```
      name:  <unnamed>
       log:  /Users/cristiangudino/Desktop/MacroeconomicsII/Tarea2/Data/Consum
> o.smcl
  log type:  smcl
 opened on:  22 Mar 2022, 16:35:50

 1 .
 2 . /*
   > A) Obtener datos del PIB, Consumo, Gasto de Gobierno, Inversión y Exportacio
   > nes Netas de manera trimestral de 1980 a 2019.
   >
   > La base contiene los datos trimestrales para el consumo privado, gasto guber
   > namental, inversión, exportaciones e importaciones, así como el producto in
   > terno bruto de los años 1993 a 2019, puesto que la página del INEGI no cuent
   > a, en todos los componentes, los datos de 1980.
   >
   > */
 3 .
 4 . import delimited "cuentas_nacionales.csv"
   (encoding automatically selected: ISO-8859-2)
   (8 vars, 107 obs)

 5 .
 6 . /*
   > B) Gráficar cada uno de los componentes que son siempre positivas - cifras r
   > eales vs ln - y comparar.
   > */
 7 .
 8 . gen periodo2 = _n // Creamos una variable numérica para ordernar las fechas

 9 . generate time = tq(1993q1) + periodo2 - 1 // Creamos nuestra nueva variable
   > de tiempo, la cual empieza desde el primer trimestre de 1993

10 . drop periodo2

11 . format time %tq // Establecemos el nuevo formato de nuestra variable tempora
   > l AAAA/trimestre
```

```
12 . order time, after(periodo) // Cambiamos la posición de la nueva variable tim
   > e

13 .
14 . tsset time, quarterly // Declaramos la variable temporal como una serie de t
   > iempo

   Time variable: time, 1993q1 to 2019q3
           Delta: 1 quarter

15 .
16 . graph twoway (line y time, legend(label(1 "PIB"))) (line c time, legend(labe
   > l(2 "Consumo"))) (line g time, legend(label(3 "Gasto de Gobierno"))) (line i
   >  time, legend(label(4 "Inversión"))), ///
   > xtitle("Año/Trimestre", size(small)) ytitle("Cifras Reales (Millones mxn)",
   > size(small)) ///
   > xlabel(132(8)238 , valuelabel angle(vertical) labsize(small)) ///
   > ylabel(0(2000000)2.00e+07 , valuelabel angle(horizontal) labsize(small))  //
   > /
   > graphregion(fcolor(white)) bgcolor(white) ///
   > legend(size(small) col(2)) ///
   > caption("Fuente: Elaboración propia con datos del INEGI", size(vsmall) span)

17 .
18 . graph export "$graphs/CifrasReales_Trimestral.pdf", as(pdf) replace
   file
       /Users/cristiangudino/Desktop/MacroeconomicsII/Tarea2/Graphs/CifrasReale
       > s_Trimestral.pdf saved as PDF format

19 .
20 . *Generamos de manera individual la variable ln_var = ln(var), la cual nos da
   >  la tasa de crecimiento para cada variable en cada trimestre
21 .
22 . gen lny = ln(y)

23 . gen lnc = ln(c)
```

```
24 . gen lng = ln(g)

25 . gen lni = ln(i)

26 .
27 . graph twoway (line lny time, legend(label(1 "PIB"))) (line lnc time, legend(
   > label(2 "Consumo"))) (line lng time, legend(label(3 "Gasto de Gobierno"))) (
   > line lni time, legend(label(4 "Inversión"))), ///
   > xtitle("Año/Trimestre", size(small)) ytitle("(ln)", size(small)) ///
   > xlabel(132(8)238 , valuelabel angle(vertical) labsize(small)) ///
   > ylabel(14(1)17 , valuelabel angle(horizontal) labsize(small))  ///
   > graphregion(fcolor(white)) bgcolor(white) ///
   > legend(size(small) col(2)) ///
   > caption("Fuente: Elaboración propia con datos del INEGI", size(vsmall) span)

28 .
29 . graph export "$graphs/Cifrasln_Trimestral.pdf", as(pdf) replace
   file
       /Users/cristiangudino/Desktop/MacroeconomicsII/Tarea2/Graphs/Cifrasln_Tr
       > imestral.pdf saved as PDF format

30 .
31 . /*
   > C)Graficar las tasas de crecimientos de las cuatro variables anteriores.
   > Tasa de crecimiento = (var_t - var_t-1)/var_t-1
   > */
32 .
33 . *Para crear una variable con lag utilizamos el comando lag. De manera análog
   > a, creamos de manera individual cada variable lag de y, c, i, g.
34 .
35 . gen lagy = y[_n - 1]
   (1 missing value generated)

36 . replace lagy = 0 if lagy == . // Reemplazamos missing value de la primera ob
   > servación para evitar errores de cálculo.
   (1 real change made)
```

```
37 . gen lagc = c[_n - 1]
   (1 missing value generated)

38 . replace lagc = 0 if lagc == .
   (1 real change made)

39 . gen lagg = g[_n - 1]
   (1 missing value generated)

40 . replace lagg = 0 if lagg == .
   (1 real change made)

41 . gen lagi = i[_n - 1]
   (1 missing value generated)

42 . replace lagi = 0 if lagi == .
   (1 real change made)

43 .
44 . *Para crear las variables de tasas de crecimiento de cada una de las variabl
   > es:
45 .
46 . gen ty = (y/lagy) - 1
   (1 missing value generated)

47 . replace ty = 0 if ty == . // Reemplazamos missing values por un cero para te
   > ner consistencia en las gráficas
   (1 real change made)

48 . gen tc = (c/lagc) - 1
   (1 missing value generated)

49 . replace tc = 0 if tc == .
   (1 real change made)

50 . gen tg = (g/lagg) - 1
   (1 missing value generated)
```

```
51 . replace tg = 0 if tg == .
   (1 real change made)

52 . gen ti = (i/lagi) - 1
   (1 missing value generated)

53 . replace ti = 0 if ti == .
   (1 real change made)

54 .
55 . *Gráfica para el PIB
56 .
57 . graph twoway (line ty time, legend(label(1 "PIB"))), ///
   > title("Tasa de Crecimiento PIB", size(small) justification(center)) ///
   > xtitle("Año/Trimestre", size(small)) ytitle("Tasa de Crecimiento", size(smal
   > l)) ///
   > xlabel(132(8)238 , valuelabel angle(vertical) labsize(small)) ///
   > ylabel(-0.06(0.02)0.05 , valuelabel angle(horizontal) labsize(small))  ///
   > graphregion(fcolor(white)) bgcolor(white) ///
   > legend(size(small) col(1)) ///
   > name(g1, replace) nodraw

58 .
59 . *Gráfica para el Consumo
60 .
61 . graph twoway (line tc time, legend(label(2 "Consumo"))), ///
   > title("Tasa de Crecimiento Consumo", size(small) justification(center)) ///
   > xtitle("Año/Trimestre", size(small)) ytitle("Tasa de Crecimiento", size(smal
   > l)) ///
   > xlabel(132(8)238 , valuelabel angle(vertical) labsize(small)) ///
   > ylabel(-0.07(0.02)0.04 , valuelabel angle(horizontal) labsize(small))  ///
   > graphregion(fcolor(white)) bgcolor(white) ///
   > legend(size(small) col(1)) ///
   > name(g2, replace) nodraw

62 .
63 .
```

```
64 . graph combine g1 g2, name(combine1, replace) cols(1) ///
   > graphregion(fcolor(white)) ///
   > note("Fuente: Elaboración propia con datos del INEGI", size(tiny) span)

65 .
66 . graph export "$graphs/TasasCrecimiento1_Trimestral.pdf", as(pdf) replace
   file
       /Users/cristiangudino/Desktop/MacroeconomicsII/Tarea2/Graphs/TasasCrecim
       > iento1_Trimestral.pdf saved as PDF format

67 .
68 . *Gráfica para el Gasto de Gobierno
69 .
70 . graph twoway (line tg time, legend(label(3 "Gasto de Gobierno"))), ///
   > title("Tasa de Crecimiento Gasto de Gobierno", size(small) justification(cen
   > ter)) ///
   > xtitle("Año/Trimestre", size(small)) ytitle("Tasa de Crecimiento", size(smal
   > l)) ///
   > xlabel(132(8)238 , valuelabel angle(vertical) labsize(small)) ///
   > ylabel(-0.03(0.01)0.03 , valuelabel angle(horizontal) labsize(small))  ///
   > graphregion(fcolor(white)) bgcolor(white) ///
   > legend(size(small) col(1)) ///
   > name(g3, replace) nodraw

71 .
72 . *Gráfica para la Inversión
73 .
74 . graph twoway (line ti time, legend(label(4 "Inversión"))), ///
   > title("Tasa de Crecimiento Inversión", size(small) justification(center)) //
   > /
   > xtitle("Año/Trimestre", size(small)) ytitle("Tasa de Crecimiento", size(smal
   > l)) ///
   > xlabel(132(8)238 , valuelabel angle(vertical) labsize(small)) ///
   > ylabel(-0.3(0.05)0.1, valuelabel angle(horizontal) labsize(small))  ///
   > graphregion(fcolor(white)) bgcolor(white) ///
   > legend(size(small) col(1)) ///
   > name(g4, replace) nodraw
```

```
75 .
76 .
77 . graph combine g3 g4, name(combine2, replace) cols(1) ///
   > graphregion(fcolor(white)) ///
   > note("Fuente: Elaboración propia con datos del INEGI", size(tiny) span)

78 .
79 . graph export "$graphs/TasasCrecimiento2_Trimestral.pdf", as(pdf) replace
   file
       /Users/cristiangudino/Desktop/MacroeconomicsII/Tarea2/Graphs/TasasCrecim
       > iento2_Trimestral.pdf saved as PDF format

80 .
81 . /*
   > D) Considerando sólo Consumo y PIB, gráficar los puntos (\deltaC, \deltaY)
   > */
82 .
83 . graph twoway scatter tc ty, msymbol(Dh) ///
   > title("Gráfica de dispersión PIB vs Consumo", size(small) justification(cent
   > er)) ///
   > xtitle("Tasa de crecimiento PIB", size(small)) ytitle("Tasa de crecimiento C
   > onsumo", size(small)) ///
   > graphregion(fcolor(white)) bgcolor(white) ///
   > caption("Fuente: Elaboración propia con datos del INEGI", size(small) span)

84 .
85 . graph export "$graphs/Dispersión_PIBvsConsumo.pdf", as(pdf) replace
   file
       /Users/cristiangudino/Desktop/MacroeconomicsII/Tarea2/Graphs/Dispersión_
       > PIBvsConsumo.pdf saved as PDF format

86 .
87 . /*
   > E) Calcular la volatilidad de las dos series de tasas de crecimiento.
   >
   > Sabemos que cuando hablamos de volatilidad solemos referirnos a la desviació
   > n estándar, tomada con signo positivo. Por definición, la desviación estánda
   > r de una variable no es mas que la raíz cuadrada de su varianza.
   > */
```

```
88 .
89 . sum ty lny tc lnc, det // Nos permite conocer las estadísticas descriptivas
   > de las series de tasas de crecimiento para el PIB y Consumo.
```

ty

Percentiles		Smallest		
1%	-.0511819	-.057467		
5%	-.0086521	-.0511819		
10%	-.0047247	-.0489362	Obs	107
25%	.0023479	-.0163142	Sum of wgt.	107
50%	.007173		Mean	.0058408
		Largest	Std. dev.	.0129532
75%	.0110009	.024794		
90%	.0187807	.0268949	Variance	.0001678
95%	.021032	.0301897	Skewness	-2.425971
99%	.0301897	.0329895	Kurtosis	12.80468

lny

Percentiles		Smallest		
1%	16.11019	16.09144		
5%	16.13749	16.11019		
10%	16.16875	16.12471	Obs	107
25%	16.3315	16.12736	Sum of wgt.	107
50%	16.46391		Mean	16.4532
		Largest	Std. dev.	.1820096
75%	16.6014	16.73429		
90%	16.70868	16.73507	Variance	.0331275
95%	16.73291	16.73888	Skewness	-.2072651
99%	16.73888	16.73903	Kurtosis	2.088753

tc

Percentiles		Smallest		
1%	-.0417713	-.0676228		
5%	-.0084455	-.0417713		
10%	-.0041356	-.0376581	Obs	107
25%	.0009909	-.0191957	Sum of wgt.	107
50%	.0073259		Mean	.0066699
		Largest	Std. dev.	.0132373
75%	.0144091	.0266107		
90%	.0212909	.0272164	Variance	.0001752
95%	.0232557	.0274495	Skewness	-2.298736
99%	.0274495	.0307256	Kurtosis	13.06687

lnc

Percentiles		Smallest		
1%	**15.64588**	**15.64**		
5%	**15.65939**	**15.64588**		
10%	**15.67707**	**15.64887**	Obs	**107**
25%	**15.88361**	**15.64888**	Sum of wgt.	**107**
50%	**16.08896**		Mean	**16.03817**
		Largest	Std. dev.	**.2093602**
75%	**16.19234**	**16.3379**		
90%	**16.30427**	**16.34161**	Variance	**.0438317**
95%	**16.33733**	**16.34177**	Skewness	**-.4879601**
99%	**16.34177**	**16.34783**	Kurtosis	**2.132631**

```
90 .
91 . outreg2 using summary, tex replace sum(detail) keep(ty lny tc lnc) eqkeep(N
   > mean sd Var min max)
```

time

Percentiles		Smallest		
1%	**133**	**132**		
5%	**137**	**133**		
10%	**142**	**134**	Obs	**107**
25%	**158**	**135**	Sum of wgt.	**107**
50%	**185**		Mean	**185**
		Largest	Std. dev.	**31.03224**
75%	**212**	**235**		
90%	**228**	**236**	Variance	**963**
95%	**233**	**237**	Skewness	**0**
99%	**237**	**238**	Kurtosis	**1.79979**

Y

Percentiles		Smallest		
1%	**9921230**	**9736936**		
5%	**1.02e+07**	**9921230**		
10%	**1.05e+07**	**1.01e+07**	Obs	**107**
25%	**1.24e+07**	**1.01e+07**	Sum of wgt.	**107**
50%	**1.41e+07**		Mean	**1.42e+07**
		Largest	Std. dev.	**2536090**
75%	**1.62e+07**	**1.85e+07**		
90%	**1.81e+07**	**1.85e+07**	Variance	**6.43e+12**
95%	**1.85e+07**	**1.86e+07**	Skewness	**.0724381**
99%	**1.86e+07**	**1.86e+07**	Kurtosis	**2.019853**

C

	Percentiles	Smallest		
1%	**6236193**	**6199652**		
5%	**6320988**	**6236193**		
10%	**6433793**	**6254854**	Obs	**107**
25%	**7909782**	**6254902**	Sum of wgt.	**107**
50%	**9712863**		Mean	**9427023**
		Largest	Std. dev.	**1872353**
75%	**1.08e+07**	**1.25e+07**		
90%	**1.20e+07**	**1.25e+07**	Variance	**3.51e+12**
95%	**1.25e+07**	**1.25e+07**	Skewness	**-.1987582**
99%	**1.25e+07**	**1.26e+07**	Kurtosis	**2.019953**

G

	Percentiles	Smallest		
1%	**1407266**	**1400313**		
5%	**1429084**	**1407266**		
10%	**1443169**	**1408021**	Obs	**107**
25%	**1597582**	**1424324**	Sum of wgt.	**107**
50%	**1671367**		Mean	**1757091**
		Largest	Std. dev.	**246718.1**
75%	**1973902**	**2185154**		
90%	**2139748**	**2200914**	Variance	**6.09e+10**
95%	**2177641**	**2210584**	Skewness	**.3783536**
99%	**2210584**	**2223988**	Kurtosis	**1.861798**

I

	Percentiles	Smallest		
1%	**1496103**	**1476316**		
5%	**1812231**	**1496103**		
10%	**2083076**	**1644163**	Obs	**107**
25%	**2436776**	**1680733**	Sum of wgt.	**107**
50%	**3001446**		Mean	**2916968**
		Largest	Std. dev.	**629726.7**
75%	**3537532**	**3798115**		
90%	**3725305**	**3806069**	Variance	**3.97e+11**
95%	**3768913**	**3810515**	Skewness	**-.2472079**
99%	**3810515**	**3858489**	Kurtosis	**2.026301**

X

	Percentiles	Smallest		
1%	**1469001**	**1430233**		
5%	**1588012**	**1469001**		
10%	**1994754**	**1494371**	Obs	**107**
25%	**2810673**	**1557092**	Sum of wgt.	**107**
50%	**3650612**		Mean	**3941652**
		Largest	Std. dev.	**1526689**
75%	**5049161**	**6799603**		
90%	**6265124**	**6805347**	Variance	**2.33e+12**
95%	**6781811**	**6993221**	Skewness	**.3456035**
99%	**6993221**	**7023756**	Kurtosis	**2.165391**

M

	Percentiles	Smallest		
1%	**1495226**	**1492723**		
5%	**1599863**	**1495226**		
10%	**1785727**	**1539877**	Obs	**107**
25%	**2966039**	**1571378**	Sum of wgt.	**107**
50%	**4123027**		Mean	**4118542**
		Largest	Std. dev.	**1569515**
75%	**5282134**	**6896833**		
90%	**6383769**	**6919612**	Variance	**2.46e+12**
95%	**6858034**	**6971336**	Skewness	**.0186492**
99%	**6971336**	**7007410**	Kurtosis	**2.093324**

XN

	Percentiles	Smallest		
1%	**-695011.1**	**-917493.9**		
5%	**-581640.1**	**-695011.1**		
10%	**-473308.5**	**-661020.8**	Obs	**107**
25%	**-349733.2**	**-617498.1**	Sum of wgt.	**107**
50%	**-210338.2**		Mean	**-176890.1**
		Largest	Std. dev.	**266810.5**
75%	**-23162.61**	**434951**		
90%	**126922.9**	**471814.6**	Variance	**7.12e+10**
95%	**383708.6**	**474389.5**	Skewness	**.3950151**
99%	**474389.5**	**477950.7**	Kurtosis	**3.410699**

lny

	Percentiles	Smallest		
1%	**16.11019**	**16.09144**		
5%	**16.13749**	**16.11019**		
10%	**16.16875**	**16.12471**	Obs	**107**
25%	**16.3315**	**16.12736**	Sum of wgt.	**107**
50%	**16.46391**		Mean	**16.4532**
		Largest	Std. dev.	**.1820096**
75%	**16.6014**	**16.73429**		
90%	**16.70868**	**16.73507**	Variance	**.0331275**
95%	**16.73291**	**16.73888**	Skewness	**-.2072651**
99%	**16.73888**	**16.73903**	Kurtosis	**2.088753**

lnc

	Percentiles	Smallest		
1%	**15.64588**	**15.64**		
5%	**15.65939**	**15.64588**		
10%	**15.67707**	**15.64887**	Obs	**107**
25%	**15.88361**	**15.64888**	Sum of wgt.	**107**
50%	**16.08896**		Mean	**16.03817**
		Largest	Std. dev.	**.2093602**
75%	**16.19234**	**16.3379**		
90%	**16.30427**	**16.34161**	Variance	**.0438317**
95%	**16.33733**	**16.34177**	Skewness	**-.4879601**
99%	**16.34177**	**16.34783**	Kurtosis	**2.132631**

lng

	Percentiles	Smallest		
1%	**14.15716**	**14.15221**		
5%	**14.17254**	**14.15716**		
10%	**14.18235**	**14.1577**	Obs	**107**
25%	**14.284**	**14.16921**	Sum of wgt.	**107**
50%	**14.32915**		Mean	**14.36958**
		Largest	Std. dev.	**.1385563**
75%	**14.49552**	**14.5972**		
90%	**14.5762**	**14.60438**	Variance	**.0191978**
95%	**14.59375**	**14.60877**	Skewness	**.2252013**
99%	**14.60877**	**14.61481**	Kurtosis	**1.810657**

lni

	Percentiles	Smallest		
1%	**14.21837**	**14.20506**		
5%	**14.41007**	**14.21837**		
10%	**14.54936**	**14.31274**	Obs	**107**
25%	**14.70619**	**14.33474**	Sum of wgt.	**107**
50%	**14.9146**		Mean	**14.86076**
		Largest	Std. dev.	**.2320226**
75%	**15.07894**	**15.15002**		
90%	**15.13066**	**15.15211**	Variance	**.0538345**
95%	**15.1423**	**15.15327**	Skewness	**-.6633977**
99%	**15.15327**	**15.16579**	Kurtosis	**2.862151**

lagy

	Percentiles	Smallest		
1%	**9736936**	**0**		
5%	**1.01e+07**	**9736936**		
10%	**1.04e+07**	**9921230**	Obs	**107**
25%	**1.23e+07**	**1.01e+07**	Sum of wgt.	**107**
50%	**1.41e+07**		Mean	**1.40e+07**
		Largest	Std. dev.	**2850187**
75%	**1.62e+07**	**1.85e+07**		
90%	**1.80e+07**	**1.85e+07**	Variance	**8.12e+12**
95%	**1.85e+07**	**1.85e+07**	Skewness	**-.973907**
99%	**1.85e+07**	**1.86e+07**	Kurtosis	**6.832495**

lagc

	Percentiles	Smallest		
1%	**6199652**	**0**		
5%	**6292018**	**6199652**		
10%	**6422592**	**6236193**	Obs	**107**
25%	**7768645**	**6254854**	Sum of wgt.	**107**
50%	**9694504**		Mean	**9309428**
		Largest	Std. dev.	**2058199**
75%	**1.07e+07**	**1.25e+07**		
90%	**1.19e+07**	**1.25e+07**	Variance	**4.24e+12**
95%	**1.24e+07**	**1.25e+07**	Skewness	**-.9221332**
99%	**1.25e+07**	**1.25e+07**	Kurtosis	**5.290268**

lagg

Percentiles		Smallest		
1%	**1400313**	**0**		
5%	**1425190**	**1400313**		
10%	**1439914**	**1407266**	Obs	**107**
25%	**1586975**	**1408021**	Sum of wgt.	**107**
50%	**1666509**		Mean	**1736922**
		Largest	Std. dev.	**296763.7**
75%	**1968737**	**2185154**		
90%	**2131969**	**2200914**	Variance	**8.81e+10**
95%	**2177641**	**2210584**	Skewness	**-1.568167**
99%	**2210584**	**2223988**	Kurtosis	**12.10459**

lagi

Percentiles		Smallest		
1%	**1476316**	**0**		
5%	**1717361**	**1476316**		
10%	**2075338**	**1496103**	Obs	**107**
25%	**2435757**	**1644163**	Sum of wgt.	**107**
50%	**2936393**		Mean	**2883907**
		Largest	Std. dev.	**687088.2**
75%	**3530510**	**3798115**		
90%	**3725305**	**3806069**	Variance	**4.72e+11**
95%	**3768913**	**3810515**	Skewness	**-.7774117**
99%	**3810515**	**3858489**	Kurtosis	**4.352551**

ty

Percentiles		Smallest		
1%	**-.0511819**	**-.057467**		
5%	**-.0086521**	**-.0511819**		
10%	**-.0047247**	**-.0489362**	Obs	**107**
25%	**.0023479**	**-.0163142**	Sum of wgt.	**107**
50%	**.007173**		Mean	**.0058408**
		Largest	Std. dev.	**.0129532**
75%	**.0110009**	**.024794**		
90%	**.0187807**	**.0268949**	Variance	**.0001678**
95%	**.021032**	**.0301897**	Skewness	**-2.425971**
99%	**.0301897**	**.0329895**	Kurtosis	**12.80468**

tc

Percentiles		Smallest		
1%	-.0417713	-.0676228		
5%	-.0084455	-.0417713		
10%	-.0041356	-.0376581	Obs	107
25%	.0009909	-.0191957	Sum of wgt.	107
50%	.0073259		Mean	.0066699
		Largest	Std. dev.	.0132373
75%	.0144091	.0266107		
90%	.0212909	.0272164	Variance	.0001752
95%	.0232557	.0274495	Skewness	-2.298736
99%	.0274495	.0307256	Kurtosis	13.06687

tg

Percentiles		Smallest		
1%	-.0234416	-.0241522		
5%	-.0105454	-.0234416		
10%	-.0073267	-.0140405	Obs	107
25%	-.0025345	-.0112177	Sum of wgt.	107
50%	.0049655		Mean	.0040964
		Largest	Std. dev.	.0096597
75%	.0106028	.0224005		
90%	.0164704	.0252503	Variance	.0000933
95%	.0197741	.0252948	Skewness	-.1015951
99%	.0252948	.0285284	Kurtosis	3.331158

ti

Percentiles		Smallest		
1%	-.1216234	-.3062722		
5%	-.0358184	-.1216234		
10%	-.0296323	-.0983066	Obs	107
25%	-.0041361	-.0413404	Sum of wgt.	107
50%	.0100457		Mean	.0060469
		Largest	Std. dev.	.0432836
75%	.0246845	.0685532		
90%	.0416238	.0695556	Variance	.0018735
95%	.0573986	.0755281	Skewness	-3.714286
99%	.0755281	.098964	Kurtosis	27.41139

```
   Following variable is string, not included:
   periodo
   summary.tex
   dir : seeout

 92 .
 93 . *Dados los resultados anteriores, podemos ver que el consumo tiene una mayor
   >  varianza, por lo que su sd será mayor respecto el PIB, de este modo podemos
   >  concluir que el componente del consumo tiene mayor volatilidad.
 94 .
 95 . /*
   > F) Estimar los siguientes cuatro modelos lineales reportando los resultados
   > de la regresión:
   >
   > 1.- C_t = a_1 + b_1 * Y_t + e_1
   >
   > 2.- \delta C_t = a_2 + b_2 * \delta Y_t + e_2
   >
   > 3.- \delta C_t = a_3 + b_3 * \delta Y_t-1 + e_3
   >
   > 4.- ln(C_t) = a_4 + b_4 * ln(Y_t) + e_3
   >
   > */
 96 .
 97 . *Dado que para el modelo 3 tenemos un lag Y_t-1 como var independiente, ento
   > nces debemos crear una nueva variable de crecimiento en el producto.
 98 .
 99 . gen lagy2 = y[_n - 2]
   (2 missing values generated)

100 . replace lagy2 = 0 if lagy2 == .
   (2 real changes made)

101 . order lagy2, after(lagy)

102 .
103 . gen ty2 = (lagy/lagy2) - 1
   (2 missing values generated)
```

```
104 . replace ty2 = 0 if ty2 == .
    (2 real changes made)

105 .
106 . label variable c "Consumo"

107 . label variable y "PIB"

108 . label variable ty "\Delta PIB_t"

109 . label variable ty2 "\Delta PIB_t-1"

110 . label variable lnc "ln(C)"

111 . label variable lny "ln(PIB)"

112 .
113 . *Modelo 1
114 .
115 . reg c y, robust // Regresión líneal simple: consumo como variable dependient
    > e y PIB como variable independiente

Linear regression                               Number of obs     =        107
                                                F(1, 105)         =    7558.53
                                                Prob > F          =     0.0000
                                                R-squared         =     0.9789
                                                Root MSE          =     2.7e+0
    > 5

------------------------------------------------------------------------------
           c | Coefficient  Robust std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
           y |   .7304619   .0084019    86.94   0.000     .7138024    .7471213
       _cons |  -951851.6   126345.9    -7.53   0.000    -1202372    -701331
------------------------------------------------------------------------------
```

```
116 .
117 . *Modelo 2
118 .
119 . reg tc ty, robust // Regresión líneal simple: tasa de crecimiento del consum
    > o como variable dependiente y tasa de crecimiento del PIB como variable inde
    > pendiente

Linear regression                               Number of obs     =        107
                                                F(1, 105)         =      56.11
                                                Prob > F          =     0.0000
                                                R-squared         =     0.6511
                                                Root MSE          =     .00786

------------------------------------------------------------------------------
             |               Robust
          tc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          ty |    .824604   .110081     7.49   0.000     .6063338    1.042874
       _cons |   .0018535   .0011718    1.58   0.117    -.0004698    .0041769
------------------------------------------------------------------------------

120 .
121 .
122 . *Modelo 3
123 .
124 . reg tc ty2, robust // Regresión líneal simple: tasa de crecimiento del consu
    > mo como variable dependiente y tasa de crecimiento del PIB con un lag como v
    > ariable independiente

Linear regression                               Number of obs     =        107
                                                F(1, 105)         =       8.66
                                                Prob > F          =     0.0040
                                                R-squared         =     0.0789
                                                Root MSE          =     .01276

------------------------------------------------------------------------------
             |               Robust
          tc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         ty2 |   .2867646   .0974699     2.94   0.004     .0934998    .4800294
       _cons |   .0050141   .0014047     3.57   0.001     .0022289    .0077993
------------------------------------------------------------------------------
```

```
125 .
126 . *Modelo 4
127 .
128 . reg lnc lny, robust // Regresión líneal simple: ln deel consumo como variabl
    > e dependiente y ln del PIB como variable independiente

Linear regression                               Number of obs     =        107
                                                F(1, 105)         =    6626.06
                                                Prob > F          =     0.0000
                                                R-squared         =     0.9776
                                                Root MSE          =     .03145

------------------------------------------------------------------------------
             |               Robust
         lnc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         lny |   1.137339   .0139721    81.40   0.000     1.109635    1.165044
       _cons |  -2.674694   .2303382   -11.61   0.000    -3.131413   -2.217976
------------------------------------------------------------------------------

129 .
130 .
131 . reg c y, robust

Linear regression                               Number of obs     =        107
                                                F(1, 105)         =    7558.53
                                                Prob > F          =     0.0000
                                                R-squared         =     0.9789
                                                Root MSE          =     2.7e+0
> 5

------------------------------------------------------------------------------
             |               Robust
           c |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
           y |   .7304619   .0084019    86.94   0.000     .7138024    .7471213
       _cons |  -951851.6   126345.9    -7.53   0.000    -1202372    -701331
------------------------------------------------------------------------------
```

```
132 . outreg2 using models, tex replace ctitle(Modelo 1) label
    models.tex
    dir : seeout

133 . reg tc ty, robust

    Linear regression                               Number of obs     =        107
                                                    F(1, 105)         =      56.11
                                                    Prob > F          =     0.0000
                                                    R-squared         =     0.6511
                                                    Root MSE          =     .00786

------------------------------------------------------------------------------
             |               Robust
          tc |  Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
          ty |    .824604    .110081     7.49   0.000     .6063338    1.042874
       _cons |   .0018535    .0011718    1.58   0.117    -.0004698    .0041769
------------------------------------------------------------------------------

134 . outreg2 using models, tex append ctitle(Modelo 2) label
    models.tex
    dir : seeout

135 . reg tc ty2, robust

    Linear regression                               Number of obs     =        107
                                                    F(1, 105)         =       8.66
                                                    Prob > F          =     0.0040
                                                    R-squared         =     0.0789
                                                    Root MSE          =     .01276

------------------------------------------------------------------------------
             |               Robust
          tc |  Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         ty2 |   .2867646    .0974699     2.94   0.004     .0934998    .4800294
       _cons |   .0050141    .0014047     3.57   0.001     .0022289    .0077993
------------------------------------------------------------------------------
```

```
136 . outreg2 using models, tex append ctitle(Modelo 3) label
    models.tex
    dir : seeout

137 . reg lnc lny, robust

    Linear regression                               Number of obs     =        107
                                                    F(1, 105)         =    6626.06
                                                    Prob > F          =     0.0000
                                                    R-squared         =     0.9776
                                                    Root MSE          =     .03145

------------------------------------------------------------------------------
             |               Robust
         lnc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         lny |   1.137339   .0139721    81.40   0.000     1.109635    1.165044
       _cons |  -2.674694   .2303382   -11.61   0.000    -3.131413   -2.217976
------------------------------------------------------------------------------

138 . outreg2 using models, tex append ctitle(Modelo 4) label
    models.tex
    dir : seeout

139 .
140 . /*
    > E) Explique qué se podría concluir, si fuera el caso, acerca de la HIP para
    > méxico a partir de los coeficientes encontrados.
    >
    > Sabemos que la HIP postula que el consumo de los agentes será suavizado en f
    > unción de las expectativas en el ingreso. Dadas las limitaciones en los mode
    > los antes estimados, entonces no podemos conocer el efecto de las expectativ
    > as en el ingreso sobre el nivel de consumo, por lo tanto la HIP no puede ser
    >  aceptada bajo estos modelos.
    >
    > */
141 .
142 .
143 . log close
          name:  <unnamed>
           log:  /Users/cristiangudino/Desktop/MacroeconomicsII/Tarea2/Data/Consum
    > o.smcl
      log type:  smcl
     closed on:  22 Mar 2022, 16:36:04
```