

# Gender and Monetary Policymaking: Trends, Drivers and Effects

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# Motivation and contribution

## Motivation:

- Increasing representation of women in central banks, in particular in monetary policy committees
- Effects of board composition of monetary policy decision-making and performances: heterogeneity and diversity
- Women representation in corporate boards

# Motivation and contribution

## Our contribution:

- Build an index of gender representation in central bank boards for a sample of 112 countries as of 2015
- Show that central banks with certain governance structures such as more independent or less involved in supervision are associated with larger women participation in central bank boards
- A first tentative analysis on the effects of women representation on the conduct of monetary policy and macroeconomic outcomes

# Monetary Policy, Boards and Gender: The State of the Art

## Political economy of MP committees:

- Individuals vs Board
  - 1 More efficient decisions via heterogeneity and diversity (Blinder, 2007)
  - 2 Heterogeneity can trigger regularities (Eijffinger et al., 2013, 2015)
- Board composition and monetary policy
  - 1 Central bank staff vs politicians and inflation (Gohlmann and Vaubel, 2007)
  - 2 The “age of the board” factor (Farvaque et al., 2006)
  - 3 Negligible effects of members’ backgrounds (Harris et al., 2011)
- Dovish or hawkish attitude
  - 1 Dovish female on FOMC (Chappel and McGregor, 2000)
  - 2 Inflation and female share (Farvaque et al., 2010)
  - 3 Dissenting behavior and inconsistent voting (Benanni et al., 2014; Lahner, 2015)

# Monetary Policy, Boards and Gender: The State of the Art

## Gender diversity and corporate governance:

- Glass ceiling
  - ① Discrimination in banks' boards in EU countries (Mateos de Cabo et al., 2004)
  - ② Second glass ceiling for women in top decision-making positions (Profeta et al., 2014)
- Gender and risk aversion
  - ① Female's risk aversion and career path (Gneezy et al., 2003, Sapienza et al., 2009)
  - ② "Lehman Sisters hypothesis" (Adams and Ragunathan, 2013)
- Gender and firms performance
  - ① Better loans screening and monitoring (Beck et al., 2009)
  - ② Gender and firms value and performance (Adams and Kirchmaier, 2012)

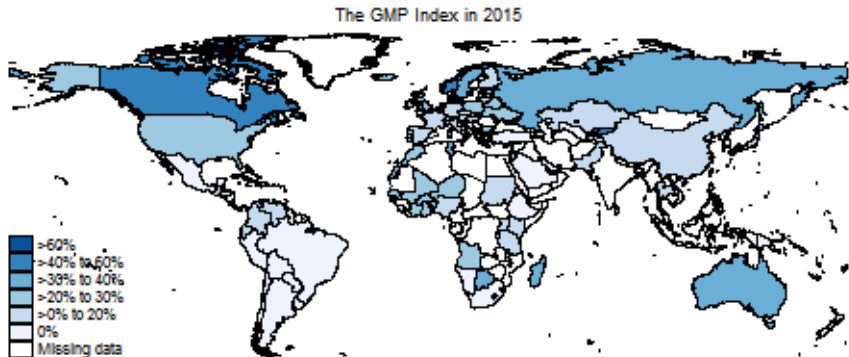
# Gender in Monetary Policymaking: the GMP Index

**The GMP Index:** measures the share of women in MP committees:

- Nr. of countries: 112
- Year: 2015 (restricted sample in 2010)
- Sources: Central Bank Directory 2015, Central Bank websites and other official documents

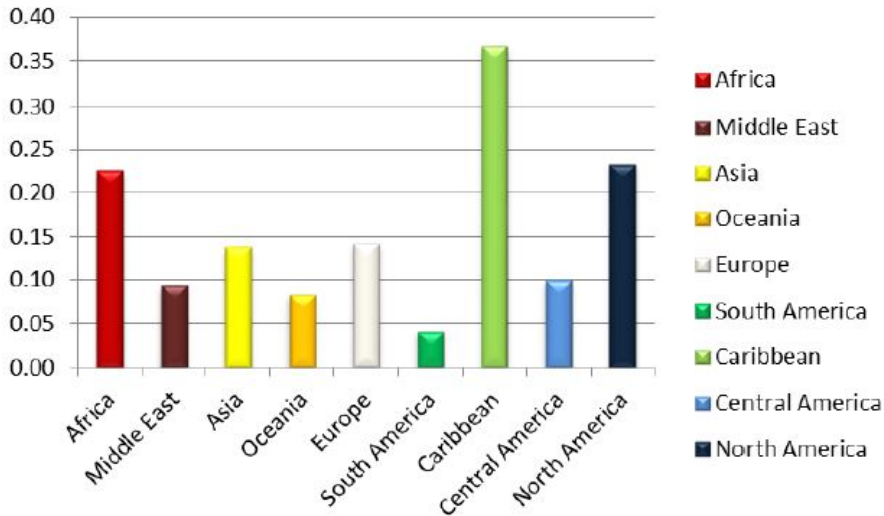


## Geographical distribution of the GMP Index

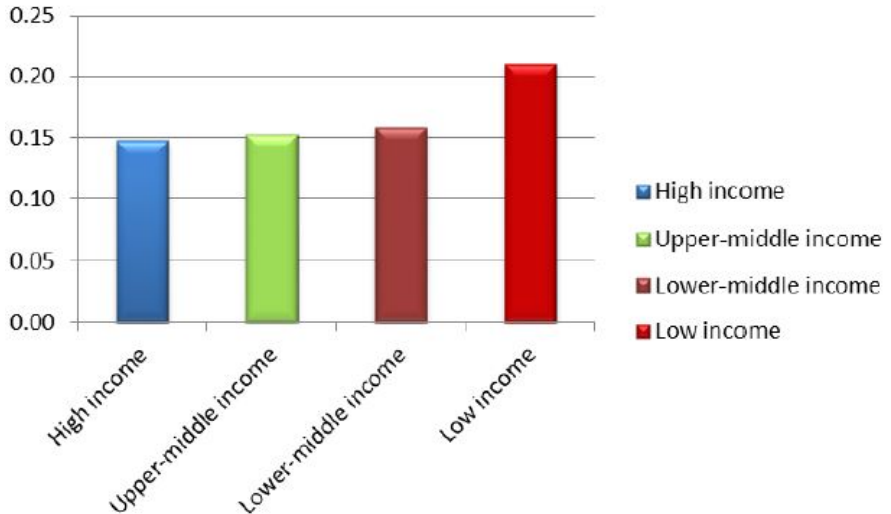




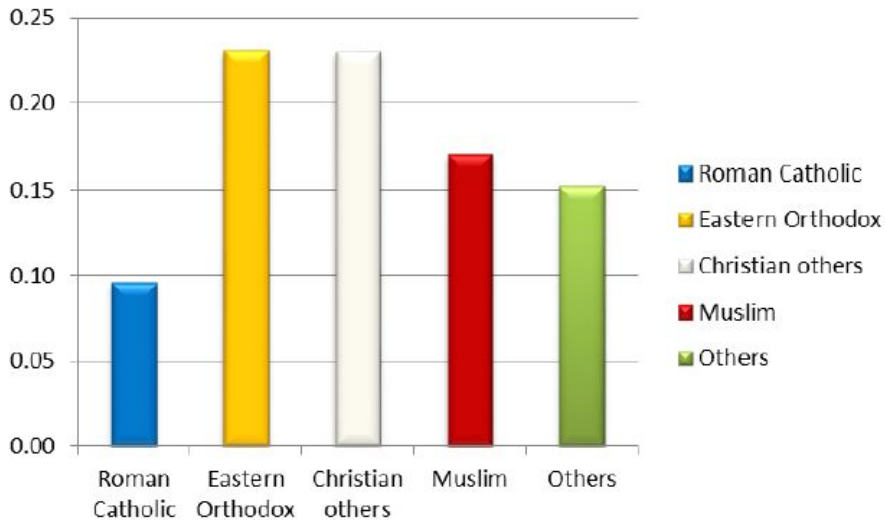
## The GMP Index by regions



## The GMP Index by Income groups



## The GMP Index by religions



# Which are the drivers of the GMP index?

$$GMP_{i,t} = \alpha_0 + \alpha_1 GMTp_{i,t-1} + \alpha_2 GMTo_{i,t-1} + \alpha_3 \Gamma_i + \epsilon_{i,t},$$

where

- $GMTp_{i,t-1}$  : lagged value of political CBI (GMTp),
- $GMTo_{i,t-1}$  : lagged value of operational CBI (GMTo),
- $\Gamma_i$  : vector of country economic characteristics,
- $\epsilon_{i,t}$  : error term.

**Table:** GMP Index and its Drivers

Dependent variable: GMP Index	(1)	(2)	(3)	(4)	(5)	(6)
GMTEcon	0.2432*** (0.088)	0.3042*** (0.095)				
GMPol	-0.1405* (0.076)	-0.1162 (0.079)				
CBSS Index			-0.0971* (0.051)	-0.1455** (0.072)		
CBFA Index					-0.0307* (0.016)	-0.0507** (0.024)
Inflation	0.0023 (0.003)	0.0008 (0.003)	0.0013 (0.003)	-0.0012 (0.004)	0.0013 (0.003)	-0.0013 (0.004)
Inflation Targeting Regime	0.0118 (0.040)	-0.0096 (0.050)	0.0062 (0.038)	-0.0343 (0.044)	0.0039 (0.037)	-0.0349 (0.044)
High-income	0.0429 (0.037)	0.0480 (0.040)	0.0253 (0.041)	0.0350 (0.050)	0.0236 (0.040)	0.0326 (0.049)
Legal system	0.1417** (0.065)	0.1636** (0.078)	0.1451** (0.071)	0.1510* (0.081)	0.1449** (0.071)	0.1546* (0.081)
Female labor force	0.0024 (0.002)	0.0025 (0.002)	0.0038* (0.002)	0.0041* (0.002)	0.0037* (0.002)	0.0041* (0.002)
Women in parliament	-0.0008 (0.002)	-0.0017 (0.002)	-0.0022 (0.002)	-0.0035 (0.003)	-0.0020 (0.002)	-0.0036 (0.003)
Buddhist	0.1479** (0.066)	0.1398** (0.062)	0.0614 (0.069)	0.0112 (0.071)	0.0618 (0.069)	0.0068 (0.072)
Catholic	-0.0648 (0.040)	-0.0874 (0.060)	-0.0326 (0.039)	-0.0326 (0.056)	-0.0318 (0.039)	-0.0336 (0.056)
Orthodox	0.1980*** (0.073)	0.2457*** (0.079)	0.1658*** (0.059)	0.2171*** (0.071)	0.1649*** (0.060)	0.2179*** (0.071)
Muslim	0.0088 (0.068)	-0.0162 (0.080)	0.0449 (0.070)	0.0313 (0.082)	0.0491 (0.070)	0.0358 (0.081)
French colony	0.1869 (0.113)	0.2194* (0.113)	0.1770* (0.100)	0.2064* (0.104)	0.1745* (0.097)	0.2012* (0.102)
In Population	-0.0140 (0.012)	-0.0267 (0.017)	-0.0155 (0.013)	-0.0338 (0.021)	-0.0145 (0.013)	-0.0330 (0.021)
Voice and Accountability	0.0313 (0.034)	0.0143 (0.040)	0.0185 (0.039)	-0.0054 (0.050)	0.0223 (0.038)	-0.0025 (0.049)
Exchange regime	-0.0053 (0.044)	0.0529 (0.055)	-0.0174 (0.048)	0.0569 (0.061)	-0.0173 (0.048)	0.0563 (0.061)
Constant	0.1072 (0.208)	0.2767 (0.292)	0.2268 (0.214)	0.5537 (0.350)	0.2381 (0.214)	0.6008 (0.359)
Observations	77	60	76	59	76	59
R-squared	0.424	0.478	0.379	0.434	0.379	0.440

# Which is the effect of GMP?

## On Inflation:

$$\pi_{i,t,t-4} = \beta_0 + \beta_1 GMP_{i,t} + \beta_2 \pi_{i,t-5,t-9} + \beta_3 OutputGap_{i,t,t-4} + \beta_4 \Gamma_{i,t-4} + \epsilon_{i,t}$$

## On Money Growth:

$$M_{i,t,t-4} = \beta_0 + \beta_1 GMP_{i,t} + \beta_2 M_{i,t-5,t-9} + \beta_3 OutputGap_{i,t,t-4} + \beta_4 LendingRate_{i,t,t-4} + \beta_5 \Gamma_{i,t-4} + \epsilon_{i,t}$$

where

- $GMP_{i,t}$  : GMP Index,
- $OutputGap_{i,t,t-4}$  : average lagged value of Output Gap,
- $LendingRate_{i,t,t-4}$  : average lagged value of Lending Rate,
- $\Gamma_i$  : vector of country specific characteristics,
- $\epsilon_{i,t}$  : error term.

**Table:** Inflation rates and women in monetary policy boards

Dependent variable: Average Inflation Rate	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GMP	-2.5624*** (0.872)	-2.3342*** (0.872)	-1.0774 (0.795)	-1.6405** (0.644)	-1.8092** (0.838)	-2.2319** (0.867)	-1.5277* (0.858)
GMT			-2.0434** (0.853)	-0.8607 (0.933)	-2.7179*** (0.700)	-2.6055*** (0.700)	-3.4279*** (1.075)
Lagged Average Inflation Rate	0.4138*** (0.066)	0.3692*** (0.068)	0.3709*** (0.062)	0.3745*** (0.069)	0.4568*** (0.062)	0.4334*** (0.069)	0.4232*** (0.069)
Average Output gap			30.6087*** (10.561)	40.3226** (16.724)	8.3488 (14.593)	-3.9413 (16.306)	10.9421 (17.366)
Inflation Targeting Regime	-0.1779 (0.362)	-1.1641** (0.559)	-0.3634 (0.392)	-0.7657 (0.495)	-0.0932 (0.305)	-0.1751 (0.439)	-0.2519 (0.551)
Trade (% of GDP)	-0.0051* (0.003)	-0.0070* (0.004)	-0.0048* (0.003)	-0.0064* (0.004)	-0.0055* (0.003)	-0.0070 (0.005)	-0.0069 (0.004)
OECD Member Dummy	-1.9318*** (0.412)	-1.6215*** (0.587)	-1.2650*** (0.401)	-0.9888* (0.535)	0.1819 (0.370)	-0.1566 (0.482)	
Constant	4.0052*** (0.709)	5.1719*** (0.857)	4.8565*** (1.029)	4.5892*** (1.144)	3.8415*** (0.744)	4.1763*** (0.891)	4.7226*** (1.141)
Observations	158	109	120	86	58	42	30
R-squared	0.510	0.486	0.606	0.586	0.770	0.759	0.739

**Table:** Money growth and women in monetary policy boards

Dependent variable: Average Money Growth	(1)	(2)	(3)	(4)	(5)	(6)
GMP	-6.1414** (2.338)	-6.9873*** (2.208)	-5.9185** (2.865)	-6.4773** (2.757)	-13.9744** (6.255)	-13.9884** (6.450)
GMT			-3.8008 (3.920)	-1.0796 (3.946)	-5.7605 (7.365)	-4.8728 (7.673)
Lagged Average Money Growth	0.1595** (0.073)	0.1690** (0.073)	0.1843* (0.107)	0.1838* (0.107)	0.0129 (0.158)	0.0047 (0.164)
Average Lending interest rate (%)	0.2112* (0.112)	0.1879* (0.104)	0.3094* (0.182)	0.2575 (0.163)	0.4682 (0.301)	0.4640 (0.301)
Average Output gap	0.9447 (26.021)	1.0680 (26.267)	-7.1919 (66.069)	-3.8474 (69.595)	-103.9567 (127.197)	-105.1752 (133.023)
OECD Member Dummy	-4.9892*** (1.266)	-4.8792*** (1.082)	-3.7265** (1.444)	-3.9542*** (1.209)	-5.1433** (2.550)	-4.8158* (2.570)
Constant	10.5120*** (2.011)	11.2398*** (1.730)	10.4613*** (2.840)	10.1394*** (2.788)	11.3040** (4.796)	10.9795** (4.828)
Observations	109	105	85	81	44	42
R-squared	0.358	0.362	0.352	0.350	0.372	0.349



# Concluding remarks

## Conclusions

- The GMP Index: an index that captures the share of female in MP committees
- We find that central banks with certain governance structures such as more independent or less involved in supervision are associated with larger women participation in central bank boards
- We find that gender diversity is inversely related with inflation rates and money growth. The presence of women in central bank boards seems to be associated with a more hawkish approach in monetary policy making.

## Future steps

- Create a dataset on the evolution of the GMP index since 1998 item  
Analyze the effects of women representation on the conduct of monetary policy and macroeconomic outcomes using both micro and macro data in a panel setting

Thank you for your attention!