



## Evaluating Femicide Rates Through Hofstede Cultural Dimensions

### *Hofstede Kültür Boyutları Bağlamında Kadın Cinayetlerinin Deđerlendirilmesi*

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#### Abstract

This paper aims to analyse the relationship between Hofstede Cultural Dimensions and cross sectional femicide rates, which have recently received increasing coverage in the media and lead to fundamental changes in laws all across the world. In our study, which includes a subset of femicide rates acquired from world health organization, we use regular Ordinary Least Squares (OLS) analyses, covering 47 countries, we find that femicide rates have no correlation with masculinity, but interestingly have a positive correlation with “Power Distance” and “Collectivism”, and to a certain degree, “Uncertainty Avoidance”, systematically explaining at least 37% of femicides across the world. The lack of any correlation with masculinity rules out a systematic gender-based violence against females though a significant amount of non-systematic male violence against females certainly does exist. We theorize that societies with a strong social hierarchical order, particularly supported by collectivistic behaviour, tend to be harsher and less tolerant of uncertainty and aberrant behaviour, punishing and sometimes killing their members although cultural structure alone cannot be the definitive cause of femicides, which most likely stems from rapid and inorganic institutional changes.

**Keywords:** Hofstede Cultural Dimensions, Femicides, Power Distance, Masculinity

**Paper Type:** Research Paper

#### Özet

Bu makale, son zamanlarda medya gündeminde yer eden ve temel kanun deđişikliklerine zemin hazırlayan kadın cinayetleri (yatay kesit verileri) ile Hostede Kültür Boyutları arası ilişkileri analiz etmeyi amaçlamaktadır. Dünya Sağlık Örgütünden elde edilen veriler ve 47 ülkeyi kapsayan ve standard En Küçük Kareler yöntemini kullandığımız çalışmamızda, erkeksilik oranı ile kadın cinayetleri arasında hiçbir korelasyon bulanamazken, “Güç Mesafesi”, “Kollektivizm” ve kısmen de “Belirsizlikten Kaçınma” boyutlarıyla pozitif bir ilişki saptanmış ve bu ilişki, kadın cinayetlerinin dünya çapında %37’sini sistematik olarak açıklayabilmektedir. Erkeksilik ile hiçbir korelasyonun dahi var olmaması, kadınlara karşı cinsiyete bađlı sistematik bir şiddet ihtimalini geçersiz kılmaktaysa da bu, kadınlara karşı sistematik olmayan erkek şiddeti yoktur anlamına gelmemektedir. Ortaya koyduğumuz kurama göre, her ne kadar kültürel yapı tek başına kadın cinayetlerini açıklamada yetersiz olsa da, güçlü sosyal hiyerarşik ve özellikle kolektivist yapıdaki toplumlar, sapkın gördükleri bireyleri cezalandırmada daha sert ve tahammülsüzce davranmakta hatta bazen öldürmektedirler. Diđer yandan kadın cinayetlerinin, daha ziyade, hızlı ve toplumsal karşılığı olmayan kurumsal deđişiklikler sonucu ortaya çıktığı görülmektedir.

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**Anahtar Kelimeler:** Hofstede Kltr Boyutları, Kadın Cinayetleri, Gç Mesafesi, Erkeksilik

**Makale Tr:** Arařtırma Makalesi

## Introduction

This study aims to tackle the highly sensitive topic of femicides from a different non-judgemental and unbiased perspective, focusing on analytical relationships, rather than a preconceived structure found and perpetuated in the mass media, and often in academic circles. It has inevitably come to our attention that there is a close relationship between different cultures and their social interactions, of which, culture is a big part.

Culture, which is a highly complex debated term, as the most important aspect of a society, can be defined in countless different ways depending on the context and perspective (Lantz-Deaton & Golubeva, 2020). Having the broadest impact on human behavior, it proves to be a non-trivial and tricky concept to define. (McCort and Malhotra, 1993). Even though the concept of culture has an extensive history dating to ancient times, it too has evolved along with the human evolution and advancement, especially after the advent of European Enlightenment and the age of modernism, looking down on non-modern societies and comparing the cultures from multiple angles.

Geert Hofstede, well known for Hofstede Cultural Dimensions, succinctly defines culture as the collective programming of the mind that distinguishes the members of one group or category of people from others” (Hofstede, 2007). In our perspective, culture is the collective memory, knowledge, experience, set of habits and behavioral patterns of a society accumulated over time, which is a continuously but gradually adapting semi-immortal organism with an inter-generational transmission mechanism, expressing itself in various outlets or forms such as traditions, customs, folklore, values, norms, and social principles.

In essence culture is, a) a social phenomenon shaped by the society (Yksel, 2013:176-177), b) a continuum of experiences, knowledge, and emotions over generations (Emre, 2007: 58-59), c) not exclusive to individuals but affecting and contributed by them, and, d) often symbolic, stereotypical and adaptable (Gney & Nurmakhamatuly, 2007: 69).

In order to critically distinguish and compare different cultures, it is crucial to be able to classify cultures by different aspects or dimensions and enumerate them. Hofstede’s cultural dimensions (Hofstede, 1980) is by far the most commonly used model in the literature to capture and compare the general differences between different cultures, employed by many different fields and disciplines such as sociology and international marketing.

In this study, we hope to shed light on the systematic relationship between various cultural dimensions and the different social reactions which may manifest itself as femicides, by using Hofstede’s cultural dimensions, rather than a fictional male vs. female battle among individuals.

In order to investigate whether the enumerated cultural aspects of a society can soundly explain the reasons and motivations behind femicides in a society, we look into the relationship between Hofstede’s each cultural dimension and femicide rates, examine all possible correlations among them and build a non-trivial model using these dimensions. Finally we will make a judgement call as to whether or not there is enough evidence to establish a causal relationship rather than simply a correlation. In either case we discuss what these correlations imply, especially in the framework of cultural institutions.

Study consists of four parts; the first section is composed of a two-fold literature review covering both culture as and femicides. At the second section, we present the methodology and data, detailing the general framework and the model specification. Third section includes the results in multiple stages and a large amount of visual data. The final section concludes the study with several discussion points and policy implications.

## 1. Literature

### 1.1 Culture

Culture has many shades of definitions in the literature. While Hofstede defines culture as the collective programming of the mind of a group or a society (Hofstede, 2011:3), other studies in sociology and anthropology equates civilization with (the level of) culture, implying a set of non-written rules of socially interacting and cohabiting individuals who share their knowledge and experiences (Hofstede, Minkov, 2010:6). Others define culture as the abstract and cognitively advanced forms of activities such as art, music, plays etc. commonly known as the “high culture” (Williams, 1983). Common habits and traditions of a significant portion of a society who collectively consume such relatively abstract forms products may also be defined to form a sub-culture (McGaha, 2015).

The iceberg metaphor (Hall 1977) suggests that the bulk of the common culture is embedded in social behavior and norms and values only rarely surface, often deeply but silently affecting social life and behavior, without getting openly detected or revealed (Ting-Toomey 1999). Although culture can briefly be defined as the collection of norms, determining the common values, beliefs and collective behavior of a society (Matsumoto 1996:16), the concept is a bit too broad to tackle alone (Samiee ve Jeong, 1994), requiring a piecemeal evaluation of culture with different germane topics. The relationship between culture and education (Bruner 1996), language (Kramsch 2003), experience (Hallowell 1955), or war (Fiorina et al.Pope 2010) are examples to such evaluations of culture in the literature.

Likewise Hofstede tackles culture from an institutional perspective, focusing on explaining the reasons behind different reactions by different societies to certain events, stylized and formalized in his theory of “Hofstede’s Cultural Dimensions”, created with 60.00 survey results from 70 different countries (Soares, Farhangmehr ve Shoham, 2007). Various researchers discussed the theory for functional conceptualization (Bond, 1987; Clark, 1990; Steenkamp 2001), increasing its popularity especially in sociology, marketing and management fields (Steenkamp 2001). Hofstede, also alluding to previous multi-dimensional models, defines his 6 dimensions of culture as Power Distance, Uncertainty Avoidance, Individuality vs. Collectivism, Masculinity vs Femininity, Long vs. Short Term Orientation and Indulgence vs. Restraint (Hofstede, 2011:8).

Power distance, which determines the distribution of power among various organizations and institutions, has a proportional impact on people’s expectations regarding hierarchical relations. People have a lower chance to challenge authorities in countries with higher power distance index, while such vertical relations are more transitive in countries with a lower score (Hofstede et al., 2010:6). Hofstede underlines the fact that Uncertainty Avoidance is not the same as risk avoidance but is more related to the creation of cultural norms such as religion, citizenship, and ideologies (Hofstede et al., 2010:6), explaining how much a society considers uncertainty as a threat (Sofyalıoğlu and Aktaş, 2001: 91).

While Individuality vs Collectivism measures the degree to which individuals consider themselves as a part of a group or a separate entity, which tends to increase as nations get richer,

Masculinity vs. Femininity focuses on the structure and institutional framework. More masculine societies tend to be object oriented and materialistic while more feminine societies tend to be more social oriented and more spiritual (Sargut, 2001: 175). Likewise Long vs. Short Orientation depicts how near or far sighted the societies are in their planning and daily life while Indulgence vs. Restraint expresses the degree to which societies stick to moral and ethical rules (Hofstede et al., 2010:6).

It is socially and strategically important to determine the cultural dimensions of a society in order to realize the tenants of the society and how it will react to and/or be motivated by certain socioeconomic or legal changes (Unutkan, 1995:90), which is why the 6 dimensional Hofstede model has also been studied in Turkey by various researchers. Turkey is found to have large degrees of power distance and uncertainty avoidance scoring 66 and 85 respectively (İlhan ve Yemişçi, 2020).

A hierarchical structure brings increasing amounts of power for the management (Wasti and Erdil, 2007) and uncertainty avoidance enables a quick decision making process often with significant sacrifices rather than gambling with the future (Sarıtış and Öztürk, 2018). Turkish culture is collectivistic where people belong and are often loyal to a certain group in their daily lives (Curkan, 2019). Turkish culture is middle ground in terms of Indulgence and Restraint (İlhan and Yemişçi, 2020) and tends to be feminine (Aydın and Uçman, 2019)

The Hofstede model has been applied in Turkey in studies as well, such as work safety (Karadağ, 2020), and cultural differences of in the tourism industry (Şahin and Palta, 2020) where the authors highlight the cultural challenges and setbacks in the industry.

The Hofstede model is also used to explain other related areas such the roots of economic development (Hofstede and Bond, 1988), the health care industry (Bošnjak, Bošnjak and Cikic, 2019), clinical studies (Rojo et al., 2020; k29), teacher student relations in education (Jaber, 2015), tourist satisfaction (Huang ve Crotts, 2019), energy policies (Pelau and Pop, 2018), forecasting financial crises (Laitinen and Suvas, 2016), psychology and loneliness (Barreto et al., 2021), fashion and consumption (Iran et al., 2019), mobile banking applications (Picato and Pinto, 2021), justice and crime (Karstedt, 2012) and even the effects of COVID-19 on various industries such as tourism and accommodation (Shapoval et al., 2021).

There has also been some criticism against the theory though not necessarily to the model itself but rather the simplification of institutions such as nation-states and nation-specific institutions into pure cultural dimensions (Baskerville, 2003).

## 1.2 Femicide

The first ever use of the term “Femicide” in the literature dates back to the beginning of the 19th Century by Corry, (1801) according to Gazioğlu (2013: 92), which is legally recognized in 1848 (Russell, 2008: 27), increasing its gravity in the field along with more emphasized violence against females, as perpetuated in Turkey by the “We will stop the violence against women (Kadın Cinayetlerini Durduracağız) Platform”.<sup>2</sup>

Russell defines femicide as murder of females because they are females (Russell, 1990:286-87), by males (Caputi and Russell, 1990:34-35), while female murders by females are excluded from this definition (Russell, 2008:28), giving it a complete cultural Marxist style “gender wars” spin, though Kelly (1988) restricts this definition into a narrower form of “extreme violence”.

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<sup>2</sup><http://kadincinayetlerini-durduracagiz.net/veriler/2947/kadin-cinayetlerini-durduracagiz-platformu-2020-raporu>

Through the years, femicides are tackled in the framework of feminism (Taylor and Jasinski, (2011) and external effects (Sharps et al., 2009), human rights (Messias et al., 2020) or customs and honor killings (Bilgili and Vural, 2011) as well as its reflections and misuse as a propaganda instrument in the press (Sallan and Altındal, 2015; Kafadar, 2018). Likewise Çetin (2014) evaluates femicides as a resistance of traditional values against modernism while Kouta et al. (2018) emphasize on cultural and environmental factors.

## 2. Methodology and Data

### 2.1 Framework

In our study, we use a simple OLS regression analysis which consists of three stages. First we analyse the relationship between Hofstede's 6 cultural dimensions and the femicide rates both separately and altogether, followed by the second stage, where we take a deeper look into the correlations between all these dimensions and possible collinearities. Finally at the third stage, we construct a robust and statistically significant model with a large explanatory power and subsequently interpret according to our findings.

### 2.2 Variables and Data

In the study, we derive our data set from two main sources; a) The Hofstede Insights, directly from the official Hofstede website, and b) a sub-set of femicide rates obtained in the 2015-2018 period from WHO (World Health Organization), as covered by a previous Turkish Police Academy study<sup>3</sup> involving a total of 47 countries for a more comparable and complete analysis.

The femicide rates, which is the dependent variable, is defined as the number of females murdered per million, while the brief definitions for Hofstede cultural dimensions, which are the independent variables in the study are given below<sup>4</sup>.

a) Power Distance Index (PDI): How social inequalities are handled and the degree to which the less powerful members of a society accept and expect that power is distributed unequally.

b) Individualism versus Collectivism (IDV): The degree to which the social framework in which individuals are expected to take care of only themselves and their immediate families versus the society as a whole taking care of all individuals in exchange for unquestioning loyalty.

c) Masculinity versus Femininity (MAS): Preference for a competitive society, aiming for achievement, heroism, assertiveness, and material rewards for success versus preference for cooperative society, aiming for modesty, caring for the weak and quality of life.

d) Uncertainty Avoidance Index (UAI): Degree to which the members of a society feel uncomfortable and deals with uncertainty and ambiguity as well as the future.

e) Long vs. Short Term Orientation (LTO): Degree to which the society prioritizes the challenges and links to past vs. future. More traditional societies score low (Short term oriented) while more pragmatic societies score high (Long Term Oriented) in this dimension.

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<sup>3</sup> [https://www.pa.edu.tr/Upload/editor/files/Kadin\\_Cinayetleri\\_Rapor.pdf](https://www.pa.edu.tr/Upload/editor/files/Kadin_Cinayetleri_Rapor.pdf)

<sup>4</sup> <https://hi.hofstede-insights.com/national-culture>

f) Indulgence Versus Restraint (IVR): Degree to which a society that allows or suppresses relatively free gratification of basic and natural human drives related to enjoying life and having fun, and how strict the social norms are.

g) Interaction variable for PDI and IDV: The level of interaction between power distance and collectivism in the society. The higher the value, the greater the cooperative impact of these two values on femicide rates.

### 2.3 Model Specification

The model is based on ordinary least squares (OLS) regression analysis, and is applied with different sets of variables. In all specifications below, given that  $Y_i$  represents the femicide rate of country “i”, the models can be expressed as;

a) For the unified model (with all Hofstede Dimensions included);

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{4i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + u_{it}$$

b) For the separate model (with only one Hofstede Dimension included);

$$Y_i = \beta_0 + \beta_k X_{ki} + u_{it}; \text{ where } X_k \text{ is the “k”th dimension and } \beta_k \text{ is its coefficient}$$

c) For the final model (with only select Hofstede Dimensions included);

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_z X_{zi} + u_{it}; \text{ where}$$

$X_{1i}$  : Power Distance Index (PDI) in country i

$X_{2i}$  : Individualism (IDV) in country i

$X_{zi} = (X_{1i} * X_{2i})^{0.5}$  : Interaction variable between PDI and IDV in country i

In the first stage of the analysis, we study the unified and separate models, followed by a detailed look into correlations between all variables and alternative model specification within the dataset, only to conclude on the final model at the third stage, which has the best fit and highest significance for the study, including not only the PDI and IDV variables, but also an interaction variable constructed from PDI and IDV.

We should note that the Hofstede dimensions are correlated among themselves with varying degrees, causing multi-collinearity, which we examine at the second stage. This is, however, not a modelling problem yet leading to lower efficiency of the estimate (through larger coefficient variances) unless the correlation is less than 0.8 according to Greene (2003) and Gujarati (1995).

Another problem that rises from multi-collinearity is the wrong signs of the coefficients, especially in the existence of a non-linear relationship. In the final model, both  $X_2$  (IDV) and the constructed  $X_z$  (Interaction) variables include the effects collectivism in a linear fashion with a significant overlap. The (unexpected) positive sign for the IDV coefficient serves to decrease the linear effect of the  $X_z$  (Interaction) variable, implying a non-linear and decreasing impact of collectivism on femicides thru PDI.

### 3. Results

#### 3.1 First Stage: Regressions

Regressing each Hofstede Dimension separately on Femicide Rates reveals some very interesting results. First of all, Masculinity (MAS), Indulgence (IVR) and Long-Term Orientation (LTO) have absolutely no correlation with femicide rates whatsoever. Regressing these variables on different combinations does not change the results either. It is especially remarkable that masculinity has no correlation with femicides.

One may even suggest that there is a negative relationship between MAS and femicide rates; after all, Japan has the highest MAS rate (95) but the lowest femicide rate (2) in the dataset while Latvia has an extremely low MAS score (9) corresponding to a very high femicide rate (26), revealing a slightly negative but statistically insignificant correlation from separate regressions (not shown). This would be fallacious, however, since both Turkey and Sweden have similar femicide rates (5) but vastly different MAS figures, 45 and 5 respectively. Countries with both low and high MAS figures may have high femicide rates; such as Russia scoring a mere 36 on MAS but a high 32 on femicides while Mexico which scores a much higher, 69 on MAS but a similar femicide rate (35).

**Table 1 - Separate Regressions on Femicides**

Independent Variables	R Square	Adj. R Square	Coefficient	P-value
PDI	<b>0,2226</b>	<b>0,2053</b>	0,2908	0,0008
IDV	<b>0,1770</b>	<b>0,1587</b>	-0,2449	0,0032
MAS	0,0023	-0,0199	-0,0319	0,7502
UAI	0,0600	0,0391	0,1766	0,0970
LTO	0,0038	-0,0183	-0,0389	0,6791
IVR	0,0002	-0,0220	-0,0104	0,9177

Power Distance (PDI) and Individualism (IDV), on the other hand, are statistically significant, and each separately explains 20% and 16% of the variation respectively. Even though the table above does not make it obvious, Uncertainty Avoidance (UAI) also plays a relatively significant role in femicide rates (p-value: 0.097) though it is highly correlated with both PDI and IDV, which makes it unfit to use simultaneously in a unified regression yielding misleading results. This correlation, however, makes it possible to use as an alternative to PDI, which we will address in the following stages.

A unified model with all dimensions in one regression inevitably increases the explanatory power ( $R^2 = 0.27$ ) most likely due to chance, since the Adjusted  $R^2$  is much lower in table 2 than regressing with PDI alone in table 1 (0.21 vs. 0.16). In other words, pouring all those variables into the soup makes it worse. Logically, it is rather pointless to include statistically insignificant variables, and we should limit our model to 2-3 statistically significant dimensions including PDI, IDV and possibly UAI.

**Table 2 - Unified Regression on Femicides (1)**

Independent Variables	R Square	Adj. R Square	Coefficient	P-values
PDI	0,2726	0,1635	0,3149	0,0336
IDV			-0,0872	0,5118
MAS			-0,0259	0,8018
UAI			-0,0859	0,5983
LTO			0,0131	0,9041
IVR			0,1233	0,3565

Regressing only the 2 statistically significant variables ( $p\text{-value} < 0.05$ ) depicts an interesting picture. IDV appears terribly insignificant though it does take the correct sign. This should not dishearten us, however, since PDI and IDV are highly correlated, this does not mean there is no correlation between IDV and femicides. However, the adjusted  $R^2$  value is still lower than regressing with PDI alone, so adding IDV alone has no real use to the analysis.

Using PDI, IDV or UAI in any combination does not improve the results either. UAI can alternatively be employed instead of PDI, often yielding very similar results as both are highly correlated as we will see in the next section. We will proceed to take a closer look at the correlations in the analysis.

**Table 3 - Unified Regression on Femicides (2)**

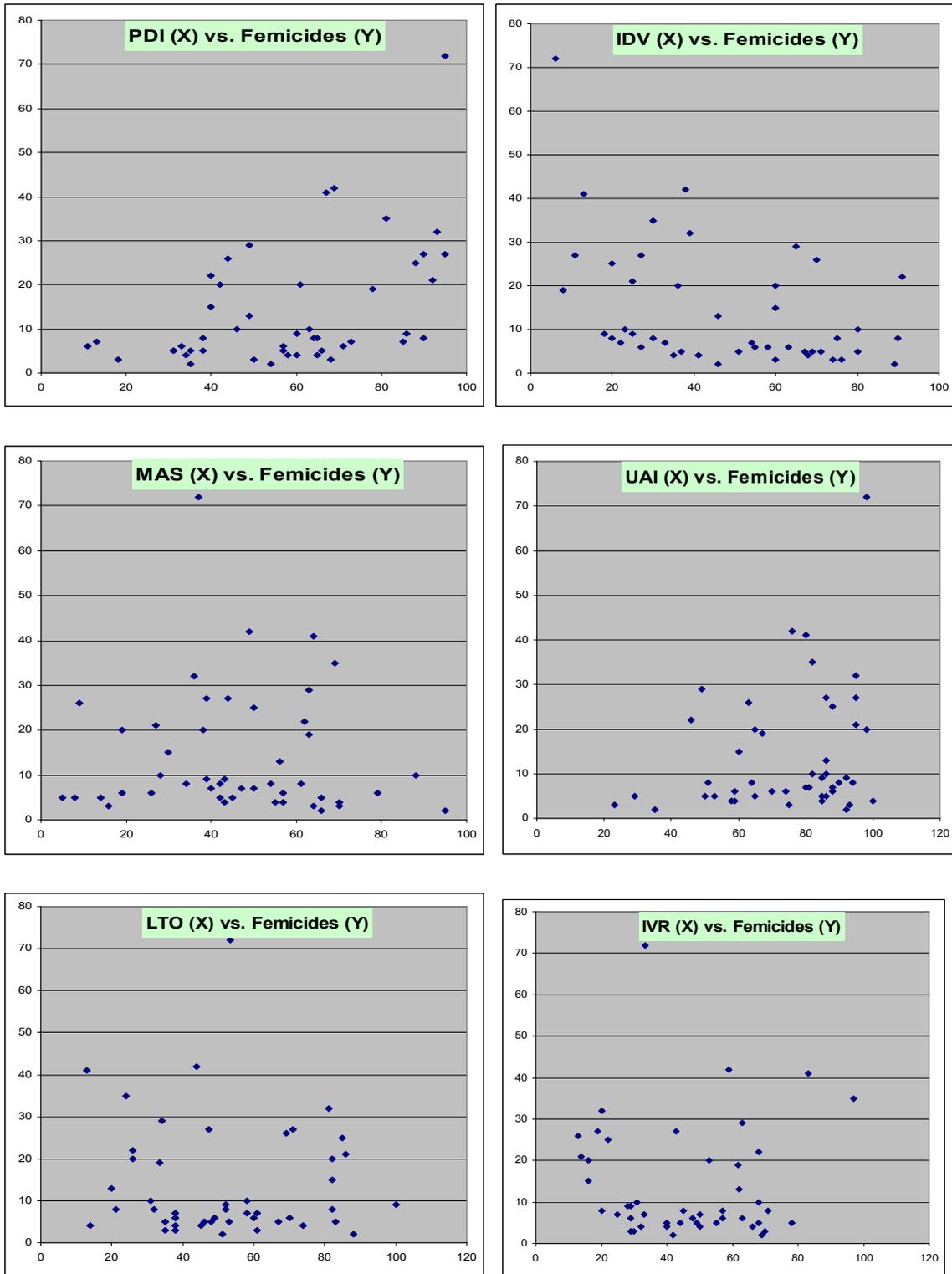
Independent Variables	R Square	Adj. R Square	Coefficient	P-values
PDI	0,2323	0,1974	0,2209	0,0819
IDV			-0,0874	0,4595

### 3.2 Second Stage: Correlations

Both the correlation matrix for Hofstede Dimensions against femicides on table 4 and the associated graph 1 clearly confirms our findings so far: a) MAS, LTO, and IVR have no correlation with femicides whatsoever; b) While both PDI and UAI are positively correlated, IDV is negatively correlated with femicides.

Even though the correlation between UAI and femicides appears barely significant in the regression ( $p\text{-value}: 0.097$ ), graph 1 begs to differ, where we see a certain although not as pronounced correlation with femicides, which most likely stems from an indirect relationship, where UAI is not the real cause but rather a correlated proxy of the real one. PDI, however, has a much clearer correlation with femicides, closer to be the real cause.

**Graph 1 – Correlations between Hofstede Dimensions and Femicides**

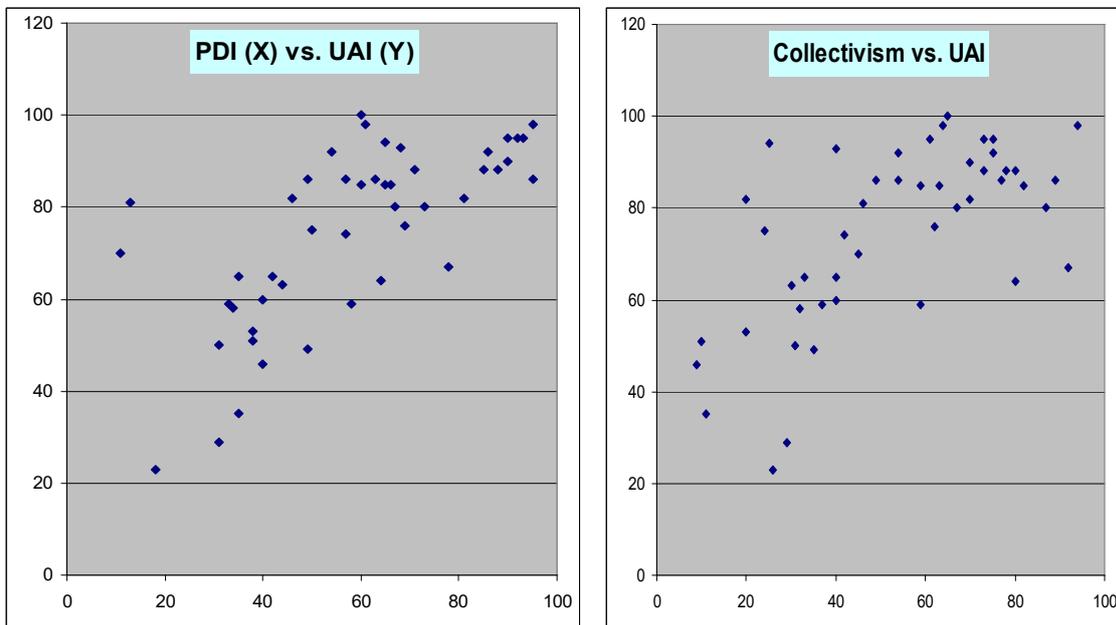


**Table 4 - Correlation Matrix for 6 Hofstede Variables & Femicides**

Hofstede Variables	PDI	IDV	MAS	UAI	LTO	IVR	Femicides
PDI	1,000	-0,755	0,001	0,693	0,104	-0,391	0,472
IDV		1,000	0,073	-0,639	0,030	0,222	-0,421
MAS			1,000	0,222	-0,040	0,158	-0,048
UAI				1,000	0,203	-0,443	0,245
LTO					1,000	-0,593	-0,062
IVR						1,000	-0,015
Femicides							1,000

Table 4 also reveals that PDI, IDV and UAI are all correlated among each other (demonstrated in graph 2), causing issues when used in a single regression. Especially PDI and UAI are close proxies of each other. Because uncertainty avoidance is often a function of power distance in a society, dropping UAI in favor of PDI would yield somewhat better results. Graph 2 below is particularly useful to show the clear correlation between collectivism, which is defined as the opposite of individualism, and femicides.

**Graph 2 – Correlations against UAI**



### 3.3 Third Stage: Final Model

Unified and separate regressions at stage 1 and correlation analyses at stage 2 have showed us:

- a) 3 Hofstede dimensions, PDI, IDV and UAI are correlated with femicides, while the other 3 dimensions are not.
- b) These 3 correlated dimensions are also correlated among each other, making it impossible to use them all in one regression, leading to worse results.
- c) Hofstede dimensions alone cannot meaningfully explain more than 20% of the variation in femicides.

In order to solve this, we theorize that;

- d) Individuality or collectivism (IDV) alone cannot be the cause of femicides, but can only be a contributing factor with another factor or factors.
- e) Power Distance (PDI) can be a powerful tool in social decision making whereas UAI is rather a product of PDI, probably in association with other factors. So those two should not be used together, and PDI should be the preferred choice.
- f) Collectivistic behavior (by implication, IDV) should be not only correlated with PDI but also highly interactive with it. Power distance will be much more effective in collectivistic societies where people tend to follow the crowd who follow the orders and rules enacted by the hierarchical elite.
- g) This necessitates the creation of a proxy variable for the interaction rate between PDI and IDV, demonstrated as  $X_{zi}$  (or simply called PDIXIDV, see model specification for more information).

In our final model, as shown on Table 5, we encounter extremely remarkable results. First of all, now that we have included the interactive variable, all variables appear statistically significant, also boosting the explanatory power to 37%, indeed proving to be noteworthy with an adjusted  $R^2$  equal to 0.33. Both PDI and the interactive variable PDIXIDV take expected signs. There is one caveat though, the IDV variable takes the wrong sign, which should have been negative. Does this mean the model fails, however?

**Table 5 - Unified Regression on Femicides (3)**

Independent Variables	R Square	Adj. R Square	Coefficient	P-values
PDI			0,7685	0,0007
IDV	0,3724	0,3286	0,6133	0,0184
PDIXIDV			-1,1300	0,0034

We know from the previous regressions and correlation analysis that IDV is definitely negatively correlated with femicides, so the positive sign here has other implications. Basically the model attributes the role of IDV to the PDIxIDV instead but the relationship is non-linear; so the large negative coefficient of PDIxIDV is partially negated by relatively small positive coefficient of the IDV, rendering the relation of IDV with femicides not only non-linear, but also dependent and thru PDI, which is a crucial point.

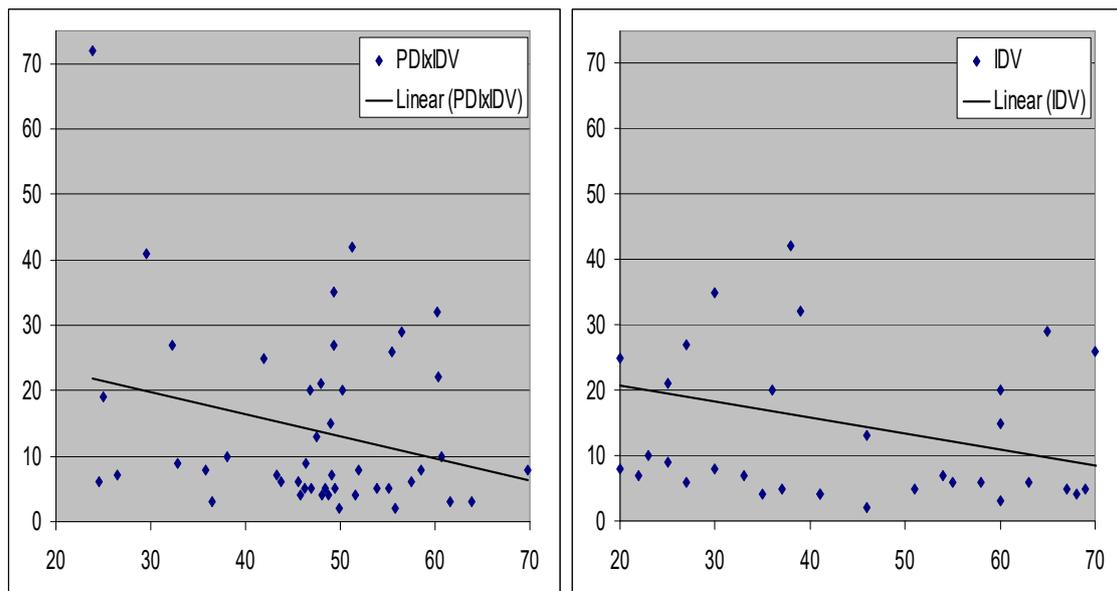
**Table 6**

**Table 6 - Unified Regression on Femicides (4)**

Independent Variables	R Square	Adj. R Square	Coefficient	P-values
PDI			0,7685	0,0007
Coll.	0,3724	0,3286	-0,6133	0,0184
PDIxIDV			-1,1300	0,0034

Table 6 above is basically a re-run of the previous table, which employs, instead of IDV figures, the collectivism figures, which are the opposite of IDV numbers. For instance IDV = 37 for Turkey, while collectivism = 100 – 37 = 63. The only difference between these two tables is the sign of the IDV and collectivism coefficients (0.61 vs. -0.61) while everything else is exactly the same. This should ensure that whatever results we find for IDV is also applicable for collectivism as these are mathematical opposites by design. We should note that the interactive variable is kept as PDIxIDV on purpose, since the interaction has a strictly negative correlation with femicides and only works with IDV, the higher the IDV's interactivity with (or resistance to) PDI, the lower the femicide rates are.

**Graph 3 – Comparison of IDV vs. IDVxPDI correlations against Femicides**



Graph 3 above compares the correlations of IDV (X, left) and the interactive variable PDIxIDV (X, right) against femicides (Y, both), showing a much stronger and tighter relationship for PDIxIDV. This implies that it is rather the interaction of individuality with PDI that has a significant impact on femicides, rather than IDV alone. A similar graph can be drawn between collectivism and femicide, exactly the opposite of IDV, having a positive upward slope.

## 4. Conclusion

### 4.1 Concluding Remarks and Limitations of the Study

In this study, our goal was to analyse the relationship between Hofstede Cultural Dimensions and cross sectional femicide rates, further investigating how much culture alone can explain the variation in femicide rates. First of all, we have found that masculinity (MAS), Long Term Orientation (LTO), and Indulgence (IVR) have practically no correlation with femicides whatsoever. In particular, the lack of any correlation of femicides with MAS is striking. At first glance, it may even be suggested to have a negative correlation, considering the most highly masculine countries such as Japan have the lowest femicide rates, though the opposite is also true and there is no coherent relationship between the two. This completely rules out any systematic male violence against females because of their gender. There is hardly any evidence to support gender wars so to speak other than the unfounded philosophical claims in the academia and press.

Second, we have found that power distance (PDI) is highly correlated with femicides while individualism/collectivism (IDV) is somewhat correlated with femicides but because it is also collinear with PDI, both variables together do not increase the explanatory power, which means it is not the IDV that affects the femicides per se, but rather the interaction of IDV with PDI.

The interaction variable that we have constructed (PDIxIDV) is also correlated with femicides, taking the expected sign and increases the overall explanatory power when regressed along the other two variables, explaining at least 37% of the femicide cases. However, in a 3 variable model, IDV does not take the expected sign. Yet this is understood, as the IDV acts non-linearly through the much larger interactive variable, and the (unexpected) positive sign serves to decrease the effect of the interaction. In other words, the both PDI and IDV contribute to the rising numbers of femicides but the interaction between the two has a diminishing non-linear effect on femicides.

In essence, PDI leads to greater number of femicides, exacerbated by the interactive collective behavior of the society. It would be wrong, however, to assume that the hierarchical and collectivist nations kill solely females; such societies where hierarchical structure is expected and collectively followed, the social construct has a much greater levy to impose penalties on both genders, both males and females, to preserve and protect the social values and norms.

Uncertainty avoidance (UAI) is strongly correlated with both PDI and IDV (collectivism in this case), as well as femicides, though multi-collinearity does not allow us to include it simultaneously with the other two variables. This has implications, however, suggesting a strong causal relationship between these three variables.

It would be plausible to theorize that power distance engaged with collectivistic behavior leads to and also aims for uncertainty avoidance; thus all three are strongly correlated with each other. An alternative model with UAI and an interaction variable with PDI may be adopted, instead of collectivism and its interaction proxy with the PDI, yielding very similar yet weaker results, which suggests that UAI is not the main source here, but rather a proxy of collectivistic behavior and a product of PDI.

Last but not least, we should not forget that correlation does not necessarily imply causation, which is admittedly the main limitation of this study, and there is not enough evidence for any of the Hofstede Dimensions to be the definitive cause of femicides. For instance, the longitudinal data for femicide rates in Turkey<sup>5</sup> show a rapid rise from low 100s to over 300s in less than a decade, even though the overall cultural structure of the society has stayed mostly the same. Similarly, Turkey and Brazil, which generate very similar PDI and IDV numbers, have vastly different femicide rates (5 vs. 42).

The very same cultural structure with one of the lowest levels of violence against females turned a lot more violent in recent years, which cannot be explained in and of itself, but rather through an external transformation or rapid institutional change and/or shock. Similar to the Greenwood et al. (2010) who suggest that organizations respond in different though patterned ways to complex institutional changes, different cultural structures respond to institutional changes differently as well, especially when those changes are rapid and inorganic, not stemming from inside but rather externally forced upon the society.

## 4.2 Policy Implications

The fact that masculinity has no bearing on the rate of femicides shows that, aside from the non-systematic random events, it is not the males but the social structure that commits femicides. Males are merely the instrument or the public executioner of the social punishment, where the aberrant individuals are sacrificed or eliminated for the good of the society. This entirely rules out a systematic femicide with the true meaning as coined by Russell (554) or others, rendering the fictional “gender wars” narrative a complete feminist fantasy, only perpetuated on unfounded philosophical claims in the academia and press.

It would also be fallacious to call out for certain cultures to be sexist or misogynist, based on the socio-cultural structure, although some cultures are certainly harsher on females and grant them less freedom, which is socially punished in cases of aberrant behavior. This is not exclusive to females though as these cultures are often harsher on both genders and the lion’s share of punishment usually falls on males.

Even though power distance aided by collectivistic behavior increases the chances of outburst and a systematic violent reaction (as a response), they are not the true causes of it. The systematic increase in femicides tends to happen when there is a rapid, inorganic (externally enforced) institutional change in the society, often not sufficiently digested by the common folk (or the overall social structure), who resist to these drastic changes, manifesting itself in some form of violence by the consequent losers against the apparent winners at the cost of the society as a whole.

The gargantuan socio-economic implications of such inorganic institutional changes are often not adequately registered in official accounts. Likewise rapid increases or simply high perpetual levels of crime rates require urgent social attention and a great deal of social resources allocated to entirely socially inefficient means leading to a parallel drop in life satisfaction rates. The highest crime levels including but not limited to femicide rates are often seen where the law and order are not well established regardless of masculinity levels (such as South-America or Russia) or there is a lot of tension between genders due to ill-balanced and family-hostile laws (such as the US), artificially creating highly exaggerated gender wars often through media propaganda (as in Turkey).

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<sup>5</sup> <https://adlisicil.adalet.gov.tr/Home/SayfaDetay/adalet-istatistikleri-yayin-arsivi>

We then suggest and hope to prove in our future studies that this is eventually an institutional issue; either due to the clash of several institutional mechanisms in the society with relatively traditional values yet increasingly secular laws (as in Turkey), especially if it tends to be a masculine society (as in the US), or simply the lack of well functioning mechanisms leading to chaos (as in South America). Europe, on the other hand enjoys much lower rates of femicides, simply because of relatively compatible social and legal framework, both of which have been gradually secularized over a long stretch of time.

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