

FEMALE EMPLOYMENT AND INTIMATE PARTNER VIOLENCE:
REVISITING THE IMPACT OF SYRIAN REFUGEE INFLOWS TO TURKEY

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DECLARATION OF ORIGINALITY

I, İlkem Gök Karcı, certify that

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ABSTRACT

Female Employment and Intimate Partner Violence: Revisiting the Impact of Syrian Refugee Inflows to Turkey

Intimate Partner Violence (IPV) continues to be a major problem in Turkey, affecting almost one in three women yearly, according to the National Survey on Domestic Violence Against Women (NSDVW) surveys conducted by the Turkish Statistical Institute (TurkSTAT) in 2008 and 2014. With this thesis, I examine the effects of female employment on IPV through an exogenous shock effective from 2012 onwards, namely the settlement of Syrian refugees in Turkish provinces. To that end, I first replicated the findings of Erten and Keskin (2021, henceforth EK), claiming that the arrival of Syrian refugees decreased IPV in Turkish provinces receiving them. Their explanation for this phenomenon was that the "instrumental theories of violence," IPV against women being positively correlated with female employment due to rent extraction purposes by their spouses, were prevalent. By employing the same Instrumental Variables (IV) methodology as EK using a distance-based instrument to account for the Syrian refugee to native population ratio in Turkish provinces, I show that the settlement of Syrian refugees, in fact, did not have a significant negative impact on IPV in Turkish provinces when accounted for the regional trends. Furthermore, I show that even if it did, we cannot conclude that it was through the effect on female employment.

ÖZET

Kadın İstihdamı ve Ev İçi Şiddet: Suriyeli Mülteci Akınlarının Türkiye'ye Etkisinin Yeniden İncelenmesi

Kadına yönelik ev içi şiddet, Türkiye İstatistik Kurumu'nun (TÜİK) 2008 ve 2014 yıllarında gerçekleştirdiği Kadına Yönelik Aile İçi Şiddet Anketlerine göre, Türkiye'de senelik yaklaşık her üç kadından birini ekleyen önemli bir sorun olmaya devam ediyor. Bu çalışma, 2012 yılından itibaren etkili olan Suriyeli mültecilerin Türkiye illerine yerleşimlerini kadın istihdamı üzerinde etkili bir dışsal şok olarak kullanarak kadın istihdamı ve aile içi şiddet arasındaki ilişkiyi incelemektedir. Bu amaçla, öncelikle aynı metodolojiyi kullanarak Türkiye'de kadına yönelik aile içi şiddette “enstrümantal şiddet teorileri”nin, kadına yönelik şiddetin eşlerin gelir elde etmek amacıyla şiddet uygulaması sebebiyle kadın istihdamıyla beraber artması, geçerli olduğu sonucuna ulaşan Erten ve Keskin (2021)'in sonuçlarını tekrarladım. Erten ve Keskin'in de kullandığı bir mesafe bazlı aracı illerdeki Suriyeli mültecilerin yerlilere oranı için bir araç değişkeni olarak kullanarak Suriyeli mültecilerin yerleşim bölgelerindeki kadına yönelik eş şiddetini azaltmadığını göstermek için (i) bölgesel trendler hesaba katıldığında etkilerin ortadan kalktığını, (ii) mülteciler çoğunlukla kentsel bölgelere yerleştiği halde kırsal veya kentsel yerleşimlerde benzer etkilerin bulunduğunu ve (iii) etkilerin kadının son yılda veya genel olarak şiddet görmesi üzerinde eşit derecede bulunduğunu gösterdim.

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To my family...

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CHAPTER 1

INTRODUCTION

Violence against women continues to harm women's physical and psychological health, leaving the subjects to experience a sub-standard quality of life. A recent study by World Health Organization (WHO, 2018) combining 307 studies from 154 countries or areas states that violence by a woman's partner or husband, Intimate Partner Violence (IPV), is the most common form of domestic violence. WHO defines intimate partner violence as:

... behavior by an intimate partner or ex-partner that causes physical, sexual or psychological harm, including physical aggression, sexual coercion, psychological abuse and controlling behaviors.

WHO (2018) estimates that, globally, one in every four women between the ages of 15 and 49 who has ever been married or involved in a relationship has been subject to IPV in the forms of physical and/or sexual violence at least once since the age of 15. This ratio becomes even more drastic for underdeveloped and developing countries, reaching four-tenths of the female population older than 15 years old for the least developed countries.

Turkey has a long-standing issue of violence against women, which is far from being abolished, including but not constrained to IPV. According to an online counter to femicides in Turkey, anitsayac.com, created by the We Will Stop Femicide Platform due to lack of transparency on the subject by the governmental authorities, more than 400 women have been killed each year since 2018. Although a proportion of these femicides remain suspicious in their motives and suspects, a 2019 annual report by the platform states that of the 474 femicides in 2019, 27 were related to economic reasons, and 114 were due to either lack of reciprocity towards the perpetrator's feelings or divorce attempts by the victims. As such, IPV in Turkey remains to be a serious problem to be investigated at length to provide necessary policy adjustments.

Two waves of the National Survey of Domestic Violence against Women (NSDVW) conducted in 2008 and 2014 by the Hacettepe University Institute of Population Studies in collaboration with the Turkish Statistical Institute (TURKSTAT) provides the most comprehensive information on domestic violence against women between the ages of 15 and 59, including information on violence perpetrated by other family members or strangers in addition to IPV. According to the most recent survey conducted in 2014, one in three women who have ever been involved in a relationship experienced physical violence by their current or ex-partners, while 11.2% experienced sexual, and 42.9% experienced psychological violence.

Understanding the drivers of IPV is of utmost importance as the subjects' life experiences gravely deteriorate in the aftermath of the incidences due to both psychological, physical, and financial aspects. While Crowne et al. (2011) and Adams et al. (2012) show a significant loss of stability in the employment of women who have been subject to IPV, Ehrensaft et al. (2003), Heyman and Slep (2002), and Bowlus and Seitz (2006) points out to the increased likelihood of being subject to or perpetrator of IPV as an adult as a result of growing up in a violent household. Thus, policies that help eliminate IPV today will also help end IPV tomorrow.

There is a vast literature, mostly comprised of studies from psychology, sociology, and criminology, studying the underlying reasons behind IPV. As this thesis investigates the relationship between female employment and IPV, theories relating to the employment of females, and shortly for males, are discussed at length in the literature review on the effects of labor market outcomes on IPV. In short, there are two mainstream views on the subject: one that claims a decreased level of IPV with increased female employment via the increased bargaining power of women (Gelles, 1976) within the household or due to the reduction in time spent together (Dugan et al., 1999), and another that claims the opposite. The latter is built on two main pillars, the first of which is the discomfort males experience due to feeling inferior in the household when their spouses work or earn more than them

(Macmillan Gartner, 1999). The second one is the incentive for males to perpetrate violence to extract rent when their spouses have income (Bloch Rao, 2002).

As endogeneity is a major problem when investigating the causality between female labor participation and IPV, more recent studies employ methods such as Instrumental Variable (IV) model (Aizer, 2010). One recent study, Erten and Keskin (2021, henceforth EK), published in the *Journal of Development Economics*, addresses this causal relationship through the NSDWV 2008 and 2014 data sets and the effect of the settlement of Syrian refugees starting in 2012 in the aftermath of Syrian civil war. They consider the disproportionate settlement of the refugees in Turkish provinces as an exogenous shock to the labor market. As previous studies suggest (Ceritoglu et al., 2017; Aksu et al., 2018), which are discussed in the literature review on the effects of Syrian refugees on the Turkish labor market, EK shows a significant negative impact on the overall female employment as opposed to insignificant impact on overall male employment.

With that, EK move on to first using the Syrian refugee to native population ratio in each of the 81 Turkish provinces in 2014 as an explanatory variable to account for the changes in physical, sexual, and psychological IPV experienced by the respondents in the past 12 months. Then, they use a distance instrument for Syrian refugee ratios to account for the non-randomness of the allocation of refugees following Del Carpio and Wagner (2016), which is employed in this thesis and explained in the methodology part as well. With this methodology, EK shows that regions experiencing higher levels of Syrian refugee influxes, hence facing higher female detachment from labor markets, encountered a statistically significant decrease in all of the specified forms of IPV. EK, then, concludes the reason behind this phenomenon to be the violence exerted by men for rent extraction purposes disappearing following the dropping out of females from the labor market.

As this is a very strong result that might inspire serious policy measures hindering female employment opportunities for the sake of decreasing IPV, thus leaving women without the financial means necessary for their economic

independence, I reinvestigated this causal relationship.

To that end, I first replicate EK's results with the same data set and methodology, then move on to extend the analysis to financial control behavior as they claim it to be the channel of the results relating to the decrease in IPV while refraining from analyzing the data relating to it, even though they investigate it in a previous study (Erten Keskin, 2018). With that, I show the invalidity of their claim.

I then check if there really exists such a relationship between IPV and the refugees using the type of the respondent's region, urban or rural, and male labor outcomes for informal and formal sectors separately, following Aksu et al. (2018). Finally, I show that the results arise from the existing trends for different subregions in Turkey, which can be observed in Table A2, as eastern regions, which historically have higher IPV, NUTS1 TRA, TRB, and TRC, experience more rapid improvement with respect to IPV even though TRA and TRB have lower refugee to national ratios relative to rest of the country, as can be observed from figures C1 and C2. I show this result by employing trend components for subregions and reevaluating the results at NUTS1 levels.

This study contributes to the literature by reappraising the causal relationship between female employment, and indirectly male employment, and IPV. The question is far from being wholly answered as there are constraints to measuring IPV unerringly through self-reporting (Ellsberg et al., 2001). Nonetheless, with the NSDWV data, I conclude that there is no positive causal relationship between female employment and IPV.

The remainder of the thesis is structured as follows. Chapter 2 provides a review of relevant literature on (i) the relationship between female labor outcomes and IPV and (ii) the effect of Syrian refugees on the Turkish labor market. Chapter 3 describes the data. Chapter 4 puts forth the empirical methodology employed through the analyses. Chapter 5 presents and interprets the empirical results. Chapter 6 concludes.

CHAPTER 2

LITERATURE REVIEW

2.1 Effects of labor market outcomes on IPV

Domestic abuse is a long-standing problem waiting to be tackled globally. Accordingly, a vast literature investigates the causes underlying domestic violence. Relation to female employment encompasses a large proportion in this literature alongside the psychopathological and cultural drivers, which are beyond the scope of this study. As this paper focuses solely on IPV data and their relation to female labor market outcomes, this section is dedicated to a summary of existing literature comprised of opposing views on the causal relationship between female employment and domestic violence.

An earlier study, Gelles (1976), is considered as the pioneer of the "inter-family bargaining model," attributing to the bargaining power women gain in the household through financial resources. Though this study involves an investigation of why women stay with their abusive spouses through a relatively small sample and did not account for the potential endogeneity arising from other specifications of women relating to their resources, it sets the ground for the subsequent studies by pointing out to the inability of women leaving abusive households without the necessary financial means.

Pollak (2005), on the other hand, specifies the actual source of bargaining power in the household at the divorce threat as the wage rate or potential earnings rather than actual earnings in a theoretical setting, emphasizing the importance of human capital rather than labor hours or employment itself.

Pronyk et al. (2006), employing a randomized intervention through loans to poor women aged between 14 to 35 in South Africa, provide significant results in favor of decreased IPV via economic empowerment.

Though there is literature pointing out a converse effect (Crowne et al., 2011), namely the effect of being battered on employment of women, Bowlus and Seitz

(2006) use a structural model to show that the relationship occurs only through employment status decreasing the likelihood of being abuse, and not the other way around. The study states that the converse findings are related to demographics of women, including childhood abuse that affects both employment status and the likelihood of being exposed to IPV. Additionally, their findings specify this causal relationship to exist only for first-time abuse. They claim that after the abuse starts, the only way it could stop is through a divorce.

Another study employing a structural household bargaining model, Aizer (2010), focuses on the gender wage gap. Aizer shows evidence to attribute nine percent of the decrease in domestic violence to decreased gender wage gap over the 1990 and 2003 time period using data on female hospitalizations due to IPV in California.

Using panel data over two years and a structural model, Tauchen, Witte, and Long (1991) present diversified results across high- and low-income families. For low-income families, they present an equilibrium where one individual is indifferent between remaining in the relationship or not, while the other is weakly better off by not breaking up. This result suggests the more economic power a woman has, the less likely she will stay as her outside option becomes better. On the contrary, they suggest evidence to increased IPV with increased wages for the female in high-income families when the wife is the main source of familial income. They explain this to result from lack of income transfers with the high-income, female earning more families.

Another theory that supports decreased IPV outcomes with female employment through a different channel is the "theory of exposure reduction." In their 1999 study, Dugan, Nagin, and Rosenfeld use panel data on intimate partner homicides for 29 large U.S. cities over the 1976 to 1992 period and conclude that employment of either of the spouses decreases IPV, or homicides in particular, by the man or woman due to the decreased time spent together.

On the opposite side of the spectrum of theories inferring a causal relationship

between female employment is the "instrumental theories of violence." These theories view IPV as an instrument perpetrators use to gain power in the household. The first of these theories, the "theory of male backlash," state that men resort to violence in order to protect their culturally established role as the head of the household when women gain economic power through employment. Macmillan and Gartner (1999) conclude that the male backlash is, in fact, influential when the woman is employed and the man is not. On the contrary, they state that female employment acts as a hindering source to IPV when both parties are employed.

Similarly, Heath (2014) shows evidence for increased risk of facing IPV with employment for females that either married early or have low education using Bangladesh data. Heath then attributes this result to males' attempt to protect their bargaining power in the household concluding to the importance of empowering women before marriage to prohibit IPV.

Lastly, Bloch and Rao (2002) contribute to the theory that violence can be used as an instrument to extract financial resources using data on IPV and dowry in rural India. Their hypothesis, however, does not apply to the case of income. Instead, they argue that the wealth of women's families are the source of extraction through abuse. They underline the fact that women in rural India do not have the means to get out of an abusive relationship, or to not marry at earlier ages, to begin with, which should be altered through cohesion of women in social life.

Vyas and Watts (2009) combine a variety of studies with contradictory results for fifteen low to middle-income countries and conclude the necessity of models beyond classical sociological and economic approaches to understand the dynamics between female employment and IPV. However, they point out to poverty reduction, male and female access to education, and a decrease in inequalities as tools that might be effective towards the elimination of IPV.

2.2 Labor market effects of Syrian refugees

Immigration's influence on the host community's labor market is the other pillar that this thesis is built on. Hence, it is important to understand the findings of the vast literature to be able to successfully analyze the findings. While classical economic theory views migrant inflows as positive labor supply shocks that lower the wages and decrease employment among natives, in addition to accounting for the impact on the demand side as well, differentiation between skilled and unskilled workers is crucial for an accurate analysis as migrants, in particular refugees, as they may be forced to settle for lower-paid jobs regardless of their skill sets (Altonji, Card, 1991).

As the Syrian refugee inflows to Turkey, reaching 3.7 million Syrians under temporary protection as of 2022, exceeds any other migratory flow in the near past, thus making it unique in certain aspects, this section is solely dedicated to the review of the most recent literature relating to it.

Ceritoglu, Yunculer, Torun, and Tumen (2016) employ a difference-in-differences methodology in the investigation of data from four waves of the Turkish Household Labor Force Survey (HLFS) from 2010 to 2013. The authors show significant evidence of decreased likelihood of employment among Turkish natives driven by the informal sector without any effects on wages. They show diversified results for men and women with respect to the aftermath of the unemployment, namely, men remained unemployed whereas women dropped out of the labor force, overall leading to an increased unemployment rate.

As there is an issue of endogeneity with respect to places of settlement for Syrian refugees, Del Carpio and Wagner (2016) introduce a distance-based instrument for the refugee to working-age population ratio. With this instrument, which is employed and explained further in this thesis, they account for the non-randomness of the settlement of Syrian refugees in Turkish provinces driven by the closeness to the Syrian border, the existence of previous settlers, and economic opportunities. Using HLFS data from 2011 to 2014, this paper shows a considerable fall in employment for women and informal workers.

Aksu, Erzan, and Kırđar (2018) use a difference-in-differences IV methodology and relax the common-trend assumption that previous studies employ in addition to accounting for the informality, industry, and employment status of the labor. With this methodology, they show a negative impact for males in the informal sector balanced by an equal positive impact informal sector, adding up to an overall no negative impact, crucial to explaining some of the findings of the earlier studies. On the contrary, they show a total loss of employment for women mainly driven by the loss of part-time employment.

CHAPTER 3

DATA AND DESCRIPTIVE STATISTICS

Provincial data on the ratio of Syrian refugees to natives of working age in 2014 is the main explanatory variable used in the analyses provided in this thesis. These data are constructed from provincial data on the number of Syrian refugees provided by Erdogan (2014) and demographic data provided by the Turkish Statistical Institute (TURKSTAT). Figures C1 and C2 visualize the distribution of Syrian refugees relative to the native population for NUTS1 and NUTS2 levels.

The main source of information, two waves of the National Survey of Domestic Violence Against Women (NSDVW) conducted by Hacettepe University Institute of Population Studies in 2008 and 2014, and distributed by TURKSTAT, provides the most comprehensive information on violence against women in Turkey. The micro-level data not only includes information regarding IPV and the demographics of women but also provides in-depth information on any form of abuse a woman may encounter throughout her life by family members or strangers. The survey additionally includes data relating to perspectives on gender-based norms.

The survey methodology is face-to-face interviews with household members and women aged between 15 to 59 with a questionnaire adapted by the “Multi-country Study on Women’s Health and Domestic Violence against Women” by World Health Organization (WHO). Each of the survey samples is constructed to have an accurate portrayal of the working-age women with respect to age groups, education levels, socioeconomic statuses, and regions using both five regions classification and the first level of Nomenclature of Territorial Units for Statistics (NUTS1). Both samples include respondents from urban and rural settlements with a ratio of 75% to 25%, respectively, where urban settlements are described as consisting of 10,000 or more residents. 2008 NSDVW data includes 17,168 household and 12,795 women surveys, and 2014 NSDVW data includes 11,247 household and 7462 women surveys.

It is important to note that there are minor adjustments between the questionnaires. One such example is the 2008 survey includes data on the survey language, however, does not indicate the mother tongue of the respondent. As such, respondents of Kurdish or Arabic origin might have responded in Turkish. On the contrary, 2014 survey data includes the mother tongue of the respondent. As I started this study by replicating EK's results, I construct the "non-Turkish speaker" variable with their methodology using the survey language for 2008 and mother tongue for 2014. This might have a minor impact on the results as non-Turkish speaker component was included in all regressions and 2014 sample includes 1205 and 144 women whose mother tongue is Kurdish and Arabic, respectively, of which only 187 and 12 were surveyed in their mother tongues.

Another important difference is with respect to the question formats relating to IPV. More precisely, even though the questions relating to occurrences of physical, psychological or sexual violence, or financial control behaviors remain the same, the 2008 questionnaire asks the respondent whether there was an incident in the past 12 months, and then move on to asking the number of times. On the other hand, the 2014 questionnaire directly asks for the number of times of occurrences in the past year, including zero values. This might be a better way for women to recall correctly before vouching to having experienced IPV in the last year. Though this nuance most likely has no significant effect on the outcomes, it should be noted as it is a fragile subject which requires meticulous consideration of psychological aspects.

Lastly, one major discrepancy that I noticed was the unlikely considerable increase in agreement with men being entitled to beat their wives in certain situations. This is another result that is driven by the change in questionnaire. In 2008, the respondents were asked whether they agreed with the phrase "Men can beat their wives in certain situations," which 85% of the respondents disagreed with. To the contrary, in 2014, respondents were presented with certain situations and asked their opinion on husbands' "right" to beat their wives. This new type of question, including a case where a wife cheats on his husband, led some of the women who

would perhaps disagree with the 2008 question to justify violence, perhaps due to religious concerns or their own sensibilities in the relationship. As such, other than providing descriptive statistics for them, I did not use the agreement questions in the analyses.

This study relies solely on women surveys from the NSDVW data sets. The responses were filtered so that only the currently married respondents' data were used in the analyses as it is the methodology used by EK. Table A1 provides the descriptive statistics relating to the variables used in the analyses. Descriptive statistics and all regressions account for sample weights provided by TURKSTAT to overcome discrepancies between characteristics of the population and the sample.

As Table A1 shows, the respondents have an average age of 37 and 6 years of schooling. The average husband on the other hand is 42 years old with 8 years of schooling, according to wives' statements. Information on respondents' employment statuses show that only 17% of the respondents worked one week prior to the survey as opposed to a striking 75% for the husbands. Descriptive statistics also indicate the number of observations by N, varying across different variables. Loss of observations are partly due to lack of answer in the data set and partly as a result of the data cleaning procedure where inconsistent answers are replaced with missing values.

The main outcome variables, namely physical violence, psychological violence, and sexual violence dummy variables are constructed by giving zero if none of the specified abuse forms were experienced in the 12 months prior to the survey and one if at least one of them was experienced. Table A2 aims to show the IPV trends in addition to financial control variables across subregions by taking the averages, while Table A3 clarifies the relative changes by employing z-scores of each IPV specification. I provide the baseline regression outcomes for both and then proceed only with z-scores as the results are similar and z-scores are more appropriate in comparing relative changes.

The 2008 and 2014 NSDVW data sets include a tremendous amount of data that might be useful for various future studies that I did not include in this study due

to relevancy. However, as it is the case with any data set relating to IPV or violence in general, it should be kept in mind that underreporting is an issue that might affect the outcomes as it is closely related with the characteristics of the respondent (Ellsberg et al. 2001). There is a literature researching the most efficient methodology in reporting IPV, but it is beyond the scope of this study.

CHAPTER 4
EMPIRICAL STRATEGY

To estimate the impact of (i) Syrian refugees on Turkish labor market and (ii) the impact of female employment on IPV outcomes through the assumption that refugees lowering female employment while leaving male employment unchanged, as put forth by previous studies (Del Carpio Wagner, 2016; Aksu et al., 2018), for the baseline analyses I use the following estimating equation:

$$Y_{ipt} = \beta \mathcal{R}_{pt} + \gamma X_{ipt} + \delta_p + \delta_t \quad (1)$$

where subscripts i , p and t denote individual, province and year indicators, respectively. Y_{ip} denotes the outcome variable in each specification. \mathcal{R}_{pt} denotes the ratio of registered Syrian refugees to working-age population in province p in year t . As such, since the arrival of Syrian refugees started in 2012, for 2008 this variable is equal to zero across all provinces. X_{ipt} denotes individual-specific controls, age, age squared, years of schooling, type of location (urban or rural), and mother-tongue or for some cases, the language of interview as discussed in Chapter 3. δ_p and δ_t represent province fixed effects and year fixed effects, respectively. I cluster the standard errors at the province level, as in EK, to account for serial correlation across provinces.

Then, following the methodology introduced by Del Carpio, Wagner (2016), and adapted for the province-level by EK, I use the following distance-based instrument:

$$IV_{pt} = \sum_s \frac{1}{\tau_{sp}} \pi_s R_t \quad (2)$$

where τ_{sp} denotes the travel distance from the center of each Syrian governorate, indicated with the subscript s , to the center of each Turkish province, π_s denotes the share of population in Syrian governorate s in 2011, the last available data prior to the Syrian Civil War, and R_t denotes the total number of registered Syrian refugees in

Turkey for year t . Similarly, R_t is equal to zero for all observations in 2008.

Table A2 presents the first stage regression outcomes. Although the coefficient of the distance instrument is small, it is statistically significantly positive at 1% level and has high explanatory power displaying the compatibility of the instrument to account for refugee ratios while addressing the endogeneity problem related to settlement areas of the refugees. The coefficient is different than what is presented in EK even though the specifications are the same as a result of the data on refugee ratios. I use the data from Erdogan (2014) whereas EK uses data from the Directorate General of Migration Management (DGMM) which is as of today unavailable.

The instrument while satisfying the condition to have a significant positive effect of the explanatory variable, here the use of IV methodology is problematic. Even though helpful for overcoming endogeneity for Syrian refugee ratios in certain cases such as the effects on the labor market, in this case is not a very good instrument due to being correlated with an omitted “cultural” variable (Angrist and Krueger, 2001). In other words, the eastern regions of Turkey which are closer to the Syrian border are historically more conservative and the farthest western regions are more modern. I show that this is, in fact, the underlying reason behind EK’s findings. Nevertheless, I provide all of the analyses with IV methodology as well as it is helpful in overcoming a proportion of the endogeneity present in the OLS methodology.

Next section describes the outputs for (i) the labor market outcomes that were differentiated across formal and informal sectors for both male and female labor; (ii) the basic IPV outcomes for both dummy variables and z-scores relating to physical, psychological and sexual violence, and financial control behaviors; (iii) separate regression analyses for women living in rural and urban areas, comparing outcomes for being exposed to IPV in the past year and being exposed to IPV from the current partner in any time period. Following, it discusses the main finding of this thesis, a common trend for the provinces within Eastern Turkey subregion, which does not

apply to the remainder showing the driver of the claims of EK. For all analyses, I utilize both OLS and IV estimation methods.

CHAPTER 5

RESULTS AND DISCUSSION

This chapter presents and analyzes the outcomes of (i) the estimated labor market impact of Syrian refugees for both females and males working in formal and informal sectors, (ii) how the changes in IPV did not result from the settlement of the refugees, and (iii) how the channel was not female employment even if the refugees, in fact, led to a decrease in IPV within their settlement areas.

First and foremost, I investigate the effect of Syrian refugees on the Turkish labor market as it provides the core assumption for all of the analyses in EK. Table A5 presents results for employment status in the past week, having a regular job, being employed in the formal sector, and being employed in the informal sector as dependent variables for women (columns 1, 2) and for men (columns 3, 4). As opposed to EK investigating the effects of Syrian refugees on the labor market with both NSDVVW and HLFS data, with sectoral specifications for the former (public, private; agricultural, industrial and service) and not providing any specifications for informality, I include this analysis as it is underlined in all of the established previous studies on the subject (Cerioglu et al., 2016; Aksu et al., 2018).

As previously suggested, women face a statistically significant negative impact at 1 percent level in overall employment for both the past week and regular employment status. When diversified across informality, it is seen that while the majority of the outcome results from the decrease in employment in the informal sector, formal employment is also negatively affected by the Syrian refugees but with lower magnitude and significance. This might result from a spillover effect in the area (Tang and Zhang, 2021).

Males, on the other hand, do not face a significant negative impact in their overall employment statuses for the past week and general employment. Though, as the previous studies suggest, this stability is caused by increased employment opportunities in the formal sector that neutralizes the effect of the job losses in the

informal sector. This finding is an obvious contradiction to the assumption that the refugee influxes influence the household dynamics only through the female employment. Hence, the claim of EK contributing to the instrumental theories of violence by showing decreased levels of IPV in provinces with higher refugee to native ratios becomes unverifiable as the refugees not only hinder the employment opportunities for women but also create formal employment opportunities for men.

Next, I replicated EK's analyses on IPV outcomes with both dummy variables and z-scores to account for the relative effects (Table A6). The z-scores provides standardization for the outcome variables leading to easier interpretation. I also extended the analyses to show the effects on two financial control behavior outcomes, husband preventing wife from working in the last year and husband taking or refusing to give money in the past year. I employ these variables as dependent variables to show the inability of the instrumental theories of violence in explaining the decreased IPV in refugee receiving provinces if refugees were in fact the driver of this phenomenon.

The lack of analyses on these variables in EK is puzzling as one (preventing to work) is closely related with male backlash theory, and the others (taking or refusing to give money) has close connections to rent extraction behavior. As expected, the ratio of Syrian refugees has no significant impact on either of the financial control behaviors as opposed to other IPV outcomes. In the light of this result, it is not possible to conclude any effect of the refugees on IPV through female employment in Turkey.

Following, I constructed further checks to address the causality between the settlement of the Syrian refugees and decrease in IPV outcomes in respective provinces. Table A1 shows the results for women residing in rural areas (columns 1 and 3) and urban areas (columns 2 and 4). It is important to note here that Syrian refugees settle in the urban areas. Hence, any causal effect would be significantly different than zero only for the urban subgroup.

On the contrary, Table A1 shows even greater negative coefficients for rural

subsample using OLS methodology. With IV methodology, the effects of refugees on psychological and sexual IPV become statistically not significant, however coefficient estimate for physical violence as the dependent variable remains significantly negative at 5 percent level, contradicting to the effect of refugee influxes on the outcomes. These imply that the decrease in IPV in provinces dense in refugees is not a result of refugees' existence.

Furthermore, I conducted the baseline regressions with IPV from current partner variables rather than IPV in the past twelve months as the dependent variables, and I estimated the effects for longer marriages. Table A2 shows that the results are not significantly different from each other. This suggests, as IPV typically starts early in the marriage (Peterman et al., 2015), for longer marriages the fall in IPV outcomes cannot be explained by a shock as recent as two years.

Having established that there was no significant indicator of causal impact of Syrian refugees on IPV outcomes, I controlled for regional effects. Table A2 and A3 show the changes in IPV outcomes for 12 NUTS1 regions. These tables show the existence of a larger decrease in IPV outcomes for eastern TRA, TRB and TRC regions relative to the rest of the country. Only TRC region being highly populated by Syrian refugees and the others receiving very small refugee ratios relative to the rest of the country (Figures C1 and C2), this common trend seems to be preexistent (Figure C3), likely to be due to the higher starting point for IPV in these regions. Figure C4 provides a more holistic view of these two separate phenomena. The percentage decreases in physical IPV is visualized with darker green indicating the highest decrease, red color indicating the highest increase, and circle sizes indicating Syrian refugee to native ratios.

Then, I established the existence of this trend by first re-estimating the coefficients for specific subregions in Turkey (Table A7), second adding regional trend component for 5 region specification (Table A8), and lastly by adding NUTS1 trend component (Table A9). Table A7 shows that within the eastern TRA, TRB and TRC regions where there is a relatively higher decrease in IPV, Syrian refugees had

no significant effect on IPV outcomes. This result is considerable as TRC has been the region with the highest proportion of Syrian refugees since the inception of the Syrian Civil War. A similar result is observable for TR5 to TR7 regions, which are also similar in their positioning on the east-west axis, and only one of them is highly populated by Syrian refugees, namely TR6.

Hence, following I account for regional trends by using region-year fixed effects. Table A8 shows that though the estimates remain to be statistically significantly lower than zero with IV method, they diminish in size for Turkey. Furthermore, they become insignificant for TR7 to TRC for physical and sexual violence. Finally, inclusion of NUTS1 trend components diminishes the effects further for physical and psychological violence for any regional specification.

As such, the findings point out to no effect of the Syrian refugee ratios on the changes in IPV. Earlier findings arise from the overseen regional trends in the eastern regions, which are relatively closer to the Syria border, and contain the NUTS1 with the highest refugee ratio, TRC.

CHAPTER 6

CONCLUSION

Violence against women in general, and intimate partner violence in particular, continues to be a major societal concern especially in the underdeveloped to developing countries such as Turkey. As taking of policy measures calls for extensive understanding of the drivers of the subject, there is a vast literature investigating the causal relationship between female employment and IPV.

This thesis investigates this relationship through an analysis of the impact of an exogenous supply shock to Turkish labor markets by extending on an earlier study, Erten and Keskin (2021). With this thesis, I show that the main claim of this earlier study pointing out to a decrease in IPV as a result of the settlement of the Syrian refugees is not valid. Furthermore, I show that even if it were, the channel was not the decrease in female employment.

By first replicating the earlier results, and then, extending their results with specifications crucial to correctly identify the effects of Syrian refugee influxes as put forth by the previous literature, I show that Syrian refugees had significant impacts on both male and female employment. Hence, we cannot conclude that if there were a causal relationship between the settlement of Syrian refugees and the decline in IPV, it was through female employment. It is an important finding as the previous findings could have led to serious reconsideration of policies aimed at financially empowering women.

Then, I continue to investigate the results to have a better understanding of the actual driver of the significant negative estimates for the effects of Syrian refugee ratios on IPV in host provinces both present in EK and this paper. I, then, conclude to the existence of an underlying trend for the eastern regions of Turkey with historically higher rates of IPV. This preexisting trend may be resulting from a convergence effect due to the increased awareness through the availability of information. The subject, having many different observable and unobservable drivers

and issues relating to a truthful declaration, calls for further investigation.

APPENDIX A

TABLES

Table A1. Descriptive Statistics for Currently Married Women

	N	Mean	Std. Dev.	Min	Max
Panel A: Female demogaphics and employment outcomes					
Years of schooling	15924	6.02	3.96	0	21
Non-Turkish speaker	15904	0.02	0.15	0	1
Lives in a rural area	15929	0.24	0.43	0	1
Age	15929	37.26	10.60	15	59
Has a personal income	15929	0.11	0.32	0	1
Worked last week	15926	0.17	0.38	0	1
Public employment	15929	0.04	0.19	0	1
Private employment	15929	0.24	0.43	0	1
Agricultural employment	15929	0.06	0.23	0	1
Industrial employment	15929	0.02	0.12	0	1
Service employment	15929	0.10	0.30	0	1
Panel B: Male demographics and employment outcomes					
Years of schooling	15664	7.83	3.72	0	22
Age	15768	41.59	10.97	15	96
Worked last week	15917	0.75	0.43	0	1
Public employment	15894	0.13	0.33	0	1
Private employment	15894	0.72	0.45	0	1
Agricultural employment	15909	0.09	0.28	0	1
Industrial employment	15909	0.17	0.38	0	1
Service employment	15909	0.58	0.49	0	1
Panel C: Being subject to IPV in the past 12 months					
Physical violence	15928	0.09	0.29	0	1
Psychological violence	15755	0.26	0.44	0	1
Sexual violence	15915	0.07	0.25	0	1
Husband prevented from working	15910	0.10	0.30	0	1
Husband refused or took money	15892	0.06	0.23	0	1
Panel D: Being Subject to IPV from Current Husband Ever					
Physical violence	15929	0.35	0.48	0	1
Psychological violence	15900	0.41	0.49	0	1
Sexual violence	15339	0.09	0.28	0	1
Husband prevented from working	15883	0.22	0.42	0	1
Husband refused or took money	15904	0.08	0.27	0	1
Panel E: Gender attitudes					
A good wife should not argue with her husband and keep silent if she disagrees with him.	15800	0.47	0.50	0	1
A woman should spend her money according to her own will.	15739	0.67	0.47	0	1
In some cases men can beat their wives.	15551	0.23	0.42	0	1
Men should also do housework like cooking, dishwashing, cloth washing, ironing.	15151	0.50	0.50	0	1
Sometimes, it may be necessary to beat children to discipline them.	15863	0.33	0.47	0	1
Male family members are responsible of the attitudes and behaviors of a woman.	15648	0.46	0.50	0	1

Note: The table presents observations, means, standard deviations, minimum, and maximum values obtained for the married women in the 2008 and 2014 NSDVW survey samples. Data are weighted with the sample weight data provided in the datasets.

Table A2. Percentage of Women Being Exposed to IPV in the Past 12 Months According to Year and NUTS1 Region

Panel A: Physical violence		Year		Panel B: Psychological violence		Year		Panel C: Sexual violence		Year		Panel D: Husband refused to give or took money		Year		Panel E: Husband prevented work	
		2008	2014			2008	2014			2008	2014			2008	2014		
NUTS1				NUTS1				NUTS1				NUTS1				NUTS1	
TR1	8.2%	7.3%	23.1%	30.1%	TR1	4.6%	5.8%	TR1	5.3%	6.2%	TR1	9.4%	10.4%				
TR2	5.8%	8.2%	16.8%	22.0%	TR2	4.4%	3.6%	TR2	3.7%	4.8%	TR2	6.2%	7.4%				
TR3	5.1%	8.1%	23.8%	24.0%	TR3	4.4%	5.0%	TR3	3.7%	3.8%	TR3	5.7%	9.9%				
TR4	7.3%	4.8%	22.5%	19.2%	TR4	6.0%	4.0%	TR4	6.3%	3.5%	TR4	12.8%	11.4%				
TR5	12.2%	9.4%	24.8%	34.7%	TR5	7.0%	5.6%	TR5	5.2%	6.5%	TR5	11.4%	13.1%				
TR6	12.4%	9.1%	29.2%	24.9%	TR6	6.8%	5.3%	TR6	9.2%	6.0%	TR6	10.9%	12.6%				
TR7	13.8%	11.2%	28.4%	27.6%	TR7	11.5%	4.0%	TR7	10.7%	5.5%	TR7	11.2%	9.5%				
TR8	8.1%	6.9%	23.6%	20.6%	TR8	7.1%	3.2%	TR8	7.4%	4.0%	TR8	8.2%	7.6%				
TR9	6.8%	5.8%	22.9%	19.6%	TR9	8.1%	4.8%	TR9	5.7%	5.7%	TR9	6.4%	7.4%				
TRA	18.2%	8.1%	36.8%	26.3%	TRA	20.0%	8.3%	TRA	29.9%	11.0%	TRA	11.5%	11.5%				
TRB	14.6%	6.4%	29.1%	20.9%	TRB	12.7%	5.6%	TRB	17.0%	6.5%	TRB	10.0%	11.1%				
TRC	19.8%	8.3%	36.2%	24.8%	TRC	13.7%	7.4%	TRC	15.2%	9.8%	TRC	13.3%	11.5%				

Note: The table presents weighted averages for the married women in the 2008 and 2014 NSD VW survey samples.

Table A3. Z Scores of Women Being Exposed to IPV in the Past 12 Months According to Year and NUTS1 Region

Panel A: Physical violence		Year		Panel B: Psychological violence		Year		Panel C: Sexual violence		Year		Panel D: Husband refused to give or took money		Year		Panel E: Husband prevented work		
		2008	2014			2008	2014			2008	2014			2008	2014			2008
NUTS1				NUTS1				NUTS1				NUTS1					NUTS1	
TR1	-0.064	0.009	0.083	TR1	-0.109	0.005	TR1	-0.064	0.005	TR1	-0.064	0.005	TR1	-0.036	0.014	TR1	-0.036	0.014
TR2	-0.111	-0.017	-0.015	TR2	-0.080	-0.049	TR2	-0.125	-0.044	TR2	-0.125	-0.044	TR2	-0.133	-0.080	TR2	-0.133	-0.080
TR3	-0.129	0.010	-0.003	TR3	-0.120	0.021	TR3	-0.134	-0.087	TR3	-0.134	-0.087	TR3	-0.151	-0.003	TR3	-0.151	-0.003
TR4	-0.086	-0.069	-0.050	TR4	-0.066	-0.036	TR4	-0.025	-0.073	TR4	-0.025	-0.073	TR4	0.072	0.035	TR4	0.072	0.035
TR5	-0.014	0.034	0.116	TR5	-0.035	0.025	TR5	-0.089	-0.010	TR5	-0.089	-0.010	TR5	0.042	0.108	TR5	0.042	0.108
TR6	0.049	0.036	0.035	TR6	-0.018	-0.009	TR6	-0.007	0.030	TR6	-0.007	0.030	TR6	0.027	0.083	TR6	0.027	0.083
TR7	0.041	0.042	0.015	TR7	0.059	-0.060	TR7	-0.002	-0.024	TR7	-0.002	-0.024	TR7	0.042	-0.023	TR7	0.042	-0.023
TR8	-0.061	-0.022	-0.078	TR8	-0.023	-0.057	TR8	0.036	-0.066	TR8	0.036	-0.066	TR8	-0.060	-0.079	TR8	-0.060	-0.079
TR9	-0.110	-0.061	-0.097	TR9	-0.012	0.032	TR9	-0.064	-0.025	TR9	-0.064	-0.025	TR9	-0.129	-0.068	TR9	-0.129	-0.068
TRA	0.179	0.062	0.051	TRA	0.230	0.113	TRA	0.234	0.181	TRA	0.234	0.181	TRA	0.114	0.037	TRA	0.114	0.037
TRB	0.070	-0.020	-0.018	TRB	0.059	-0.009	TRB	0.127	0.028	TRB	0.127	0.028	TRB	0.048	0.016	TRB	0.048	0.016
TRC	0.184	-0.005	0.012	TRC	0.124	0.058	TRC	0.092	0.123	TRC	0.092	0.123	TRC	0.125	0.029	TRC	0.125	0.029

Note: The table presents z-scores for being exposed to IPV for the married women in the 2008 and 2014 NSD VW survey samples.

Table A4. First Stage Regression Results

	Dependent Variable: Share of Syrian refugees in province population
Distance Instrument	2.15e-05***
Robust standard errors	(3.19e-06)
Observations	15,899
R-squared	0.868

Notes: All of the data used in the analyses are from 2008 and 2014 NSDVW, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. Distance based instrument is created using Erdogan (2014) data, Google Maps distances between each Turkish province and Syrian governorate, and 2011 population data for each governorate in Syria from Syrian Arab Republic Central Bureau of Statistics. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

Table A5. Effects of Syrian Refugee Inflows on Labor Market Outcomes

	Women		Men	
	OLS (1)	IV (2)	OLS (3)	IV (4)
Worked Last Week	-1.246*** (0.288)	-1.558*** (0.342)	0.498 (0.376)	-0.0644 (0.503)
Observations	15,896	15,896	15,699	15,699
Employed	-1.642*** (0.276)	-1.877*** (0.373)	-0.144 (0.245)	-0.343 (0.321)
Observations	15,426	15,426	15,698	15,698
Employed in the formal sector	-1.156*** (0.287)	-1.137*** (0.298)	0.752*** (0.272)	1.009*** (0.320)
Observations	15,872	15,872	15,679	15,679
Employed in the informal sector	-0.493* (0.274)	-0.752*** (0.272)	-0.923** (0.352)	-1.401*** (0.360)
Observations	15,451	15,451	15,679	15,679

Notes: All of the data used in the analyses are from 2008 and 2014 NSDVW, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. Distance based instrument used in the IV regressions is created using Erdogan (2014) data, Google Maps distances between each Turkish province and Syrian governorate, and 2011 population data for each governorate in Syria from Syrian Arab Republic Central Bureau of Statistics. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

Table A6. Effects of Refugee Inflows on IPV Outcomes

	OLS		IV	
	Dummy	z-Score	Dummy	z-Score
Physical violence	-1.360*** (0.233)	-2.897*** (0.883)	-1.640*** (0.331)	-3.585*** (1.133)
Observations	15,898	15,894	15,898	15,894
Psychological violence	-1.371*** (0.382)	-1.824*** (0.635)	-2.239*** (0.768)	-3.692*** (1.348)
Observations	15,726	15,898	15,726	15,898
Sexual Violence	-0.552** (0.239)	-1.827*** (0.659)	-0.990*** (0.364)	-3.450*** (1.075)
Observations	15,886	15,894	15,886	15,894
Financial control 1: husband prevented from working	-0.146 (0.206)	-0.508 (0.717)	-0.103 (0.190)	-0.358 (0.660)
Observations	15,880	15,880	15,880	15,880
Financial control 2: husband refused to give or took mo	-0.012 (0.190)	-0.0487 (0.782)	-0.153 (0.224)	-0.630 (0.925)
Observations	15,862	15,862	15,862	15,862

Notes: All of the data used in the analyses are from 2008 and 2014 NSDVW, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. Distance based instrument used in the IV regressions is created using Erdogan (2014) data, Google Maps distances between each Turkish province and Syrian governorate, and 2011 population data for each governorate in Syria from Syrian Arab Republic Central Bureau of Statistics. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. Columns (1) and (3) indicates results for binary answers to IPV questions as a dependent variable, and columns (2) and (4) indicates results for z-scores for each of the IPV variables. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

Table A7. Effects of Refugee Inflows on IPV by Subregions

	Turkey	NUTS1 TR5-TR7	NUTS1 TRA-TRC	NUTS1 TR5-TRC	NUTS1 TR7-TRC	
	(1)	(2)	(3)	(4)	(5)	
Panel A: Physical Violence						
OLS	Z-physical	-2.897*** (0.883)	-1.083 (0.771)	-1.548 (1.198)	-2.421** (0.958)	-2.765*** (1.090)
	Observations	15,894	3,882	4,392	10,811	8,256
IV	Z-physical	-3.585*** (1.133)	-1.232 (0.827)	-1.408 (1.144)	-2.172** (0.985)	-2.803*** (0.938)
	Observations	15,894	3,882	4,392	10,811	8,256
Panel B: Psychological Violence						
OLS	Z-psychological	-1.824*** (0.635)	-2.942** (1.143)	0.819 (0.795)	-1.353* (0.756)	-0.329 (0.684)
	Observations	15,898	3,883	4,395	10,815	8,259
IV	Z-psychological	-3.692*** (1.348)	-3.595*** (1.325)	1.487* (0.787)	-1.579* (0.824)	0.0976 (0.454)
	Observations	15,898	3,883	4,395	10,815	8,259
Panel C: Sexual Violence						
OLS	Z-Sexual	-1.827*** (0.659)	-2.402** (1.112)	0.0238 (0.700)	-1.271* (0.640)	-0.392 (0.492)
	Observations	15,894	3,881	4,395	10,813	8,259
IV	Z-Sexual	-3.450*** (1.075)	-2.445** (1.082)	0.169 (0.970)	-1.525* (0.863)	-0.404 (0.570)
	Observations	15,894	3,881	4,395	10,813	8,259

Notes: All of the data used in the analyses are from 2008 and 2014 NSDVW, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. Distance based instrument used in the IV regressions is created using Erdogan (2014) data, Google Maps distances between each Turkish province and Syrian governorate, and 2011 population data for each governorate in Syria from Syrian Arab Republic Central Bureau of Statistics. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. The row above the column numbers specifies the region of provinces in the sample for the analysis. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

Table A8. Effects of Refugee Inflows on IPV with 5 Region Trend Components by Subregions

	OLS			IV		
	Turkey	NUTS1 TR5- TRC	NUTS1 TR7- TRC	Turkey	NUTS1 TR5- TRC	NUTS1 TR7- TRC
	(1)	(2)	(3)	(4)	(5)	(6)
Z-physical	-2.436** (0.939)	-1.818 (1.130)	-1.817* (1.079)	-2.635** (1.056)	-1.257 (1.153)	-1.680 (1.029)
Observations	15,894	10,811	8,256	15,894	10,811	8,256
Z-psychological	-1.286 (0.853)	-0.611 (1.242)	0.862 (1.096)	-2.381*** (0.817)	-0.625 (1.134)	1.839** (0.860)
Observations	15,898	10,815	8,259	15,898	10,815	8,259
Z-sexual	-1.625 (0.979)	-0.386 (0.752)	0.592 (0.795)	-2.995** (1.260)	-0.314 (1.263)	1.032 (1.175)
Observations	15,894	10,813	8,259	15,894	10,813	8,259

Notes: All of the data used in the analyses are from 2008 and 2014 NSDVW, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. Distance based instrument used in the IV regressions is created using Erdogan (2014) data, Google Maps distances between each Turkish province and Syrian governorate, and 2011 population data for each governorate in Syria from Syrian Arab Republic Central Bureau of Statistics. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. This table additionally controls for 5 region trend components, i.e. region cross year dummies. The row above the column numbers specifies the region of provinces in the sample for the analysis. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

Table A9. Effects of Refugee Inflows on IPV with NUTS1 Trend Components by Subregions

	OLS			IV		
	Turkey	NUTS1 TR5-TRC	NUTS1 TR7-TRC	Turkey	NUTS1 TR5-TRC	NUTS1 TR7-TRC
	(1)	(2)	(3)	(4)	(5)	(6)
Z-physical	-1.304* (0.723)	-1.006 (0.836)	-1.332 (1.475)	-1.196* (0.642)	-0.771 (0.678)	-0.768 (2.254)
Observations	15,894	10,811	8,256	15,894	10,811	8,256
Z-psychological	-2.942** (1.143)	0.432 (1.120)	2.691*** (0.622)	-3.595*** (1.325)	0.115 (1.349)	5.297** (2.323)
Observations	3,883	10,815	8,259	3,883	10,815	8,259
Z-sexual	-1.337 (1.038)	-1.247 (0.990)	0.243 (0.451)	-1.665 (1.238)	-1.362 (1.284)	0.713 (1.044)
Observations	15,894	10,813	8,259	15,894	10,813	8,259

Notes: All of the data used in the analyses are from 2008 and 2014 NSDVW, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. Distance based instrument used in the IV regressions is created using Erdogan (2014) data, Google Maps distances between each Turkish province and Syrian governorate, and 2011 population data for each governorate in Syria from Syrian Arab Republic Central Bureau of Statistics. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. This table additionally controls for NUTS1 region trend components, i.e. NUTS1 cross year dummies. The row above the column numbers specifies the region of provinces in the sample for the analysis. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

APPENDIX B
ADDITIONAL TABLES

Table B1. Effects of Refugee Inflows on IPV Outcomes by Place of Residence

	OLS		IV	
	(1)	(2)	(3)	(4)
Physical violence	-6.450*** (1.235)	-2.485** (1.057)	-8.253** (4.096)	-3.550*** (1.143)
Observations	4,517	11,377	4,517	11,377
Psychological violence	-5.564** (2.532)	-1.499* (0.838)	-5.054 (5.427)	-4.079** (1.643)
Observations	4,517	11,381	4,517	11,381
Sexual Violence	-6.414*** (1.388)	-2.220** (0.893)	-9.166 (6.013)	-4.332*** (1.242)
Observations	4,514	11,380	4,514	11,380

Notes: All of the data used in the analyses are from 2008 and 2014 NSDVW, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. Distance based instrument used in the IV regressions is created using Erdogan (2014) data, Google Maps distances between each Turkish province and Syrian governorate, and 2011 population data for each governorate in Syria from Syrian Arap Republic Central Bureau of Statistics. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. Columns (1) and (3) show analyses for rural regions, and columns (2) and (4) show analyses for urban regions. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

Table B2. Effects of Refugee Inflows on IPV Outcomes (Last Year vs. Ever from Current Husband) - OLS

	IPV in the Last Year			Ever Abused by Current Husband		
	(1)	(2)	(3)	(4)	(5)	(6)
z-physical	-2.897*** (0.883)	-2.664** (1.148)	-2.968*** (0.863)	-2.097*** (0.394)	-2.297*** (0.526)	-2.626*** (0.692)
Observations	15,894	13,900	11,434	15,898	13,904	11,438
z-psychological	-1.824*** (0.635)	-1.262** (0.616)	-1.607* (0.948)	-1.884*** (0.640)	-1.672*** (0.568)	-1.840** (0.747)
Observations	15,898	13,904	11,438	15,898	13,904	11,438
z-sexual	-1.827*** (0.659)	-1.572** (0.619)	-1.007 (0.889)	-1.653** (0.668)	-1.531* (0.804)	-1.227 (0.951)
Observations	15,894	13,901	11,435	15,893	13,900	11,434

Notes: All of the data used in the analyses are from 2008 and 2014 NSDVW, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. Columns (1) and (4) indicate results for all women in the sample, columns (2) and (5) indicate results for marriages longer than 5 years, and columns (3) and (6) indicate results for marriages longer than 10 years. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

Table B3. Effects of Refugee Inflows on IPV Outcomes (Last Year vs. Ever from Current Husband) - IV

	IPV in the Last Year			Ever Abused by Current Husband		
	(1)	(2)	(3)	(4)	(5)	(6)
z-physical	-3.585*** (1.133)	-3.637** (1.459)	-3.543*** (0.822)	-3.354*** (0.955)	-4.011*** (1.218)	-3.923*** (1.086)
Observations	15,894	13,900	11,434	15,898	13,904	11,438
z-psychological	-3.692*** (1.348)	-2.870** (1.231)	-2.990** (1.337)	-3.684*** (1.196)	-3.310*** (1.109)	-3.052*** (1.034)
Observations	15,898	13,904	11,438	15,898	13,904	11,438
z-sexual	-3.450*** (1.075)	-2.975*** (1.000)	-2.527** (1.128)	-3.265*** (1.236)	-3.149** (1.307)	-2.938** (1.368)
Observations	15,894	13,901	11,435	15,893	13,900	11,434

Notes: All of the data used in the analyses are from 2008 and 2014 NSD/W, and Erdogan (2014) data for ratio of Syrian refugees in each province for 2014. Distance based instrument used in the IV regressions is created using Erdogan (2014) data, Google Maps distances between each Turkish province and Syrian governorate, and 2011 population data for each governorate in Syria from Syrian Arab Republic Central Bureau of Statistics. All specifications control for age, age squared, type of location (rural vs. urban), mother tongue, and province and year fixed effects. Columns (1) and (4) indicate results for all women in the sample, columns (2) and (5) indicate results for marriages longer than 5 years, and columns (3) and (6) indicate results for marriages longer than 10 years. Standard errors are clustered at the province level. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

APPENDIX C

FIGURES

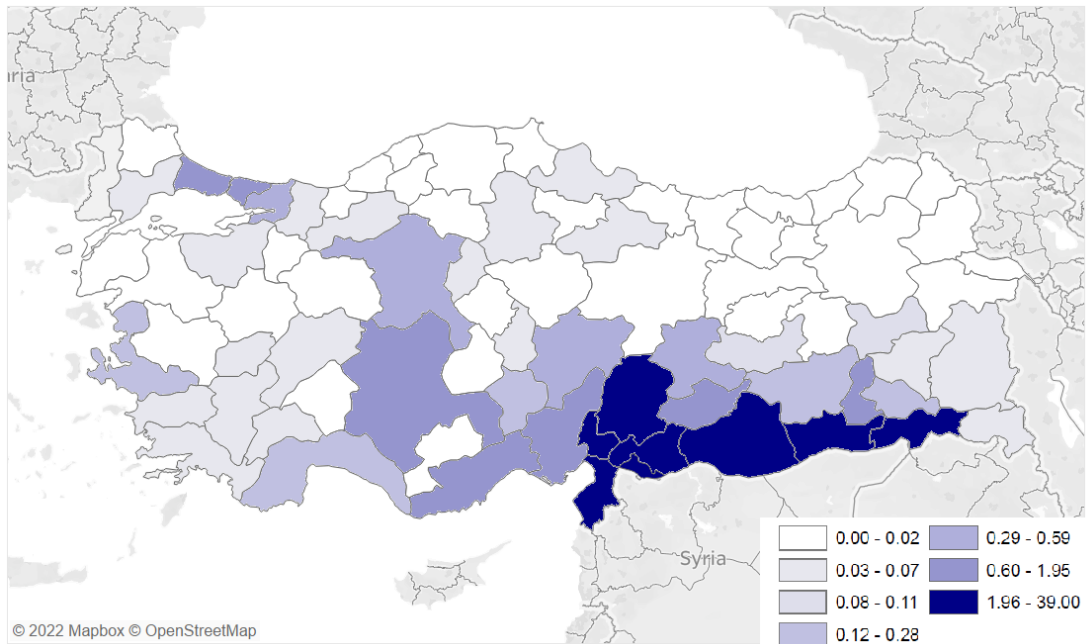


Figure C1. Share of Syrian Refugees in Turkish Population (Province, %)

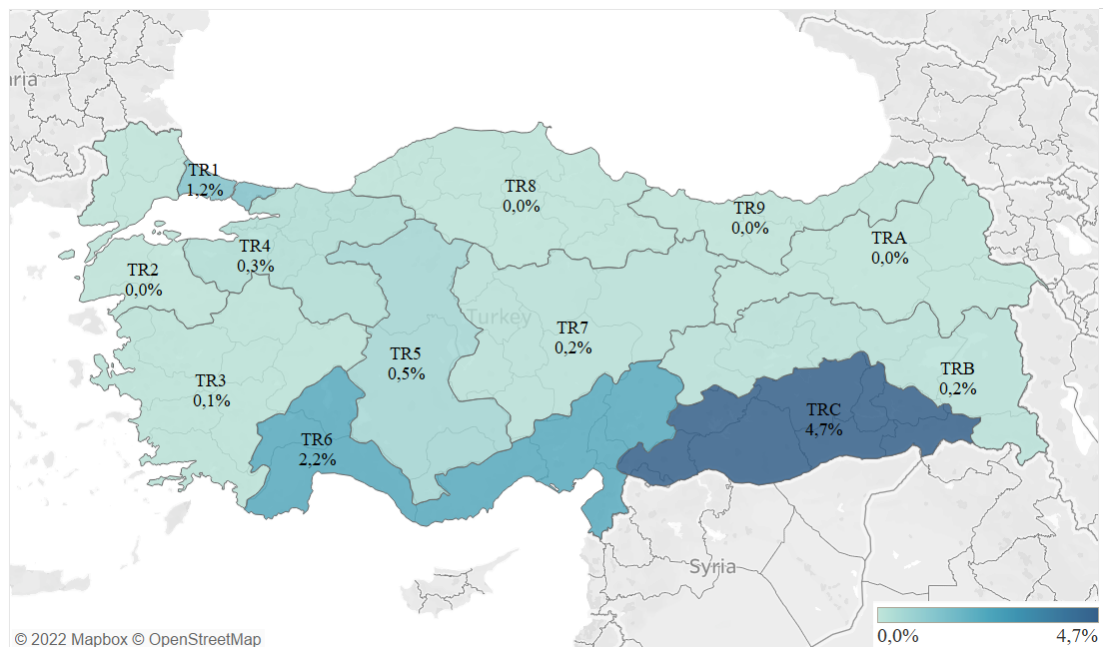


Figure C2. Share of Syrian Refugees in Turkish Population (NUTS1, %)

Note: Figures are created using data from Erdogan (2014) data on Syrian refugee ratio and Tableau software.

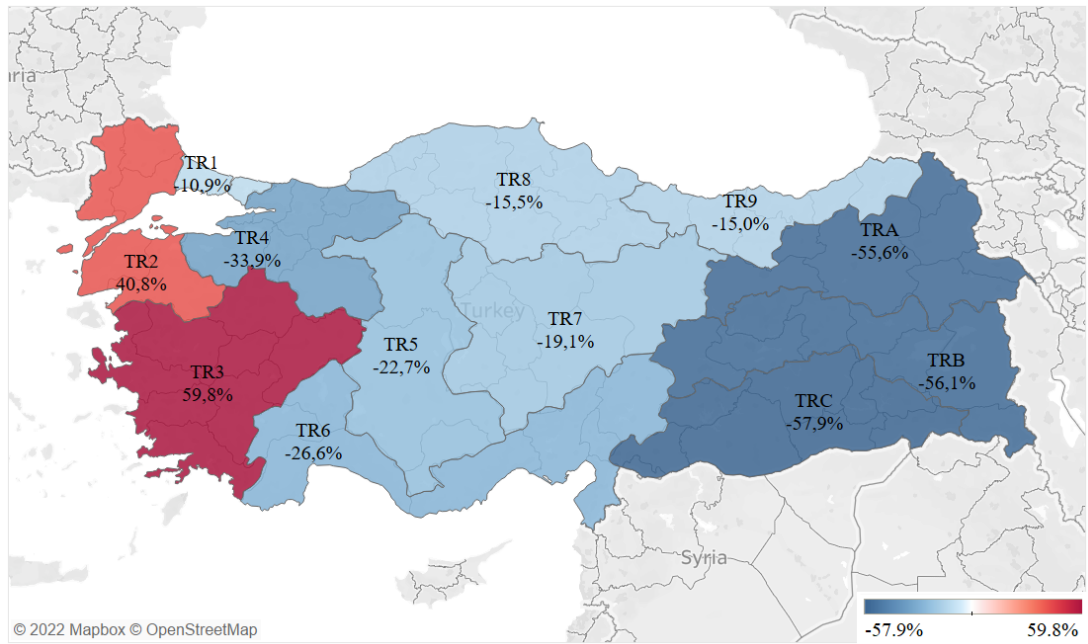


Figure C3. Change in Physical IPV (NUTS1, %)

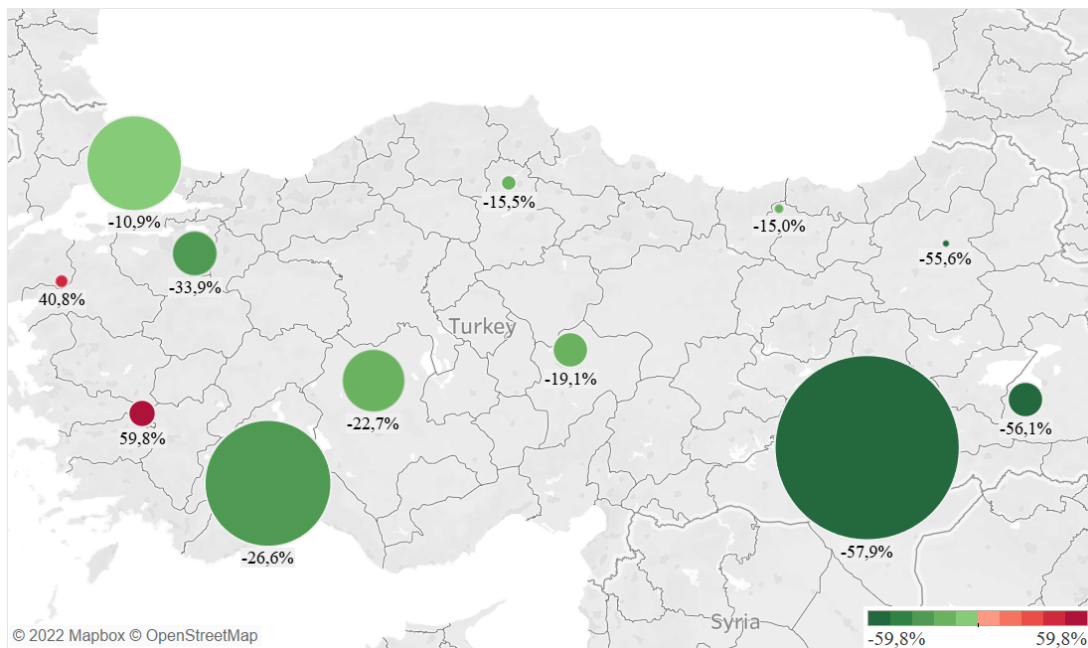


Figure C4. Change in Physical IPV (denoted by colors) versus the Syrian Refugee to Native Population Ratio (denoted by circle size) (NUTS1, %)

Note: Figures are created using data from Erdogan (2014) data on Syrian refugee ratio, physical IPV data for 2008 and 2014 NSDVW, and Tableau software.

APPENDIX D

EXPLANATIONS FOR VIOLENCE VARIABLES

D.1 Physical violence

Slap: Partner slapped or thrown an object that could hurt her

Push: Partner pushed or shoved her, or pulled her hair

Hit: Partner hit with his punch or another object that could hurt her

Kick: Partner kicked, dragged, or beat her up

Choke: Partner choked her or burnt a part of her body

D.2 Psychological violence

Insult: Partner upset her by insulting or swearing

Humiliate: Partner belittled/humiliated her in front of other people

Scare: Partner scared or intimidated her on purpose by yelling, breaking objects etc.

Threaten: Partner threatened to hurt her or someone she cares about

D.3 Sexual violence

Forced sex: Partner physically forced her to have sex when she did not want to

Fear sex: She had sex with partner due to fear of what he might do

Humiliating sex: Partner forced her to involve in sexual acts that she felt were humiliating or degrading

D.4 Financial control behaviors

Prevented from working: Partner prevented from being employed or forced to quit her job even though she wanted to work

Took money: Partner took her earning even though she did not want to giveo

Refused money: Partner refused to give money for household needs even though he had money for his other expenses

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