.288	0.134	
<i>Data Source 1, 2015-2022</i>					
Post-Withdrawal Period	0.039* (0.021)	0.039** (0.018)	0.034* (0.017)	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	0.31	0.237	0.153	0.053	
Observations	7,776	7,776	7,776	7,776	
R-squared	0.460	0.390	0.293	0.134	
<i>Data Source 2, 2015-2022</i>					
Post-Withdrawal Period	0.053** (0.022)	0.034* (0.018)			-0.092 (0.059)
Covid-19 Lockdowns	-0.003** (0.001)	-0.002* (0.001)			-0.003 (0.003)
Mean of the dependent variable	0.26	0.17			0.95
Observations	7,776	7,776			7,776
R-squared	0.365	0.295			0.567
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 province specific number of days of covid lockdowns, gender-specific province population (in logs), province level real GDP growth, hospital beds per hundred thousand individuals per province, 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 A2
Robustness Check: Difference in Differences Estimations
Controlling for Covid-19 Closures

	Homicides Data Source 2	By Intimate Partners Data Source 2	Homicides Data Source 1	By Intimate Partners Data Source 1
<i>Panel A: 2015-2022</i>	(1)	(2)	(3)	(4)
Female*March 2021 Dummy	0.246*** (0.045)	0.247*** (0.045)	0.278*** (0.048)	0.252*** (0.044)
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	0.455	0.432	0.479	0.457
<i>Panel B: 2018-2022</i>				
Female*March 2021 Dummy	0.179*** (0.039)	0.176*** (0.039)	0.191*** (0.040)	0.181*** (0.037)
Covid-19 Lockdowns	-0.004* (0.002)	-0.004* (0.002)	-0.005** (0.002)	-0.005* (0.002)
Observations	9,720	9,720	9,720	9,720
R-squared	0.455	0.428	0.484	0.457
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 growth, hospital beds per hundred thousand individuals per province, 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 A3
Entry into Istanbul Convention and 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.

Appendix Table A4
Heterogeneity in Entry into Istanbul Convention
by Vote Shares, Regions and Education

	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	-0.112** (0.047)	-0.076 (0.056)	-0.125** (0.047)	-0.106 (0.137)	-0.107** (0.041)	-0.081 (0.061)
Adoption of Law 6284	-0.088** (0.038)	-0.192*** (0.068)	-0.019 (0.023)	-0.300*** (0.100)	-0.059* (0.033)	-0.229*** (0.073)
Observations	1,920	1,920	1,104	720	1,920	1,920
R-squared	0.193	0.460	0.228	0.482	0.200	0.455
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	0.143	0.309	0.161	0.542	0.149	0.313

Each column reports one regression. Standard errors are clustered at the province level. See Appendix Figures A4-A6 for geographic location of the provinces.

Appendix Table A5
Robustness Check: Poisson Estimations of the Impact of Withdrawal

	Homicides Data Source 2	By Intimate Partners Data Source 2	Homicides Data Source 1	By Intimate Partners Data Source 1
<i>Panel A: 2015-2022</i>	(1)	(2)	(3)	(4)
Female*March 2021 Dummy	0.361*** (0.059)	0.432*** (0.069)	0.437*** (0.053)	0.402*** (0.057)
<i>Percent change</i>	43%	54%	55%	49%
Observations	15,552	15,552	15,552	15,552
<i>Panel B: 2018-2022</i>				
Female*March 2021 Dummy	0.295*** (0.071)	0.351*** (0.075)	0.302*** (0.060)	0.315*** (0.062)
<i>Percent change</i>	34%	42%	35%	37%
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 growth, hospital beds per hundred thousand individuals per province, 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.

Appendix Table A6
Robustness Check: Poisson Estimations of the Impact of Entry into Istanbul
Convention, Adoption of Law 6284

	Female Homicides	By Intimate Partners	Female Homicides	By Intimate Partners
	2010-2013	2010-2013	2010-2014	2010-2014
	(1)	(2)	(3)	(4)
Post-Entry period	-0.339** (0.151)	-0.599*** (0.173)	-0.340** (0.151)	-0.594*** (0.177)
<i>Percent change</i>	-29%	-45%	-29%	-45%
Adoption of Law 6284	-0.801*** (0.194)	-0.563* (0.304)	-0.750*** (0.171)	-0.456* (0.256)
<i>Percent change</i>	-55%	-43%	-53%	-37%
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 growth, hospital beds per hundred thousand individuals per province, 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.