# Marriage and Corruption : An empirical analysis on european data

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# MARRIAGE AND CORRUPTION:ANEMPIRICAL ANALYSIS ON EUROPEAN DATA

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## Abstract

In recent years the topic of corruption has attracted a great deal of attention. However, there is still a lack of substantial empirical evidence about the determinants of corruption. Despite an increasing interest of economists in the determinants of corruption, the factor of marriage has been widely neglected in the literature. The results suggest a positive but ambiguous effect marriage on corruption.

**Keys-words**: corruption, marriage, vulnerability, Europe

JEL : D73, J12, Z13

## 1. Introduction

In recent years the topic of corruption has attracted a great deal of attention. Research has recently focused on the determinants of corruption (KodilaTedika, 2012; AbdiweliandIsse, 2003; Lambsdorff, 2006; Montinola andJackman, 2002; Park, 2003; Seldadyoand de Haan, 2006; Shabbirand Anwar, 2007; Treisman, 2000) which include political institutions, global economic integration, the size of the shadow economy, business cycles, social trust and others variables (gender, age, intelligence, family, etc.). Only recently were nonconventional variables introduced into the regressions.

Despite an increasing interest of economists in the determinants of corruption, the factor of marriage has been widely neglected in the literature. From the data of investigation in the Congolese (DRC) magistrates, taxi drivers and police officers and probit model, Nakamwambila Kiadiamuyika and Kabanga Kazadi (2007) find that, ceteris paribus, married people have a higher probability to agree to be corrupted than the non-married, given the costly family burden. Mocan (2008) uses microlevel data set from 49 countries to create a direct measure of corruption, which portrays the extent of bribery as revealed by individuals who live in those countries to show an effect of civil status on corruption. It confirms that the marital status is a cause of corruption, but one does not find an effect statistically significant for the case of the marriage. In this paper we focus more on marriage1, better than the above mentioned articles. We thus try to disentangle these two results. In addition, this article uses different data, such as European data over the period from 2002 to 2009. This focus on social norms fits better the interdisciplinary literature on marriage.

The rest of this paper is organized as follows. Section II presents the data and estimation strategy. Section III examines marriage effect of corruption and the conclusions are given in

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[1]In Kodila-Tedika, O. , Azia-Dimbu, F. and Kalemany, C. (2012), "Divorce and Corruption: analyze empirical on European data", Kinshasa University Working paper; we are interested in the relation corruption and divorce.

section 4 .


## 2. Data and estimation strategy

The base-line econometric model has the following form:


With Cor denotes the corruption, Mar indicate the marriagewe measure marriage using crude marriage rate in EU-27 (marriages per 1,000 inhabitants). The source is Demography report of Eurostat (to see figure 1 to identify the evolution of the marriage in time within EU-27).

**Figure 1.Evolution of crude marriage rate in EU-27 (marriages per 1,000 inhabitants)**
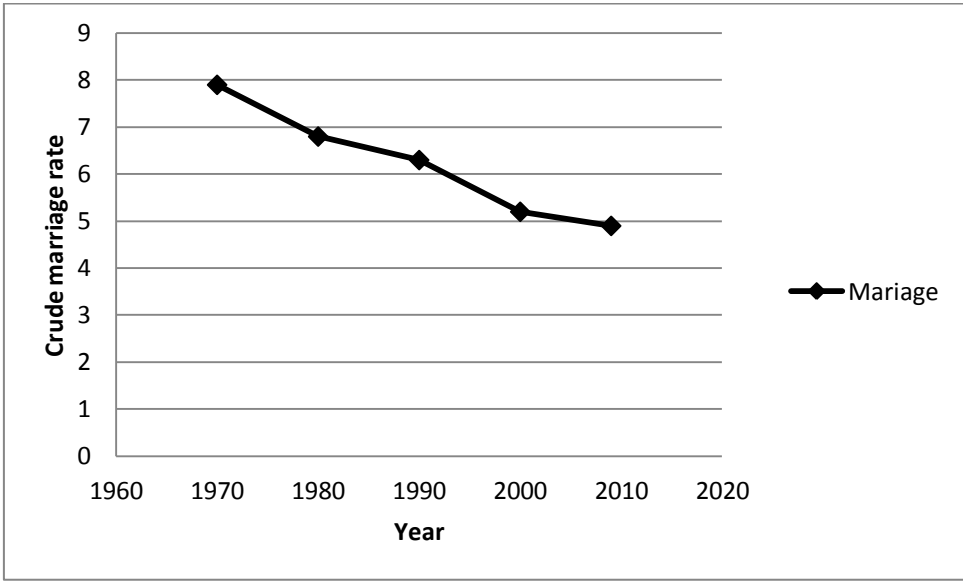


The vector X contains the. we include the Gender, Dev, Inf, Health, Den, Edu and UE. It is necessary to consider table 1 to have the definition of each variable, and theirdescriptive statistics are reported in Table 2 (cf. table 1 and 2 in annexes).All the variables of control are obtained from the World Development Indicators of the World Bank. In addition, we will not comment on the coefficients of variables of control.

To measure corruption, we use the Control of corruption (CC). The index assumes values between 2,5 (no corruption) and -2,5 (extreme corruption). The CC has often been used in empirical research on corruption (see the studies mentioned in section 1).

We estimate the model with ordinary least squares (OLS) and robust standard errors (Eicker-White). We use fixed-effects, after the result of Hausmann test. This empirical study usesuse data from 26 euorpean countries over the period from 2002 to 2009. This study adopts the data from 27 countries : Belgium (BE); Bulgaria (BG); The Czech Republic (CZ);Denmark (DK); Estonia (EE); Ireland (IE) ; Greece (EL); Spain (ES); France (FR), including overseas territories; 'Metropolitan France' excludes overseas territories; Italy (IT); Cyprus (CY); Latvia (LV); Lithuania (LT); Luxembourg (LU); Hungary (HU); Malta (MT); The Netherlands (NL); Austria (AT); Poland (PL); Portugal (PT); Romania (RO); Slovenia

(SI); Slovakia (SK); Finland (FI); Sweden (SE) and The United Kingdom (UK).

# 3. Empirical Results

## 3.1 Basic results

Table 3 shows the base-line regression results. The control of variables do not always display the expected signs and are not statistically significant in several cases. Within the framework of the relative relevance of our variable of interest (marriage), one notices that it is significant in all the cases. Its effect becomes significantly since there is interaction between the variable of interest and the vulnerability of variables (unemployment, social contribution and vulnerability of employment). Here, for the all cases, an increase in the vulnerability involves a positive effect of marriage on corruption.

**Table 3. Regression Results.**

| Regressors | Dependant variable: Cor | | | |
|---|---|---|---|---|
| Intercept | -4,36 | -4,54* | -3,82 | -4,45* |
| | (2,55) | (2,47) | (2,57) | (2,48) |
| Mar | 0,03* | 0,05* | 0,00 | 0,06 |
| | (0,02) | (0,03) | (0,02) | (0,05) |
| Mar * Vun | | | | -0,00 |
| | | | | (0,00) |
| Mar * UE | | | 0,01 | |
| | | | (0,01) | |
| Mar * Cont | | -0,01 | | |
| | | (0,00) | | |
| UE | 0,01 | 0,01 | -0,03 | 0,01 |
| | (0,01) | (0,01) | (0,02) | (0,01) |
| Cont | 0,05 | 0,08 | 0,04 | 0,05 |
| | (0,03) | (0,05) | (0,03) | (0,03) |
| Vun | 0,01 | 0,01 | 0,01 | 0,02 |
| | (0,01) | (0,01) | (0,01) | (0,01) |
| Gender | 0,06 | 0,06 | 0,06 | 0,06 |
| | (0,04) | (0,04) | (0,04) | (0,04) |
| Inf | -0,01* | -0,01* | -0,01* | -0,01* |
| | (0,01) | (0,01) | (0,01) | (0,01) |
| Health | -0,03 | -0,02 | -0,03 | -0,03 |
| | (0,03) | (0,03) | (0,03) | (0,03) |
| Density | 0,00 | 0,00 | 0,00 | 0,00 |
| | (0,00) | (0,00) | (0,00) | (0,00) |
| Edu | -0,01** | -0,01** | -0,01* | -0,01** |
| | (0,00) | (0,00) | (0,00) | (0,00) |
| Log PIB per capita | 0,72** | 0,70** | 0,62* | 0,69** |
| | (0,31) | (0,32) | (0,31) | (0,32) |
| Obs. | 207 | 207 | 207 | 207 |

Notes: Absolute value of Std. Err. in brackets; * significant at 10%; ** significant at 5%;*** significant at 1%.

## 3.2 Robustness checks

Given the nature of our data and study, to test the robustness of the results is not obvious.In order to check the robustness of the results we divided the sample into two groups: Pov1 and Pov0.The criterion of division being the standard of living in the sample.The countries of the Pov1 group are those whoseLog PIB per capita higher than the average, and the others are naturally in group 2. They are regarded as the poorest of European countries

**Table 4.RegressionResults (Robustness)**

| Regressors | Dependant variable: Cor | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Intercept | -3,58 | -3,05 | -2,30 | -3,20 | -3,35 | -2,95 | -3,51 | -2,21 |
| | (3,81) | (2,73) | (4,21) | (2,47) | (3,84) | (2,46) | (3,69) | (3,02) |
| Mar * Vun | | | | | -0,00 | -0,00* | | |
| | | | | | (0,01) | (0,00) | | |
| Mar * UE | | | | | | | 0,00 | 0,01 |
| | | | | | | | (0,01) | (0,00) |
| Mar * Cont | | | -0,03 | -0,01*** | | | | |
| | | | (0,02) | (0,02) | | | | |
| Mar | 0,01 | 0,07* | 0,01 | 0,16*** | 0,04 | 0,10*** | 0,01 | 0,05 |
| | (0,01) | (0,04) | (0,06) | (0,03) | (0,10) | (0,04) | (0,03) | (0,06) |
| UE | 0,00 | 0,01 | 0,00 | 0,01 | 0,00 | 0,01 | -0,00 | -0,03 |
| | (0,02) | (0,01) | (0,02) | (0,01) | (0,02) | (0,01) | (0,04) | (0,02) |
| Cont | 0,12* | -0,04 | 0,26** | 0,01 | 0,12* | -0,04 | 0,12* | -0,05 |
| | (0,06) | (0,03) | (0,11) | (0,04) | (0,07) | (0,03) | (0,06) | (0,03) |
| Vun | -0,02 | 0,03*** | -0,00 | 0,03*** | -0,01 | 0,05*** | -0,01 | 0,04*** |
| | (0,05) | (0,01) | (0,05) | (0,01) | (0,07) | (0,01) | (0,04) | (0,01) |
| Gender | -0,01 | 0,11* | 0,00 | 0,10* | -0,01 | 0,10* | -0,01 | 0,08 |
| | (0,09) | (0,06) | (0,09) | (0,05) | (0,09) | (0,05) | (0,09) | (0,04) |
| Inf | -0,01 | -0,00* | -0,00 | -0,01 | -0,01 | -0,01 | -0,01 | -0,00 |
| | (0,01) | (0,01) | (0,02) | (0,01) | (0,01) | (0,01) | (0,02) | (0,00) |
| Health | -0,05 | 0,03 | -0,03 | 0,05 | -0,04 | 0,05 | -0,05 | 0,03 |
| | (0,07) | (0,03) | (0,07) | (0,03) | (0,07) | (0,03) | (0,07) | (0,04) |
| Density | 0,00 | 0,00** | 0,01 | 0,00* | 0,00 | 0,00* | 0,00 | 0,00** |
| | (0,01) | (0,00) | (0,01) | (0,00) | (0,01) | (0,00) | (0,01) | (0,00) |
| Edu | -0,01* | 0,00 | -0,01 | 0,00 | -0,01* | 0,00 | -0,01* | 0,00 |
| | (0,00) | (0,00) | (0,00) | (0,00) | (0,00) | (0,00) | (0,00) | (0,00) |
| Log PIB per capita | 0,84 | -0,08 | 0,46 | -0,20 | 0,76 | -0,24 | 0,83 | 0,13 |
| | (0,58) | (0,33) | (0,58) | (3,00) | (0,53) | (0,28) | (0,56) | (0,35) |
| Obs. | 123 | 84 | 123 | 84 | 123 | 84 | 123 | 84 |
| Pov | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |

## 4. Conclusion

This article aimed at studying the relation between marriage and corruption. Using panel data of the European countries, we do validate the direct effect of marriage on corruption, at least on our sample. The increase in the number of marriage would push up corruption. Also, it is possible to find an effect of the marriage on corruption in the event of interaction with variables of vulnerability.

But, these results are not also obvious, insofar as the conclusion seems changing since one breaks up the sample into rich group on the one hand and into poor group on the other hand.It is necessary to seek to refine these preliminary results.

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**Annexes**

**Table 1 Variables description**

| Variables | Definitions |
| --- | --- |
| Cor | Transparency International's Perception of Corruption Index (CPI) |
| Vun | Vulnerable employment, total (% of total employment) |
| Contr | Contributing family workers, total (% of total employed) |
| Gender | Employers, female (% of employment) |
| Mar | Crude marriage rate in EU-27 (marriages per 1,000 inhabitants) |
| Log GDP per capita | Log GDP per capita PPP (constant 2005 US$) |
| Inf | Inflation, consumer prices (annual %) |
| Health | Life expectancy at birth, total (years) |
| Density | Population density (people per sq. km of land area) |
| Edu | Schoolenrollment, tertiary (% gross) |
| UE | Unemployment, total (% of total labor force) |

**Table 2 Descriptive statistics**

```
    Variable |        Obs        Mean    Std. Dev.        Min        Max
-------------+--------------------------------------------------------
    marriage |        207     5.05058     1.22524        2.88      14.48
  corruption |        208    1.084165    .7506046   -.3430586   2.466556
       contr |        208    2.050481    2.839899           0       15.1
     marcontr |       207    11.22059    18.32023           0    110.628
          UE |        208    7.680288    3.462881         2.6       19.9
     marunemp |       207    38.10398     17.2046      11.778    100.352
         vuln |        208    12.31971     6.96197         2.8       36.6
     marvuln |        207    64.51841    47.30167      12.684    282.716
      Gender |        208    2.223077    .9624577          .7        7.6
GDPpercapita |        208       25718    12103.18    7819.328   74113.94
         inf |        208    3.251436    2.911372   -4.479938   22.53721
      Health |        208    77.15333    3.156709    70.86585   81.47561
     Density |        208    170.9691    241.3267    17.07409   1293.722
         Edu |        208    58.81242    17.83476    10.34032   95.07212
```