

Results

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16 Februar 2018

Summary Statistics

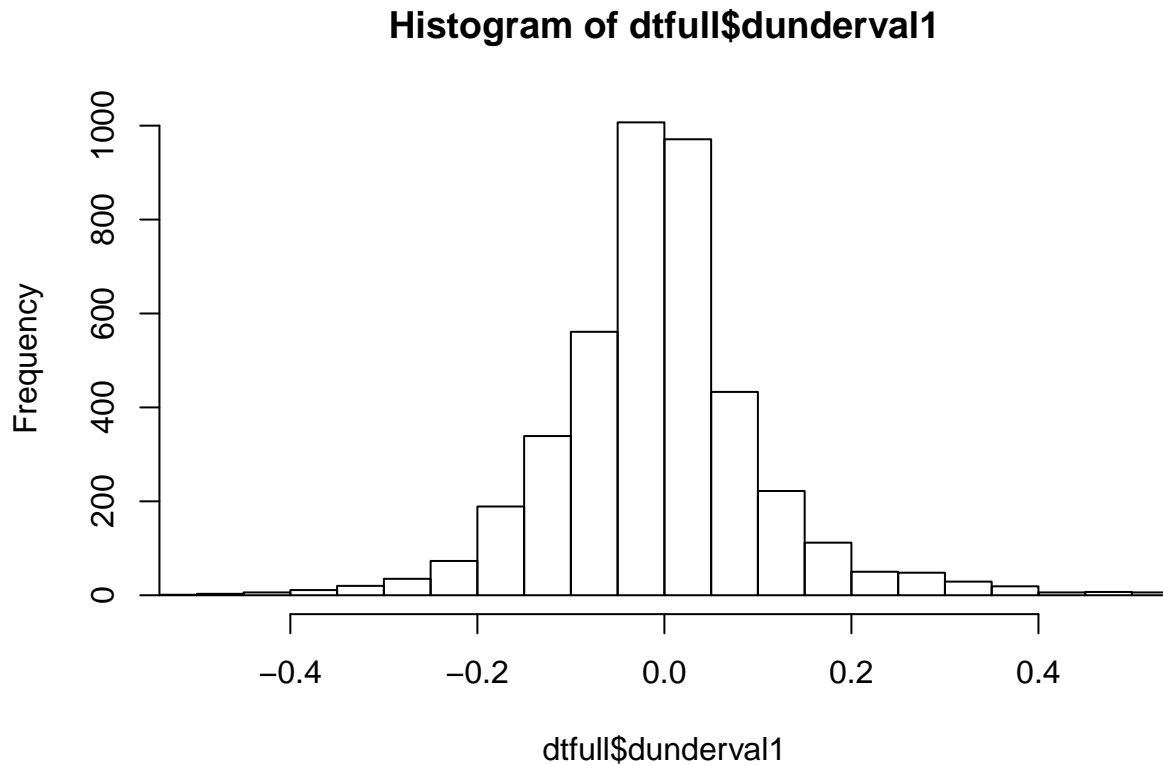
% latex table generated in R 3.4.0 by xtable 1.8-2 package % Fri Feb 23 14:32:11 2018

<i>Variable</i>	<i>Observations</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum</i>	<i>Maximum</i>
entryforceyear*	5119	13.72	7.80	1.00	31.00
agreementsigned	5115	0.28	0.45	0.00	1.00
depthacc	5115	6.24	18.71	0.00	176.00
gdp	4730	224.88	1104.84	0.01	18624.47
polity	3954	2.78	6.55	-10.00	10.00
lvau_garriga	3537	0.54	0.19	0.08	0.97
inflation	4651	41.56	517.04	-57.99	26762.02
nettrade	3949	-0.05	42.37	-761.72	357.87
debttext	3321	26.17	84.82	0.00	1770.54
debtgdp	3206	0.64	0.91	0.00	18.47
underval	4383	0.99	1.24	-5.43	23.70
dunderval1	4202	-0.00	0.31	-7.51	13.43
intrate	1180	8.68	11.68	-0.50	183.20
dprat1	1101	-0.43	6.62	-124.20	113.23
reer	2255	101.13	30.99	32.17	827.17
chreerplus1	2177	0.78	14.04	-87.91	472.17
crisis	4652	0.03	0.17	0.00	1.00

UNDERVAL

Difference Underval Descriptive

```
hist(dtfull$dunderval1, xlim = c(-0.5,0.5), breaks = 360)
```



Models

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 % Date and time: Fr, Feb 23, 2018 - 14:32:23

Interaction Effect

```
interaction_plot_continuous <- function(model, effect, moderator, interaction, varcov="default", minimum

# Define a function to make colors transparent
makeTransparent<-function(someColor, alpha=alph){
  newColor<-col2rgb(someColor)
  apply(newColor, 2, function(curcoldata){rgb(red=curcoldata[1], green=curcoldata[2],
    blue=curcoldata[3],alpha=alpha, maxColorValue=255)})
}

# Extract Variance Covariance matrix
if (varcov == "default"){
  covMat = vcov(model)
}else{
  covMat = varcov
}
```

Table 1: Effect on Undervaluation

	<i>Dependent variable:</i>				
	UNVAL+1	dUNVAL	REER	negsqrt(dunderval3)	negsqrt(chreerplu
	(1)	(2)	(3)	(4)	(5)
log1p(depthacc)	−0.012 (0.023)	0.006 (0.004)	−0.024 (0.015)	−0.054* (0.032)	0.149 (0.496)
negsqrt(nettrade)	0.007 (0.005)	−0.010*** (0.003)	−0.018*** (0.004)	−0.041*** (0.006)	0.522*** (0.087)
lvau_garriga	−0.163** (0.072)	0.089 (0.061)	−0.013 (0.073)	0.037 (0.093)	−0.022 (1.401)
debtgdp	0.017 (0.033)			−0.039 (0.043)	0.002 (0.656)
inflation	0.00003 (0.00002)	−0.0001*** (0.00002)	−0.0001*** (0.00003)	−0.0001*** (0.00003)	0.001 (0.0004)
log(gdp)	−0.390*** (0.027)		0.463*** (0.027)	0.593*** (0.035)	−5.035*** (0.533)
polity	0.004* (0.002)	−0.003 (0.002)	−0.006** (0.003)	−0.005* (0.003)	0.124*** (0.046)
crisis	0.027 (0.035)	−0.055 (0.037)	−0.085** (0.042)	−0.056 (0.046)	0.500 (0.662)
agreementsigned				−0.003 (0.034)	−0.189 (0.521)
log1p(depthacc):negsqrt(nettrade)	0.001 (0.002)	−0.0002 (0.001)	−0.0003 (0.001)	0.001 (0.002)	−0.015 (0.030)
log1p(depthacc):lvau_garriga	−0.010 (0.027)		0.068*** (0.024)	0.088** (0.035)	−0.930 (0.591)
log1p(depthacc):debtgdp	0.028 (0.022)			0.020 (0.029)	0.699* (0.424)
Observations	1,838	2,537	2,510	1,829	863
R ²	0.146	0.019	0.144	0.214	0.180

Note:

*p<0.1; **p<0.05; ***p<0.01

```

# Extract the data frame of the model
mod_frame = model.frame(model)

# Get coefficients of variables
beta_1 = model$coefficients[[effect]]
beta_3 = model$coefficients[[interaction]]

# Set range of the moderator variable
# Minimum
if (minimum == "min"){
  min_val = min(mod_frame[[moderator]])
}else{
  min_val = minimum
}
# Maximum
if (maximum == "max"){
  max_val = max(mod_frame[[moderator]])
}else{
  max_val = maximum
}

# Check if minimum smaller than maximum
if (min_val > max_val){
  stop("Error: Minimum moderator value greater than maximum value.")
}

# Determine intervals between values of the moderator
if (incr == "default"){
  increment = (max_val - min_val)/(num_points - 1)
}else{
  increment = incr
}

# Create list of moderator values at which marginal effect is evaluated
x_2 <- seq(from=min_val, to=max_val, by=increment)

# Compute marginal effects
delta_1 = beta_1 + beta_3*x_2

# Compute variances
var_1 = covMat[effect,effect] + (x_2^2)*covMat[interaction, interaction] + 2*x_2*covMat[effect, interaction]

# Standard errors
se_1 = sqrt(var_1)

# Upper and lower confidence bounds
z_score = qnorm(1 - ((1 - conf)/2))
upper_bound = delta_1 + z_score*se_1
lower_bound = delta_1 - z_score*se_1

# Determine the bounds of the graphing area
max_y = max(upper_bound)
min_y = min(lower_bound)

```

```

# Make the histogram color
hist_col = makeTransparent("grey")

# Initialize plotting window
plot(x=c(), y=c(), ylim=c(min_y, max_y), xlim=c(min_val, max_val), xlab=xlabel, ylab=ylabel, main=title)

# Plot estimated effects
lines(y=delta_1, x=x_2)
lines(y=upper_bound, x=x_2, lty=2)
lines(y=lower_bound, x=x_2, lty=2)

# Add a dashed horizontal line for zero
abline(h=0, lty=3, lwd=2, col="darkgreen")

# Add a vertical line at the mean
if (mean){
  abline(v = mean(mod_frame[[moderator]]), lty=2, col="red")
}

# Add a vertical line at the median
if (median){
  abline(v = median(mod_frame[[moderator]]), lty=3, col="blue")
}

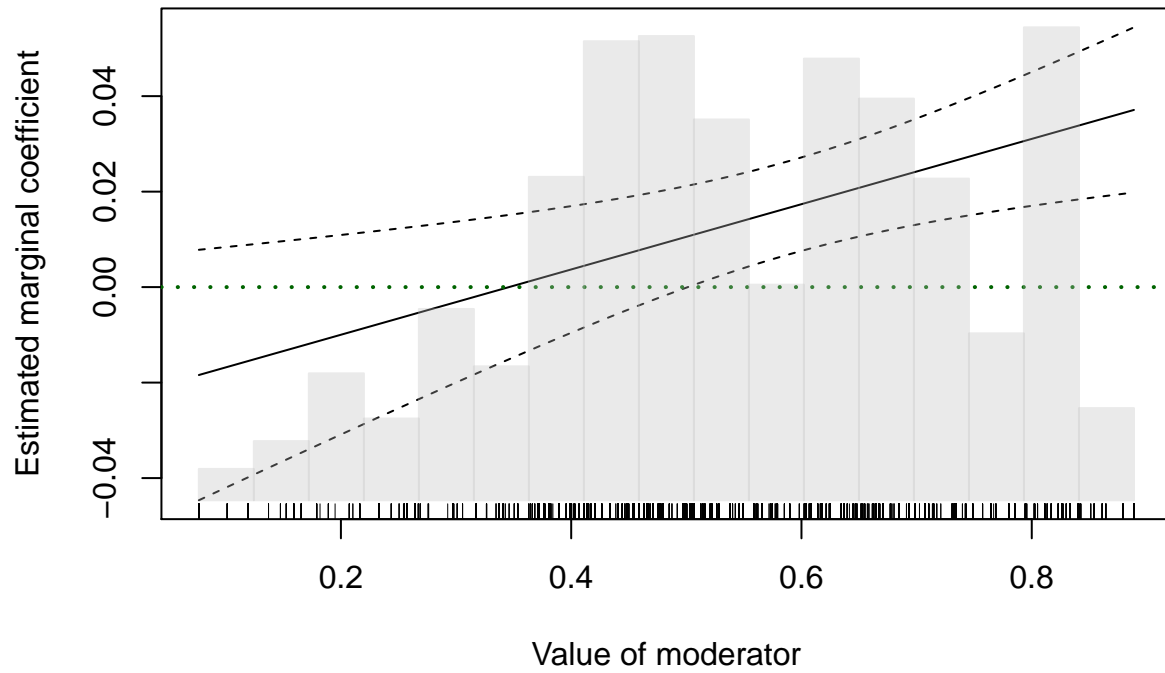
# Add Rug plot
if (rugplot){
  rug(mod_frame[[moderator]])
}

# Add Histogram (Histogram only plots when minimum and maximum are the min/max of the moderator)
if (histogram & minimum=="min" & maximum=="max"){
  par(new=T)
  hist(mod_frame[[moderator]], axes=F, xlab="", ylab="", main="", border=hist_col, col=hist_col)
}
}

interaction_plot_continuous(modunval3, "log1p(depthacc)", "lvau_garriga", "log1p(depthacc):lvau_garriga")

```

Marginal effects plot



POLICY RATES

% Table created by stargazer v.5.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Fr, Feb 23, 2018 - 14:32:57

ROBUSTNESS

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Table 2: Effect on Policy Rates

	<i>Dependent variable:</i>					
	PRAT+1	PRAT+1	PRAT+1	dPRAT+1	dPRAT+2	dPRAT+3
	(1)	(2)	(3)	(4)	(5)	(6)
log1p(depthacc)	2.475 (1.656)	2.399 (1.615)	0.719 (1.622)	−0.004 (0.320)	−0.125 (0.356)	−0.515 (0.371)
lvau_garriga	−15.837*** (5.438)	−10.516** (5.313)	−8.261 (5.293)	−0.279 (1.054)	−0.553 (1.169)	−0.780 (1.218)
debtgdp	−1.562 (3.273)	−2.829 (3.192)	−4.501 (3.145)	−0.443 (0.638)	−0.683 (0.711)	−0.911 (0.741)
negsqrt(nettrade)	0.340 (0.396)	0.177 (0.384)	0.111 (0.385)	−0.194** (0.076)	−0.310*** (0.084)	−0.296*** (0.088)
inflation	0.236*** (0.026)	0.055*** (0.015)	0.046*** (0.016)	−0.009 (0.007)	−0.016** (0.007)	−0.019** (0.008)
log(gdp)	2.400 (2.169)	3.436* (2.078)	1.767 (2.053)	0.655 (0.433)	1.289*** (0.482)	1.193** (0.502)
polity	−0.235 (0.199)	−0.103 (0.198)	−0.032 (0.195)	0.003 (0.037)	0.015 (0.041)	0.003 (0.042)
crisis	−9.871*** (3.638)	12.661*** (3.040)	−1.348 (3.126)	1.222* (0.729)	2.185*** (0.811)	0.772 (0.845)
agreementsigned	0.113 (2.127)	3.247 (2.076)	2.628 (2.078)	0.164 (0.420)	0.493 (0.468)	0.574 (0.487)
log1p(depthacc):lvau_garriga	−5.766*** (1.752)	−6.792*** (1.718)	−4.625*** (1.736)	−0.399 (0.332)	−0.250 (0.370)	0.164 (0.385)
log1p(depthacc):debtgdp	1.697 (1.502)	1.717 (1.455)	2.036 (1.456)	0.242 (0.287)	0.282 (0.320)	0.389 (0.333)
log1p(depthacc):negsqrt(nettrade)	0.213* (0.125)	0.333*** (0.124)	0.308** (0.124)	0.018 (0.024)	0.067** (0.027)	0.045 (0.028)
Observations	544	584	620	502	502	501
R ²	0.253	0.182	0.079	0.039	0.078	0.071

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 3: Effect on Undervaluation Broken Down

	<i>Dependent variable:</i>			
	UNVALp1			
	(1)	(2)	(3)	(4)
log1p(depthacc)	0.007 (0.041)	0.042 (0.093)	−0.105** (0.052)	−0.111** (0.052)
lvau_garriga	0.004 (0.112)	0.025 (0.231)	0.435*** (0.167)	0.429** (0.178)
debtgdp	0.017 (0.059)	−0.099 (0.180)	−0.041 (0.075)	0.080 (0.080)
inflation	−0.0002*** (0.00004)	−0.0001 (0.0002)	0.00000 (0.00004)	0.0001 (0.001)
log(gdp)	0.518*** (0.054)	0.603*** (0.115)	0.358*** (0.055)	0.510*** (0.075)
polity	0.001 (0.003)	0.013* (0.008)	−0.008* (0.005)	−0.012*** (0.005)
crisis	−0.182*** (0.051)	−0.285** (0.126)	0.248*** (0.075)	0.119 (0.086)
agreementsigned	0.049 (0.038)	0.063 (0.095)	0.032 (0.058)	0.112** (0.056)
log1p(depthacc):lvau_garriga	0.029 (0.049)	0.048 (0.115)	0.095* (0.051)	0.049 (0.051)
log1p(depthacc):debtgdp	−0.041 (0.033)	−0.117 (0.087)	0.062 (0.043)	0.066 (0.043)
Observations	991	211	1,036	741
R ²	0.157	0.344	0.082	0.106

Note:

*p<0.1; **p<0.05; ***p<0.01