

Plan de Expansión del Sistema Interconectado Nacional 2020 – 2034

Tomo I
Estudios Básicos

ANEXO TOMO I – 2

“Variables Históricas &
Proyección de la Demanda del
Escenario Pesimista y
Optimista”

Variables Históricas de las Distribuidoras.

AÑO	CONSUMO ALUMBRADO			CONSUMO COMERCIAL			CONSUMO GOBIERNO			CONSUMO INDUSTRIAL		
	Edechi	Edemet	Ensa	Edechi	Edemet	Ensa	Edechi	Edemet	Ensa	Edechi	Edemet	Ensa
	MWh											
2001	15,660.00	42,190.00	23,439.34	126,080.00	906,240.00	586,030.00	30,990.00	342,830.00	204,770.00	46,050.00	154,570.00	228,544.00
2002	12,470.00	40,520.00	26,182.00	144,700.00	961,280.00	627,545.00	33,350.00	338,760.00	209,207.00	38,060.00	129,480.00	200,176.00
2003	14,850.00	45,960.00	34,126.00	185,520.00	1,092,210.00	670,156.00	34,540.00	342,740.00	212,637.00	7,320.00	42,250.00	197,699.00
2004	17,490.00	50,640.00	38,719.00	185,590.00	1,177,950.00	701,632.00	44,190.00	356,700.00	234,869.00	7,610.00	42,290.00	187,857.00
2005	17,960.00	53,300.00	38,887.00	187,870.00	1,234,530.00	754,165.00	45,870.00	349,710.00	245,339.00	6,330.00	45,290.00	206,406.00
2006	18,859.00	56,192.00	41,416.00	137,203.00	1,177,248.00	804,951.00	46,340.00	355,149.00	253,565.00	64,674.00	152,864.00	238,829.00
2007	19,600.00	57,300.00	43,083.00	146,060.00	1,304,240.00	876,240.00	49,280.00	376,760.00	270,778.00	55,900.00	160,770.00	254,264.00
2008	20,364.21	59,148.17	45,559.00	153,000.00	1,377,000.00	923,216.00	49,074.80	371,862.02	275,195.00	62,000.00	146,000.00	261,613.00
2009	21,382.00	60,514.00	46,650.00	155,500.00	1,363,220.00	943,236.00	52,610.00	390,030.00	289,576.00	56,120.00	191,600.00	277,487.00
2010	22,590.00	61,280.00	47,795.00	179,210.00	1,460,420.00	967,009.00	54,320.00	399,850.00	296,196.00	53,300.00	191,470.00	226,006.00
2011	23,360.00	63,400.00	49,381.00	203,320.00	1,579,670.00	1,014,028.00	56,340.00	402,380.00	309,880.00	52,910.00	186,970.00	229,904.00
2012	24,990.00	69,990.00	51,912.00	238,360.00	1,744,930.00	1,108,826.00	60,210.00	423,330.00	338,842.00	49,610.00	193,760.00	234,584.00
2013	27,850.00	81,950.00	54,536.00	246,880.00	1,818,340.00	1,171,332.00	61,720.00	411,700.00	356,598.00	48,780.00	190,470.00	241,373.00
2014	28,950.00	83,660.00	56,910.69	248,980.00	1,898,190.00	1,224,989.62	63,180.00	414,120.00	381,118.44	49,950.00	190,170.00	225,041.34
2015	31,140.00	89,660.00	59,922.68	310,000.00	2,059,590.00	1,334,533.45	70,890.00	465,720.00	413,541.29	49,760.00	181,450.00	228,003.54
2016	35,561.27	95,205.29	63,087.90	322,528.81	2,146,580.59	1,407,222.56	86,731.10	481,222.83	426,489.80	51,405.27	179,540.50	218,715.98
2017	37,990.87	103,501.57	65,834.74	343,621.79	2,187,274.34	1,431,723.89	87,599.85	487,341.16	434,244.52	50,934.87	148,571.34	207,763.06
2018	39,641.02	110,474.71	67,572.44	348,150.61	2,215,499.85	1,383,956.29	91,017.14	495,571.96	439,057.70	53,099.50	128,813.30	139,491.56
2019	41,159.47	116,681.51	69,269.39	347,662.14	2,171,575.78	1,237,331.17	107,676.84	409,511.97	511,397.88	51,351.95	123,138.08	85,668.01

AÑO	CONSUMO OTROS			CONSUMO RESIDENCIAL			PERDIDAS NO TECNICAS			PERDIDAS TECNICAS		
	Edechi	Edemet	Ensa	Edechi	Edemet	Ensa	Edechi	Edemet	Ensa	Edechi	Edemet	Ensa
	MWh						%					
2001	3,930.00	4,930.00	2,943.00	109,640.00	546,370.00	506,543.00	0.45	0.70	0.00	0.59	0.91	0.00
2002	4,020.00	4,580.00	10,660.00	121,660.00	590,900.00	548,460.00	0.42	0.77	0.00	0.55	1.00	0.00
2003	1,250.00	6,650.00	3,377.00	122,570.00	621,740.00	596,944.00	0.48	0.73	0.00	0.62	0.95	0.00
2004	1,130.00	7,230.00	4,331.00	128,530.00	677,040.00	632,178.00	0.47	0.58	0.00	0.62	0.75	0.00
2005	1,070.00	7,500.00	3,854.00	134,030.00	694,150.00	667,650.00	0.48	0.56	0.00	0.62	0.73	0.00
2006	0.00	0.00	3,735.00	137,671.00	710,532.00	686,002.00	0.51	0.62	0.00	0.67	0.81	0.00
2007	0.00	0.00	3,738.00	149,520.00	747,930.00	731,013.00	0.50	0.50	0.00	0.65	0.65	0.00
2008	1,684.15	12,045.84	2,983.00	155,121.82	750,908.63	741,150.00	0.40	0.49	0.00	0.53	0.64	0.00
2009	540.00	4,230.00	2,886.00	175,360.00	835,170.00	791,411.00	0.44	0.55	0.54	0.58	0.72	0.79
2010	430.00	4,180.00	2,666.00	191,290.00	910,370.00	872,384.00	0.50	0.52	0.59	0.65	0.68	0.79
2011	420.00	4,270.00	2,660.00	203,540.00	960,650.00	919,934.00	0.50	0.54	0.57	0.66	0.70	0.80
2012	470.00	4,590.00	2,700.00	220,310.00	1,041,090.00	986,615.00	0.48	0.54	0.56	0.63	0.70	0.80
2013	530.00	4,560.00	2,750.00	230,900.00	1,116,990.00	1,032,117.00	0.46	0.53	0.65	0.60	0.68	0.59
2014	610.00	4,420.00	2,836.69	245,100.00	1,194,360.00	1,088,851.90	0.54	0.53	0.68	0.71	0.69	0.61
2015	720.00	4,690.00	2,867.90	271,600.00	1,273,170.00	1,170,155.16	0.66	0.55	0.82	0.86	0.72	0.65
2016	780.44	4,745.84	3,292.26	301,741.48	1,272,670.32	1,220,690.12	0.59	0.57	0.89	0.77	0.74	0.67
2017	799.96	4,510.72	3,975.75	310,091.38	1,313,144.31	1,255,690.82	0.15	0.39	0.85	1.46	0.83	0.69
2018	800.47	4,328.17	3,056.76	319,365.91	1,323,663.38	1,264,046.95	0.09	0.31	0.84	0.37	0.61	0.70
2019	900.03	4,295.02	2,703.50	346,423.85	1,421,513.44	1,353,348.36	0.78	0.31	0.86	2.33	0.61	0.72

Nota: El porcentaje (%) de perdidas es respecto al total de sistema.

Variables Históricas de los Grandes Usuarios.

AÑO	Grandes Usuarios			
	Consumo del metro	Alta tensión	Baja tensión	Perdidas
	MWh	MWh	MWh	%
2001	0.00	0.00	0.00	0.00
2002	0.00	0.00	0.00	0.00
2003	0.00	0.00	0.00	0.00
2004	0.00	0.00	0.00	0.00
2005	0.00	57,999.41	29,169.86	0.68
2006	0.00	32,621.01	6,138.59	0.74
2007	0.00	35,211.00	16,310.00	0.65
2008	0.00	36,343.00	17,903.00	0.58
2009	0.00	36,848.18	20,481.03	0.69
2010	0.00	172,140.31	44,437.51	0.71
2011	0.00	183,223.88	82,609.41	0.72
2012	0.00	210,925.63	85,753.70	0.71
2013	0.00	218,272.80	100,577.47	0.70
2014	0.00	210,463.22	125,038.72	0.72
2015	0.00	194,748.43	58,125.87	0.78
2016	0.00	184,463.00	85,841.64	0.77
2017	0.00	185,250.00	237,107.18	1.14
2018	41,037.36	158,759.00	512,537.96	1.59
2019	92,599.00	219,197.90	890,815.85	2.22
2020	120,000.00	0.00	0.00	0.00
2021	121,000.00	0.00	0.00	0.00
2022	122,000.00	0.00	0.00	0.00
2023	123,000.00	0.00	0.00	0.00
2024	124,000.00	0.00	0.00	0.00
2025	125,000.00	0.00	0.00	0.00
2026	140,000.00	0.00	0.00	0.00
2027	155,000.00	0.00	0.00	0.00
2028	170,000.00	0.00	0.00	0.00
2029	185,000.00	0.00	0.00	0.00
2030	200,000.00	0.00	0.00	0.00
2031	210,000.00	0.00	0.00	0.00
2032	220,000.00	0.00	0.00	0.00
2033	230,000.00	0.00	0.00	0.00
2034	240,000.00	0.00	0.00	0.00

Nota: El porcentaje (%) de perdidas es respecto al total de sistema.

Variables Históricas de las Variables Explicativas.

AÑO	Fc %	Variables Explicativas							
		COSTMARG	PIB	PIBCOM	PIBIND	POB	TEMPMAX	TEMPMIN	IMAE
		Balboas por MWh	Millones de Balboa	Millones de Balboa	Millones de Balboa	Habitantes	Celcius	Celcius	Millones de Balboa
2001	0.00	620.44	13,266.11	3,111.56	1,355.61	2,291,948.01	36.22	25.51	123.15
2002	0.00	546.65	13,561.99	3,088.72	1,319.72	2,346,159.27	36.67	25.53	123.74
2003	0.00	667.11	14,147.55	3,105.33	1,298.25	2,400,747.63	36.43	25.34	128.51
2004	0.00	678.43	15,211.02	3,426.64	1,332.42	2,455,910.38	36.34	25.25	137.66
2005	0.00	1,079.94	16,287.68	3,832.23	1,356.23	2,511,845.11	36.23	25.62	145.83
2006	0.00	1,507.19	17,696.90	4,260.50	1,408.68	2,568,668.39	36.08	25.68	158.02
2007	0.00	1,865.75	19,771.87	4,666.23	1,492.82	2,626,334.81	35.88	25.52	173.43
2008	0.00	2,790.00	21,822.69	5,074.28	1,547.65	2,684,755.60	35.65	25.30	190.97
2009	0.00	1,843.27	22,520.74	4,937.03	1,542.51	2,743,877.77	36.15	26.01	193.93
2010	0.700	2,139.19	24,389.34	5,691.49	1,553.61	2,803,625.55	35.92	26.12	205.81
2011	0.700	2,666.48	26,995.35	6,442.05	1,604.00	2,863,856.05	35.70	25.46	223.57
2012	0.720	2,325.07	29,876.34	6,994.16	1,662.42	2,924,621.10	36.16	25.74	245.16
2013	0.710	2,537.20	31,851.90	7,266.56	1,699.83	2,985,990.05	36.13	25.53	265.70
2014	0.720	2,604.66	33,780.00	7,266.45	1,956.74	3,047,864.86	36.40	25.79	278.57
2015	0.730	1,093.57	35,731.60	7,609.61	1,930.53	3,110,145.26	37.54	26.80	290.23
2016	0.770	724.65	37,471.80	7,875.89	1,876.88	3,172,855.22	37.42	26.59	302.89
2017	0.770	702.12	38,456.90	7,212.80	2,131.30	3,236,183.25	37.39	26.60	318.63
2018	0.760	920.43	39,887.70	7,469.70	2,146.20	3,299,844.00	36.33	25.40	328.92
2019	0.720	1,080.57	40,845.07	7,875.97	2,176.25	3,393,650.60	37.85	26.64	4,090.87
2020	0.71	889.35	0.00	0.00	0.00	0.00	37.93	26.72	0.00
2021	0.73	937.60	0.00	0.00	0.00	0.00	38.01	26.80	0.00
2022	0.73	712.94	0.00	0.00	0.00	0.00	38.09	26.88	0.00
2023	0.74	471.36	0.00	0.00	0.00	0.00	38.16	26.95	0.00
2024	0.74	560.51	0.00	0.00	0.00	0.00	38.24	27.03	0.00
2025	0.75	617.68	0.00	0.00	0.00	0.00	38.32	27.11	0.00
2026	0.75	657.17	0.00	0.00	0.00	0.00	38.40	27.19	0.00
2027	0.76	713.64	0.00	0.00	0.00	0.00	38.47	27.26	0.00
2028	0.76	767.53	0.00	0.00	0.00	0.00	38.55	27.34	0.00
2029	0.77	796.54	0.00	0.00	0.00	0.00	38.63	27.42	0.00
2030	0.77	724.15	0.00	0.00	0.00	0.00	38.71	27.50	0.00
2031	0.78	775.65	0.00	0.00	0.00	0.00	38.78	27.57	0.00
2032	0.78	821.52	0.00	0.00	0.00	0.00	38.86	27.65	0.00
2033	0.79	869.86	0.00	0.00	0.00	0.00	38.94	27.73	0.00
2034	0.79	856.35	0.00	0.00	0.00	0.00	39.02	27.81	0.00

Proyección de la Demanda en el escenario Pesimista.

EDECHI

Consumo Residencial



Proyección de la variable Consumo residencial - Método 32 (País: Panamá - Edechi)

Archivo Fórmula: $CRES = a + b * PIB \text{ (Estacional)}$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CRES

Estadístico - F = 267.06719358989
Probabilidad Estadístico - F = 0.000000000000000000
R-Squared = 0.940430886982859
R-Squared Ajustado = 0.936909560104999

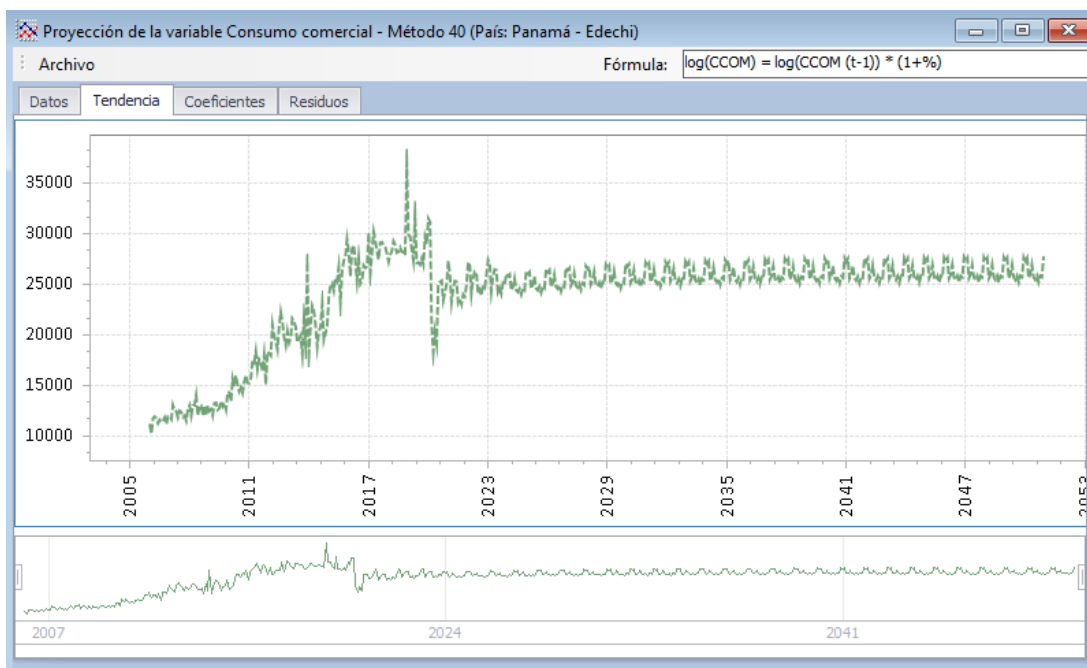
Variable	Coefficient	Std. Error	t-Statistic	Prob.
PIB	0.376	0.149	56.109	0
c	229.43	509.624	0.45	0.653
@seas(2)	-2091.672	479.885	-4.359	0
@seas(3)	-1551.778	481.232	-3.224	0.001
@seas(4)	-61.636	479.901	-0.128	0.897
@seas(5)	-1035.937	480.077	-2.157	0.032
@seas(6)	-1570.783	480.496	-4.101	0
@seas(7)	-1591.106	479.974	-3.315	0.001
@seas(8)	-2859.964	480.929	-5.944	0
@seas(9)	-2859.596	480.366	-5.952	0
@seas(10)	-3508.556	482.147	-7.27	0
@seas(11)	-2793.545	480.423	-5.814	0
@seas(12)	-1979.145	480.895	-4.115	0

Indicadores de bondad estadísticos:

Root Mean Squared Error: 1395.64520810949
Mean Absolute Error: 1085.09425918993
Mean Absolute Percent Error: 5.21080023692759
Theil Inequality Coefficient: 0.0323117998646589
Covariance Proportion: 30750756.7932025

Akaike information criterion: 17.4404716409843
Schwarz information criterion: 17.6436133970024
Hannan-Quinn information criterion: 17.5225414076775
Durbin-Watson statistic: 0.900194822252188
Log-Likelihood: -1870.57093722631

Consumo Comercial



Proyección de la variable Consumo comercial - Método 40 (País: Panamá - Edechi)

Archivo Fórmula: $\log(\text{CCOM}) = \log(\text{CCOM}(t-1)) * (1+\%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CCOM

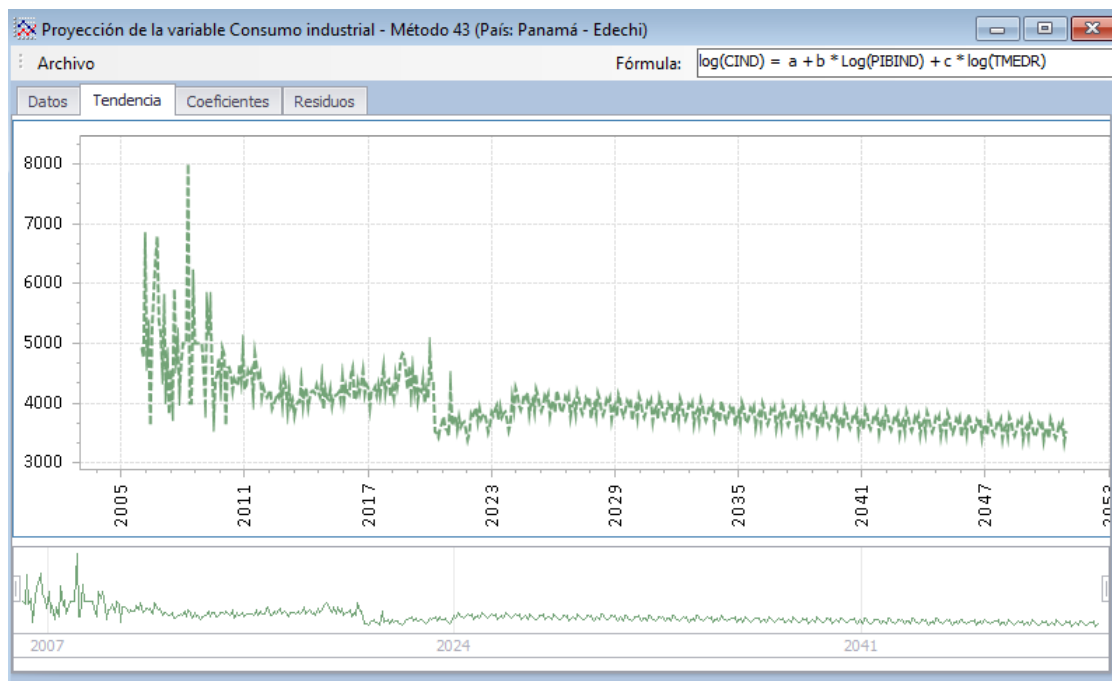
Estadístico - F = 102.654254246555
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.865762477476956
 R-Squared Ajustado = 0.857328706428398

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	1.49	0.243	6.125	0
$\log(\text{CCOM}(-12))$	0.854	0.024	34.973	0
@seas(2)	0.001	0.039	0.043	0.965
@seas(3)	-0.009	0.039	-0.239	0.81
@seas(4)	-0.007	0.039	-0.186	0.852
@seas(5)	-0.001	0.039	-0.05	0.959
@seas(6)	-0.008	0.039	-0.224	0.822
@seas(7)	-0.01	0.039	-0.263	0.792
@seas(8)	-0.007	0.039	-0.204	0.838
@seas(9)	-0.011	0.039	-0.3	0.764
@seas(10)	-0.007	0.039	-0.203	0.838
@seas(11)	-0.008	0.039	-0.222	0.824
@seas(12)	0.001	0.039	0.051	0.959

Indicadores de bondad estadísticos:

Root Mean Squared Error: 3010.62198134682
 Mean Absolute Error: 2363.47171720381
 Mean Absolute Percent Error: 11.2026282909563
 Theil Inequality Coefficient: 0.0683358348069019
 Covariance Proportion: 21362904.0557554
 Akaike information criterion: -1.44710673809894
 Schwarz information criterion: -1.23565791496181
 Hannan-Quinn information criterion: -1.36157185445506
 Durbin-Watson statistic: 0.900982531294922
 Log-Likelihood: 160.604887286092

Consumo Industrial



Proyección de la variable Consumo industrial - Método 43 (País: Panamá - Edechi)

Archivo Fórmula: $\log(\text{CIND}) = a + b * \log(\text{PIBIND}) + c * \log(\text{TMEDR})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CIND

Estadístico - F = 10.9681649011868
 Probabilidad Estadístico - F = 0.0000000000000001379
 R-Squared = 0.41378954527313
 R-Squared Ajustado = 0.376063129869916

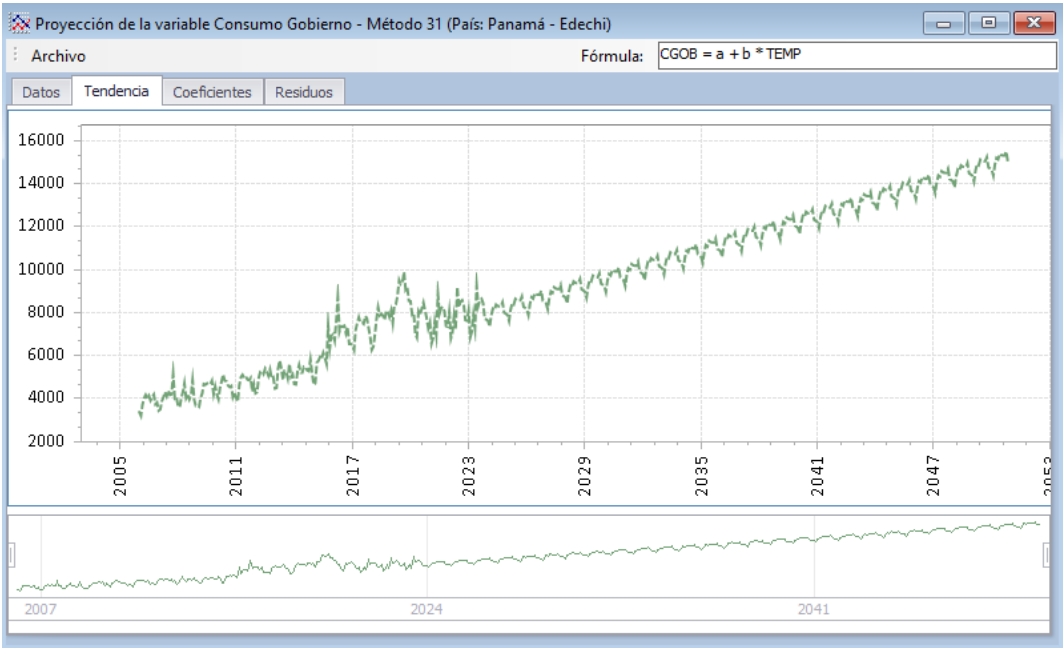
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	8.273	0.5	16.546	0
LOG(PIBIND)	-0.248	0.062	-3.963	0
LOG(TMEDR)	0.292	0.052	5.583	0
@seas(2)	-0.053	0.033	-1.606	0.109
@seas(3)	0.041	0.033	1.233	0.218
@seas(4)	0.017	0.033	0.529	0.597
@seas(5)	-0.024	0.033	-0.721	0.471
@seas(6)	-0.053	0.033	-1.568	0.118
@seas(7)	-0.025	0.033	-0.758	0.449
@seas(8)	0.017	0.033	0.523	0.601
@seas(9)	0.012	0.033	0.361	0.717
@seas(10)	0.032	0.033	0.975	0.33
@seas(11)	-0.06	0.033	-1.81	0.071
@seas(12)	-0.011	0.033	-0.327	0.743

Indicadores de bondad estadísticos:

Root Mean Squared Error: 471.356187110926
 Mean Absolute Error: 321.361083648069
 Mean Absolute Percent Error: 7.40592740171494
 Theil Inequality Coefficient: 0.0545112314466822
 Covariance Proportion: 132955.155807719

Akaike information criterion: -1.68848732537355
 Schwarz information criterion: -1.46971928043106
 Hannan-Quinn information criterion: -1.60010449970401
 Durbin-Watson statistic: 1.38054305203103
 Log-Likelihood: 196.356631140344

Consumo Gobierno



Proyección de la variable Consumo Gobierno - Método 31 (País: Panamá - Edechi)

Archivo Fórmula: $CGOB = a + b * TEMP$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CGOB

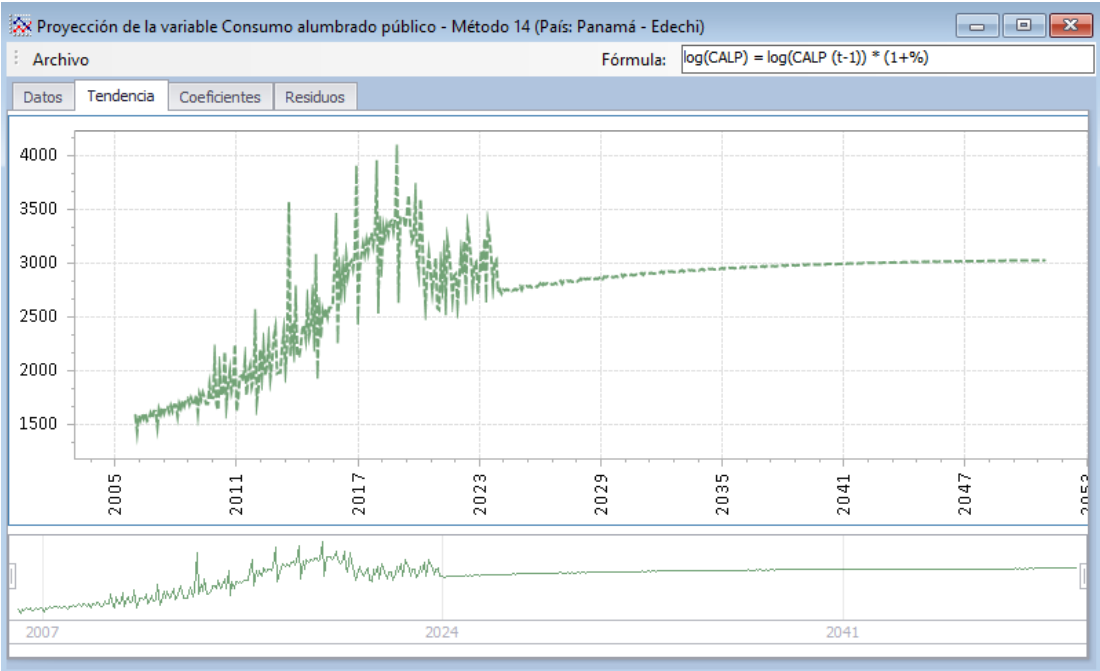
Estadístico - F =	104.138745099878
Probabilidad Estadístico - F =	0.000000000000000000
R-Squared =	0.860256832637185
R-Squared Ajustado =	0.851996152793078

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	3045.965	172.132	17.695	0
@seas(2)	-326.976	220.061	-1.485	0.138
@seas(3)	206.487	220.065	0.938	0.349
@seas(4)	535.719	220.071	2.434	0.015
@seas(5)	442.146	220.079	2.009	0.045
@seas(6)	702.023	220.09	3.189	0.001
@seas(7)	613.023	220.103	2.785	0.005
@seas(8)	566.655	220.118	2.574	0.01
@seas(9)	545.421	220.136	2.477	0.014
@seas(10)	722.304	220.156	3.28	0.001
@seas(11)	171.176	220.178	0.777	0.437
@seas(12)	92.992	220.203	0.422	0.673
@trend	24.873	0.721	34.473	0

Indicadores de bondad estadísticos:

Root Mean Squared Error:	640.006902529859
Mean Absolute Error:	497.377123653473
Mean Absolute Percent Error:	8.03654344977528
Theil Inequality Coefficient:	0.0508255814916905
Covariance Proportion:	2521545.81803896
Akaike information criterion:	15.8812053597766
Schwarz information criterion:	16.0843471157947
Hannan-Quinn information criterion:	15.9632751264698
Durbin-Watson statistic:	0.492010230856844
Log-Likelihood:	-1702.17017885588

Consumo alumbrado



Proyección de la variable Consumo alumbrado público - Método 14 (País: Panamá - Edechi)

Archivo Fórmula: $\log(\text{CALP}) = \log(\text{CALP}(t-1)) * (1+\%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CALP

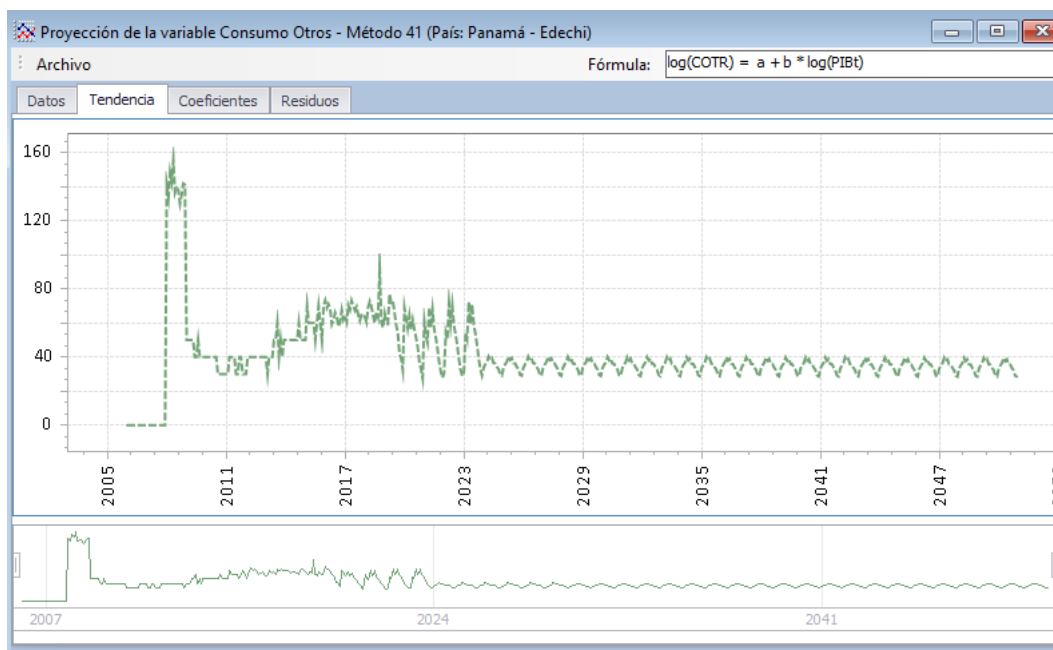
Estadístico - F = 1615.41713921463
Probabilidad Estadístico - F = 0.000000000000000000
R-Squared = 0.88885325463185
R-Squared Ajustado = 0.888303023219137

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	0.864	0.172	5.007	0
CALP(-12)	0.893	0.022	40.192	0

Indicadores de bondad estadísticos:

Root Mean Squared Error: 342.856414867269
Mean Absolute Error: 262.763413760919
Mean Absolute Percent Error: 10.4702915990353
Theil Inequality Coefficient: 0.0670519698743854
Covariance Proportion: 217531.118709766
Akaike information criterion: -2.06644737587037
Schwarz information criterion: -2.03391678769542
Hannan-Quinn information criterion: -2.05328816300208
Durbin-Watson statistic: 1.5134417153658
Log-Likelihood: 212.777632338777

Consumo Otros



Proyección de la variable Consumo Otros - Método 41 (País: Panamá - Edechi)

Archivo F6rmula: $\log(\text{COTR}) = a + b * \log(\text{PIBt})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: COTR

Estadístico - F = 1.16265753390369
 Probabilidad Estadístico - F = 0.31330689546103300000
 R-Squared = 0.0723076118996625
 R-Squared Ajustado = 0.0101159434236622

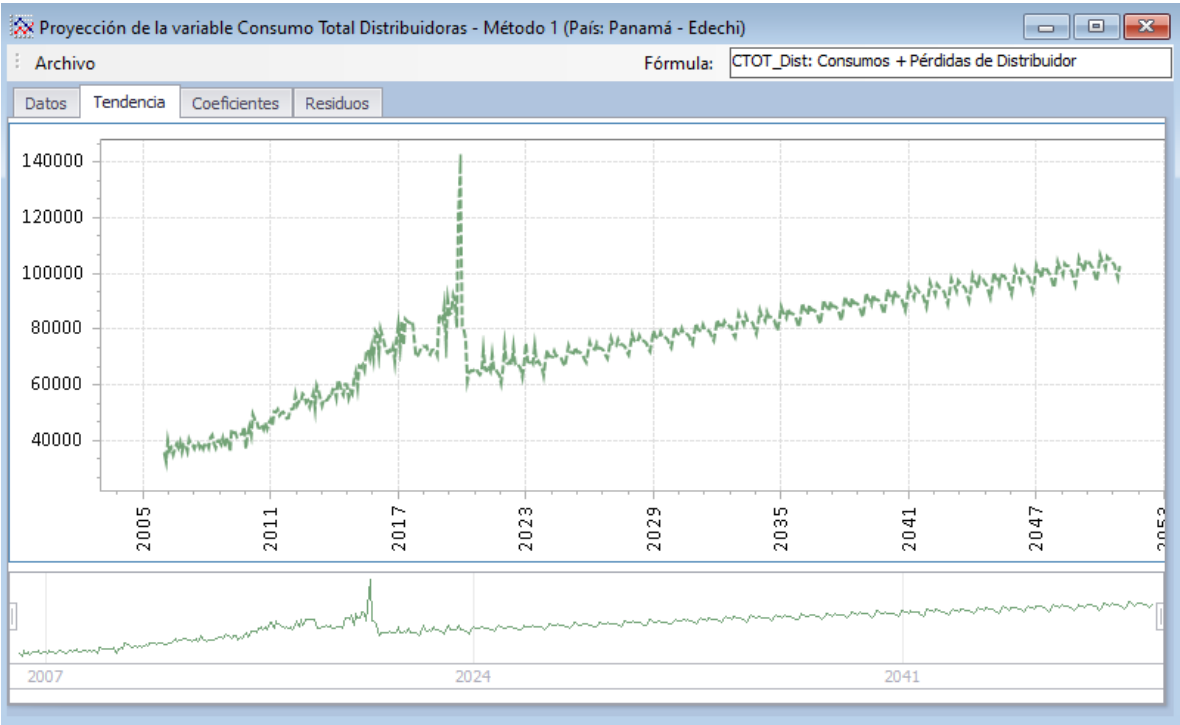
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	4.24	0.98	4.324	0
LOG(PIB)	-0.039	0.123	-0.32	0.749
@seas(2)	0.058	0.13	0.446	0.655
@seas(3)	0.093	0.13	0.714	0.475
@seas(4)	0.176	0.13	1.36	0.175
@seas(5)	0.127	0.13	0.982	0.327
@seas(6)	0.154	0.13	1.186	0.236
@seas(7)	0.076	0.13	0.586	0.558
@seas(8)	0.072	0.13	0.553	0.58
@seas(9)	0.015	0.13	0.12	0.903
@seas(10)	-0.025	0.13	-0.198	0.843
@seas(11)	-0.129	0.13	-0.993	0.321
@seas(12)	-0.148	0.13	-1.14	0.255

Indicadores de bondad estadísticos:

Root Mean Squared Error: 29.8107490636059
 Mean Absolute Error: 19.9540637294782
 Mean Absolute Percent Error: 37.6620369448849
 Theil Inequality Coefficient: 0.266173697181879
 Covariance Proportion: 15.8235417159301

Akaike information criterion: 0.902761196921002
 Schwarz information criterion: 1.12332077540205
 Hannan-Quinn information criterion: 0.99208944409114
 Durbin-Watson statistic: 0.252064172495315
 Log-Likelihood: -73.6650749044162

Consumo Total

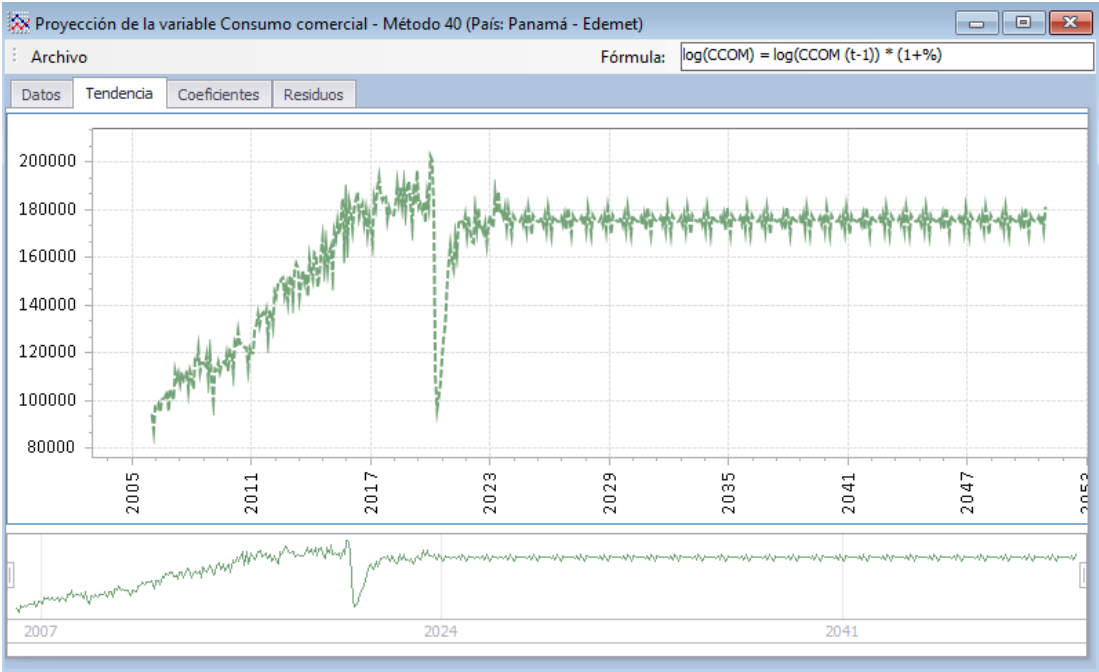


EDEMET

Consumo Residencial



Consumo Comercial



Proyección de la variable Consumo comercial - Método 40 (País: Panamá - Edemet)

Archivo Fórmula: $\log(\text{CCOM}) = \log(\text{CCOM}(t-1)) * (1+\%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CCOM

Estadístico - F = 24.217473671852
Probabilidad Estadístico - F = 0.00000000000000000000
R-Squared = 0.603413250220878
R-Squared Ajustado = 0.578496847721666

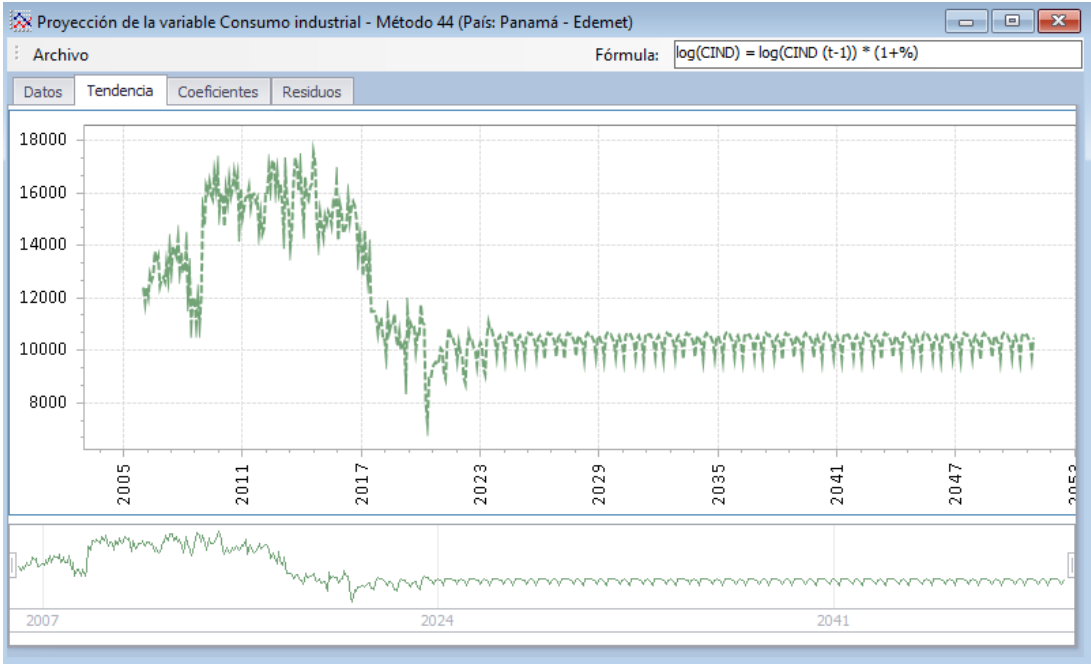
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	3.547	0.496	7.148	0
$\log(\text{CCOM}(-12))$	0.704	0.041	16.899	0
@seas(2)	-0.01	0.043	-0.236	0.813
@seas(3)	0.003	0.043	0.07	0.943
@seas(4)	0	0.043	0.015	0.987
@seas(5)	0	0.043	-0.011	0.99
@seas(6)	-0.001	0.043	-0.027	0.978
@seas(7)	0	0.043	-0.022	0.981
@seas(8)	0.001	0.043	0.041	0.966
@seas(9)	-0.003	0.043	-0.077	0.938
@seas(10)	0.003	0.043	0.074	0.94
@seas(11)	-0.007	0.043	-0.164	0.869
@seas(12)	0.008	0.043	0.189	0.849

Indicadores de bondad estadísticos:

Root Mean Squared Error: 18793.1732504248
Mean Absolute Error: 15446.9728380946
Mean Absolute Percent Error: 10.0631318598793
Theil Inequality Coefficient: 0.0606590748989873
Covariance Proportion: 328531375.900632

Akaike information criterion: -1.22397126636303
Schwarz information criterion: -1.0125224432259
Hannan-Quinn information criterion: -1.13843638271915
Durbin-Watson statistic: 0.260335938677221
Log-Likelihood: 137.845069169029

Consumo Industrial



Proyección de la variable Consumo industrial - Método 44 (País: Panamá - Edemet)

Archivo Fórmula: $\log(\text{CIND}) = \log(\text{CIND}(t-1)) * (1+\%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CIND

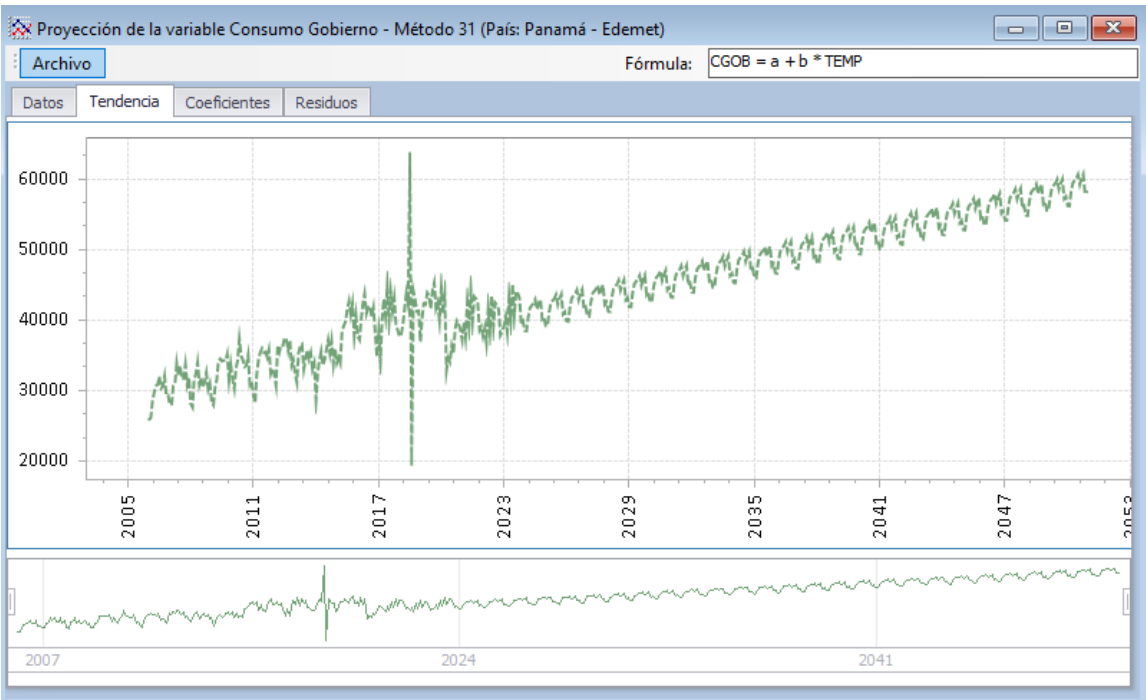
Estadístico - F =	31.3409748690437
Probabilidad Estadístico - F =	0.000000000000000000
R-Squared =	0.66319379998691
R-Squared Ajustado =	0.642033201045729

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	1.457	0.419	3.478	0
LOG(CIND(-12))	0.845	0.044	19.177	0
@seas(2)	-0.003	0.043	-0.072	0.942
@seas(3)	-0.004	0.043	-0.099	0.92
@seas(4)	-0.013	0.043	-0.319	0.75
@seas(5)	0	0.043	-0.007	0.994
@seas(6)	0.001	0.043	0.034	0.972
@seas(7)	0	0.043	0.007	0.993
@seas(8)	0	0.043	0.011	0.99
@seas(9)	-0.001	0.043	-0.04	0.968
@seas(10)	-0.003	0.043	-0.09	0.927
@seas(11)	-0.012	0.043	-0.288	0.773
@seas(12)	-0.001	0.043	-0.039	0.968

Indicadores de bondad estadísticos:

Root Mean Squared Error:	2725.09457494661
Mean Absolute Error:	2464.20730238721
Mean Absolute Percent Error:	20.142050494078
Theil Inequality Coefficient:	0.105971591756641
Covariance Proportion:	322151.13272598
Akaike information criterion:	-1.24973315095909
Schwarz information criterion:	-1.03828432782196
Hannan-Quinn information criterion:	-1.16419826731522
Durbin-Watson statistic:	0.36447195238446
Log-Likelihood:	140.472781397828

Consumo Gobierno



Proyección de la variable Consumo Gobierno - Método 31 (País: Panamá - Edemet)

Archivo Fórmula: $CGOB = a + b * TEMP$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CGOB

Estadístico - F = 30.7757301454222
Probabilidad Estadístico - F = 0.000000000000000000
R-Squared = 0.645296361738341
R-Squared Ajustado = 0.624328658983958

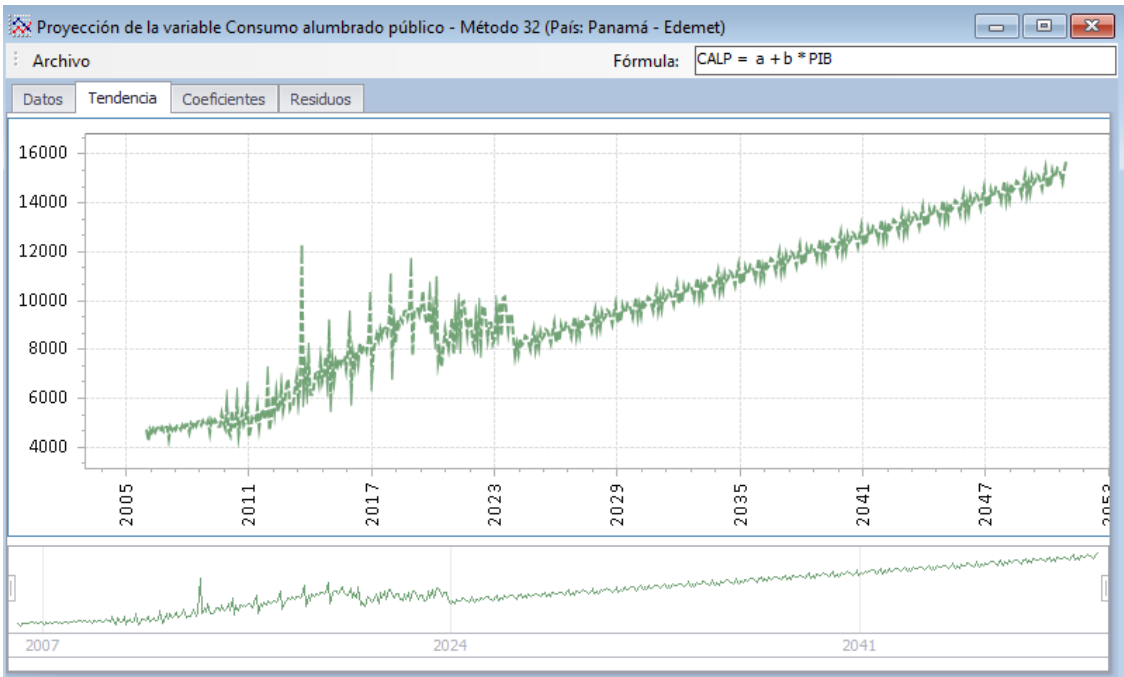
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	27660.159	807.898	34.237	0
@seas(2)	-108.877	1032.855	-0.105	0.916
@seas(3)	1890.889	1032.872	1.83	0.068
@seas(4)	3219.473	1032.9	3.116	0.002
@seas(5)	3528.179	1032.938	3.412	0
@seas(6)	3768.472	1032.988	3.648	0
@seas(7)	4287.427	1033.049	4.15	0
@seas(8)	2761.475	1033.122	2.672	0.008
@seas(9)	3601.849	1033.205	3.486	0
@seas(10)	4160.804	1033.299	4.026	0
@seas(11)	1154.247	1033.405	1.116	0.265
@seas(12)	1427.138	1033.521	1.38	0.168
@trend	59.937	3.386	17.699	0

Indicadores de bondad estadísticos:

Root Mean Squared Error: 3003.85995081097
Mean Absolute Error: 1932.43587644447
Mean Absolute Percent Error: 5.108080959644265
Theil Inequality Coefficient: 0.0407442879612184
Covariance Proportion: 16415455.3696776

Akaike information criterion: 18.9735542185706
Schwarz information criterion: 19.1766959745886
Hannan-Quinn information criterion: 19.0556239852637
Durbin-Watson statistic: 1.80175477480126
Log-Likelihood: -2036.14385560562

Consumo alumbrado



Proyección de la variable Consumo alumbrado público - Método 32 (País: Panamá - Edemet)

Archivo Fórmula: $CALP = a + b * PIB$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CALP

Estadístico - F = 94.908147886573
Probabilidad Estadístico - F = 0.000000000000000000
R-Squared = 0.84872171052327
R-Squared Ajustado = 0.839779151539424

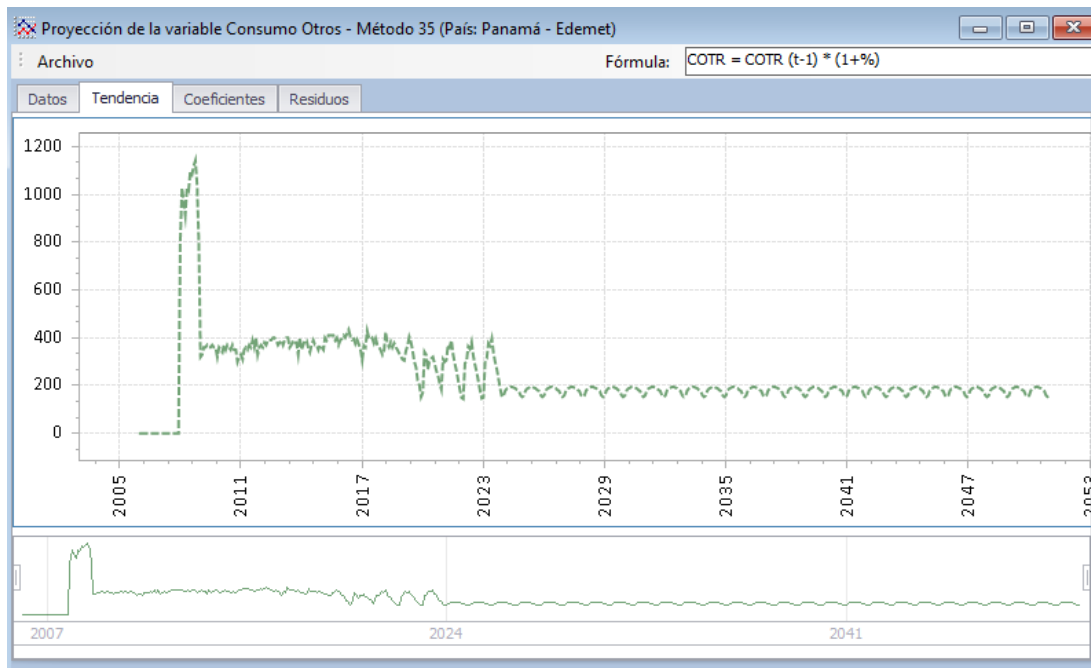
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	-360.11	269.544	-1.335	0.183
PIB	2.61	0.078	33.066	0
@seas(2)	510.171	253.815	2.01	0.045
@seas(3)	30.897	254.527	0.121	0.903
@seas(4)	730.054	253.823	2.876	0.004
@seas(5)	384.998	253.916	1.516	0.131
@seas(6)	478.161	254.138	1.881	0.061
@seas(7)	765.257	253.862	3.014	0.002
@seas(8)	668.297	254.366	2.627	0.005
@seas(9)	382.502	254.069	1.505	0.133
@seas(10)	37.699	255.011	0.147	0.882
@seas(11)	574.135	254.099	2.259	0.024
@seas(12)	942.666	254.349	3.706	0

Indicadores de bondad estadísticos:

Root Mean Squared Error: 738.167946240021
Mean Absolute Error: 562.099267209434
Mean Absolute Percent Error: 8.38116323423257
Theil Inequality Coefficient: 0.0503136738842028
Covariance Proportion: 3057025.57402094

Akaike information criterion: 16.1665901730625
Schwarz information criterion: 16.3697319290805
Hannan-Quinn information criterion: 16.2486599397557
Durbin-Watson statistic: 1.71386750579994
Log-Likelihood: -1732.99173869075

Consumo Otros



Proyección de la variable Consumo Otros - Método 35 (País: Panamá - Edemet)

Archivo Fórmula: $COTR = COTR(t-1) * (1+%)$

Datos **Tendencia** Coeficientes Residuos

Variable Dependiente: COTR

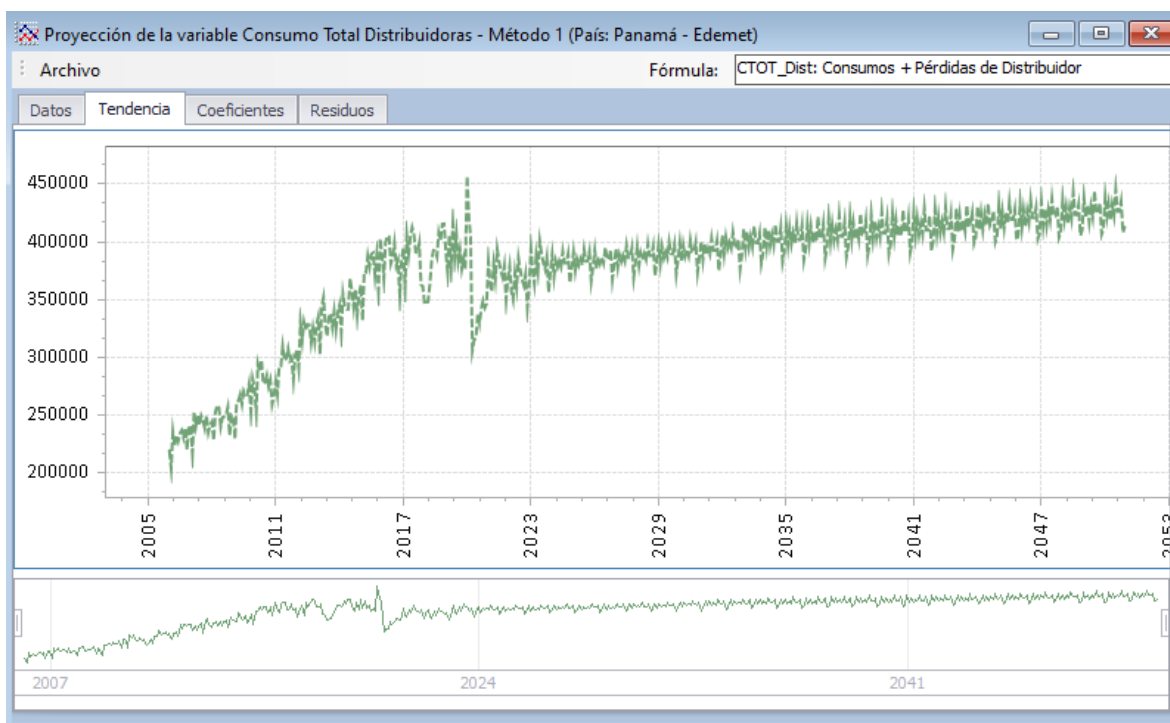
Estadístico - F = 0.570170424235923
 Probabilidad Estadístico - F = 0.86435992533782000000
 R-Squared = 0.0345833722436999
 R-Squared Ajustado = -0.0260710755734499

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	347.961	51.252	6.789	0
COTR(-12)	-0.099	0.065	-1.515	0.131
@seas(2)	46.872	66.585	0.703	0.482
@seas(3)	63.524	66.625	0.953	0.341
@seas(4)	70.58	66.635	1.059	0.29
@seas(5)	80.754	66.671	1.211	0.227
@seas(6)	80.09	66.662	1.201	0.231
@seas(7)	71.955	66.646	1.079	0.281
@seas(8)	66.254	66.636	0.994	0.321
@seas(9)	50.971	66.599	0.765	0.445
@seas(10)	41.459	66.583	0.622	0.534
@seas(11)	2.91	66.547	0.043	0.965
@seas(12)	-12.761	66.551	-0.191	0.848

Indicadores de bondad estadísticos:

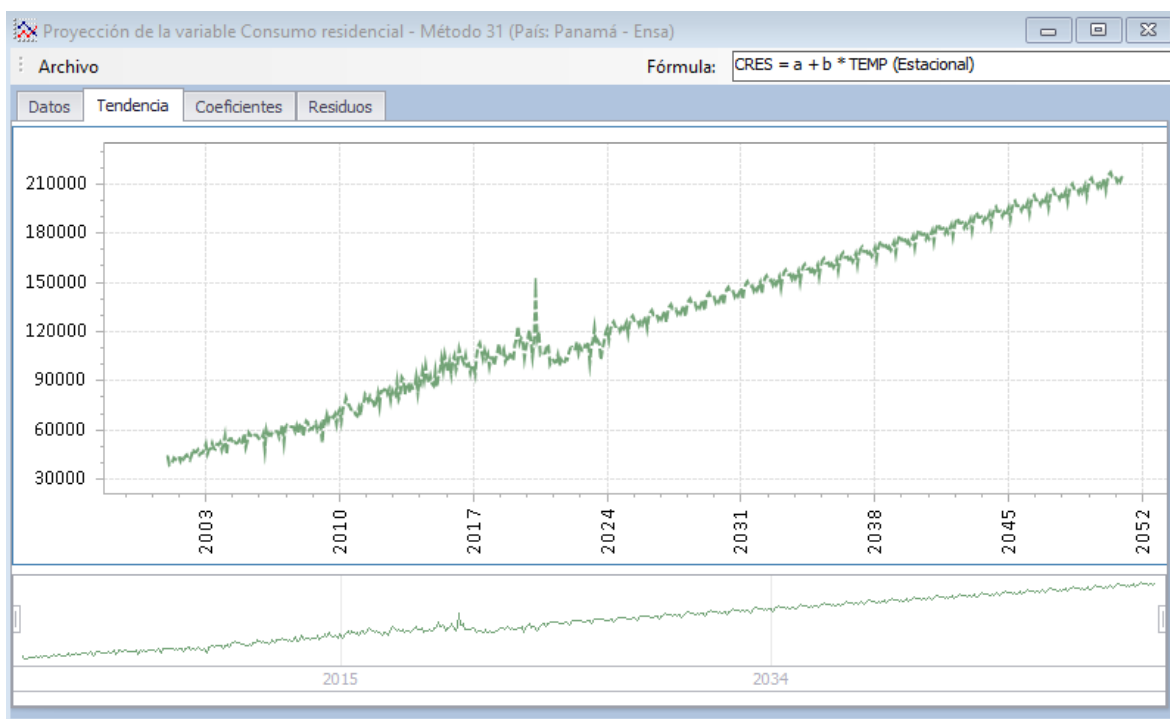
Root Mean Squared Error: 193.757408993502
 Mean Absolute Error: 98.4201462936191
 Mean Absolute Percent Error: 27.3944914151848
 Theil Inequality Coefficient: 0.251571333866078
 Covariance Proportion: -69.5402389183388
 Akaike information criterion: 13.435365149135
 Schwarz information criterion: 13.6468139722721
 Hannan-Quinn information criterion: 13.5209000327788
 Durbin-Watson statistic: 0.156095126949819
 Log-Likelihood: -1357.40724521177

Consumo Total

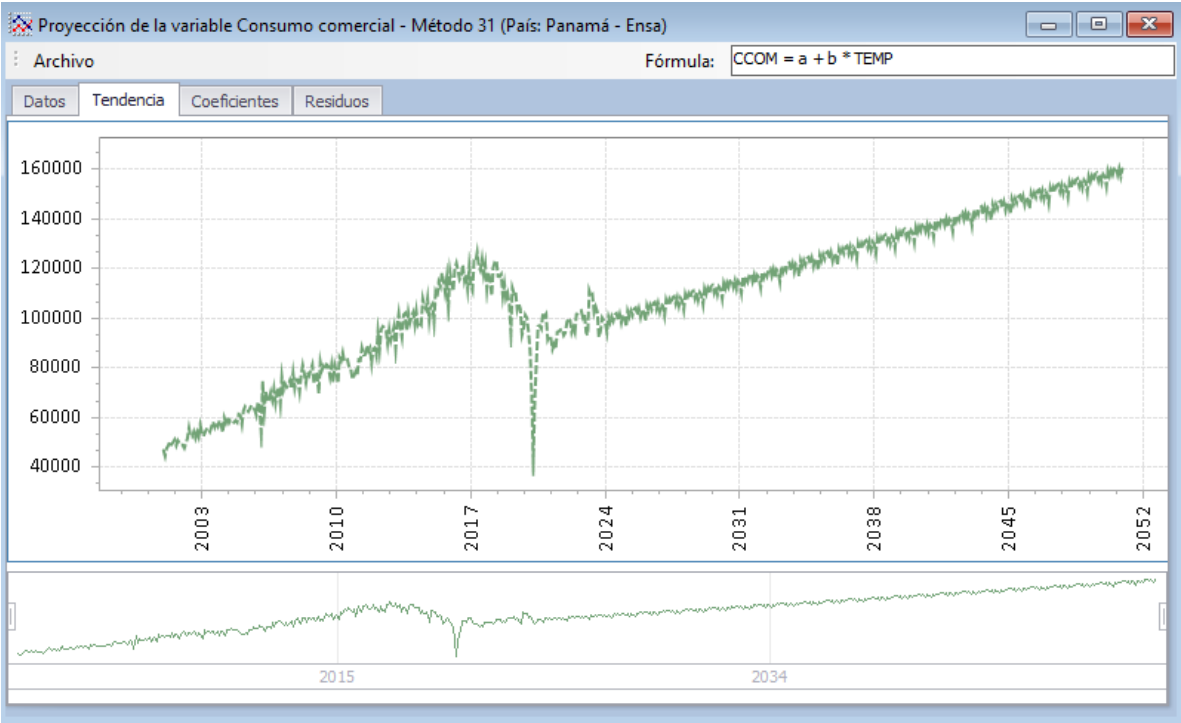


ENSA

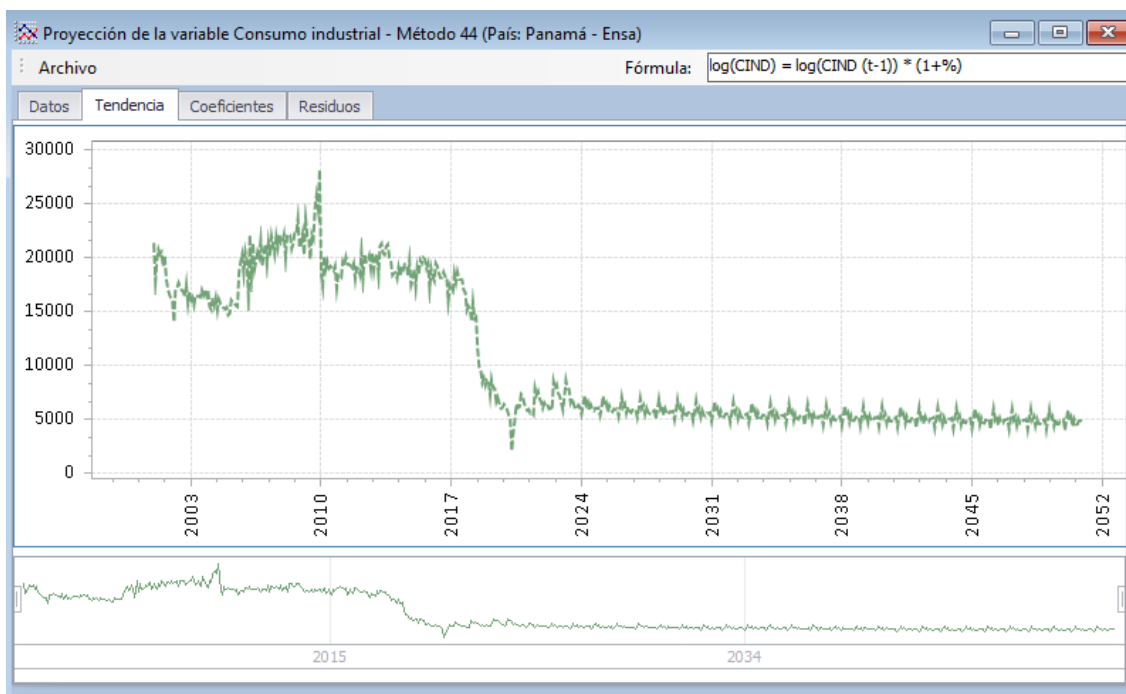
Consumo Residencial



Consumo Comercial



Consumo Industrial



Proyección de la variable Consumo industrial - Método 44 (País: Panamá - Ensa)

Archivo Fórmula: $\log(\text{CIND}) = \log(\text{CIND}(t-1)) * (1+\%)$

Datos **Tendencia** **Coeficientes** Residuos

Variable Dependiente: CIND

Estadístico - F = 82.7018355451883
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.79813724246379
 R-Squared Ajustado = 0.788486938154572

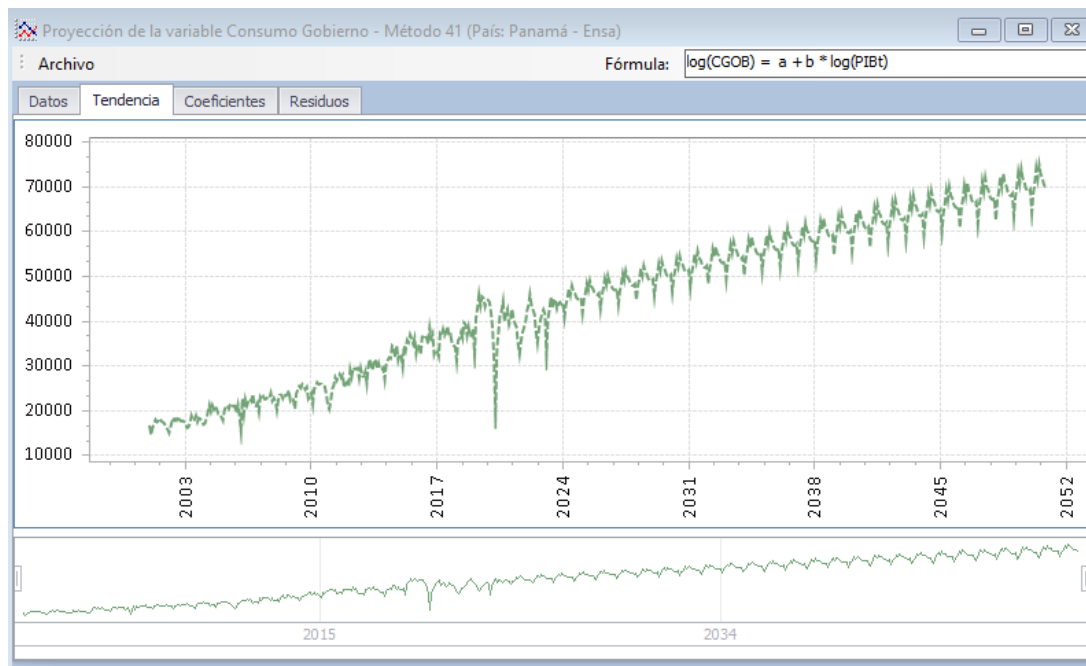
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	0.448	0.294	1.523	0.129
LOG(CIND(-12))	0.947	0.03	31.417	0
@seas(2)	0.013	0.065	0.203	0.838
@seas(3)	0.022	0.065	0.338	0.734
@seas(4)	0.011	0.065	0.173	0.862
@seas(5)	0.015	0.065	0.229	0.818
@seas(6)	0.004	0.065	0.073	0.941
@seas(7)	0.013	0.065	0.199	0.841
@seas(8)	0.007	0.065	0.112	0.91
@seas(9)	0.007	0.065	0.117	0.906
@seas(10)	0.011	0.065	0.18	0.856
@seas(11)	0.012	0.065	0.182	0.855
@seas(12)	0.013	0.065	0.202	0.84

Indicadores de bondad estadísticos:

Root Mean Squared Error: 6170.31709407811
 Mean Absolute Error: 5241.82611410533
 Mean Absolute Percent Error: 45.8206875246295
 Theil Inequality Coefficient: 0.211799796803399
 Covariance Proportion: 7829019.61939109

Akaike information criterion: -0.163689482243491
 Schwarz information criterion: 0.0123989205629562
 Hannan-Quinn information criterion: -0.09293180730066
 Durbin-Watson statistic: 0.340266501141756
 Log-Likelihood: 34.6070116561408

Consumo Gobierno



Proyección de la variable Consumo Gobierno - Método 41 (País: Panamá - Ensa)

Archivo Fórmula: $\log(\text{CJOB}) = a + b * \log(\text{PIBt})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CJOB

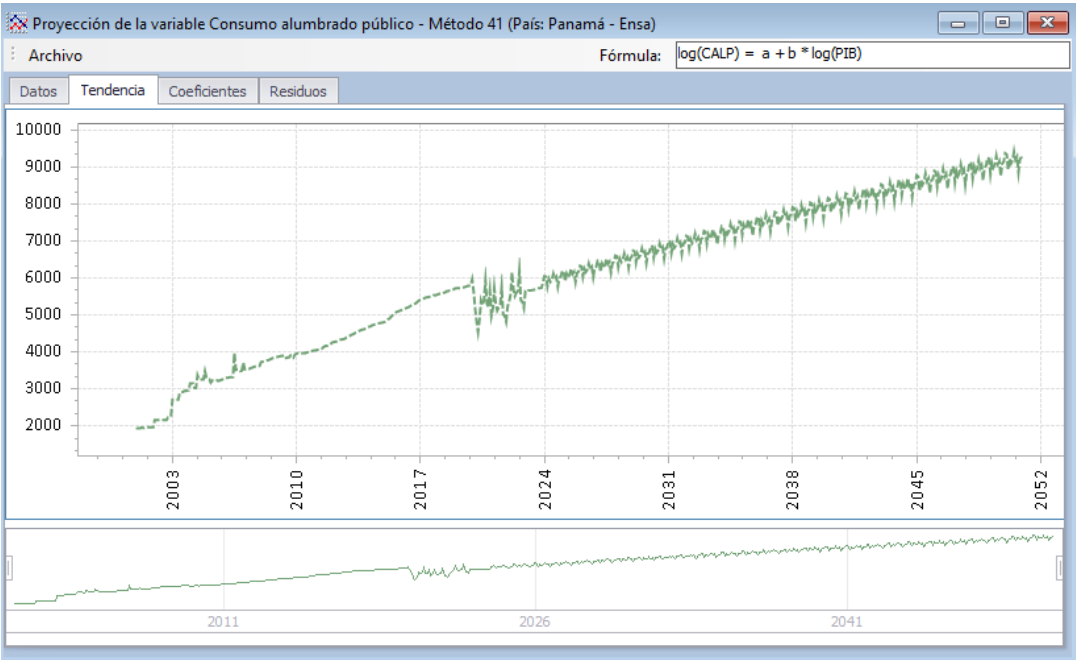
Estadístico - F =	254.006008660549
Probabilidad Estadístico - F =	0.00000000000000000000
R-Squared =	0.920569534052699
R-Squared Ajustado =	0.91694533028324

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	4.565	0.104	43.607	0
LOG(PIB)	0.734	0.013	54.482	0
@seas(2)	-0.078	0.026	-2.997	0.002
@seas(3)	-0.015	0.026	-0.578	0.563
@seas(4)	0.016	0.026	0.624	0.533
@seas(5)	0.061	0.026	2.329	0.02
@seas(6)	0.028	0.026	1.07	0.285
@seas(7)	0.069	0.026	2.648	0.008
@seas(8)	0.04	0.026	1.525	0.128
@seas(9)	0.029	0.026	1.138	0.256
@seas(10)	0.007	0.026	0.299	0.765
@seas(11)	-0.002	0.026	-0.085	0.932
@seas(12)	-0.005	0.026	-0.225	0.822

Indicadores de bondad estadísticos:

Root Mean Squared Error:	2876.14884595891
Mean Absolute Error:	1923.78823336067
Mean Absolute Percent Error:	6.15712010144489
Theil Inequality Coefficient:	0.0476452098244485
Covariance Proportion:	65883969.2232119
Akaike information criterion:	-1.946780593796
Schwarz information criterion:	-1.77625446606294
Hannan-Quinn information criterion:	-1.87835132664269
Durbin-Watson statistic:	0.675303353798223
Log-Likelihood:	281.655721943847

Consumo alumbrado



Proyección de la variable Consumo alumbrado público - Método 41 (País: Panamá - Ensa)

Archivo Fórmula: $\log(\text{CALP}) = a + b * \log(\text{PIB})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CALP

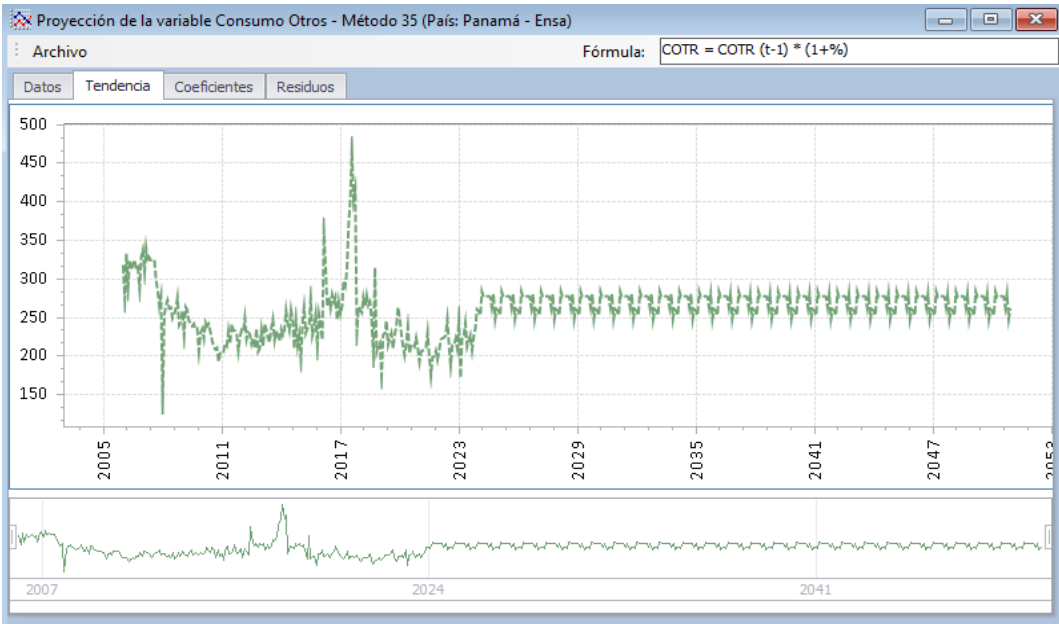
Estadístico - F =	223.450032289889
Probabilidad Estadístico - F =	0.000000000000000000
R-Squared =	0.910677908779515
R-Squared Ajustado =	0.906602376100254

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	2.88	0.106	27.005	0
LOG(PIB)	0.71	0.013	51.732	0
@seas(2)	-0.004	0.026	-0.166	0.867
@seas(3)	-0.051	0.026	-1.902	0.058
@seas(4)	-0.017	0.026	-0.66	0.509
@seas(5)	-0.033	0.026	-1.259	0.208
@seas(6)	-0.025	0.026	-0.952	0.341
@seas(7)	-0.001	0.026	-0.043	0.965
@seas(8)	-0.026	0.026	-0.991	0.327
@seas(9)	-0.018	0.026	-0.691	0.489
@seas(10)	-0.065	0.026	-2.426	0.015
@seas(11)	-0.026	0.026	-1.003	0.316
@seas(12)	-0.023	0.026	-0.885	0.376

Indicadores de bondad estadísticos:

Root Mean Squared Error:	278.365617835094
Mean Absolute Error:	222.043461522496
Mean Absolute Percent Error:	6.23336701115488
Theil Inequality Coefficient:	0.0813639554103879
Covariance Proportion:	1229403.22211037
Akaike information criterion:	-1.90923720026303
Schwarz information criterion:	-1.73871107252997
Hannan-Quinn information criterion:	-1.84080793310972
Durbin-Watson statistic:	0.163179665795443
Log-Likelihood:	276.474733636297

Consumo Otros



Proyección de la variable Consumo Otros - Método 35 (País: Panamá - Ensa)

Archivo Fórmula: $COTR = COTR(t-1) * (1+\%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: COTR

Estadístico - F = 4.12914670412998
Probabilidad Estadístico - F = 0.00000960182265827130
R-Squared = 0.205985490723237
R-Squared Ajustado = 0.156099762391713

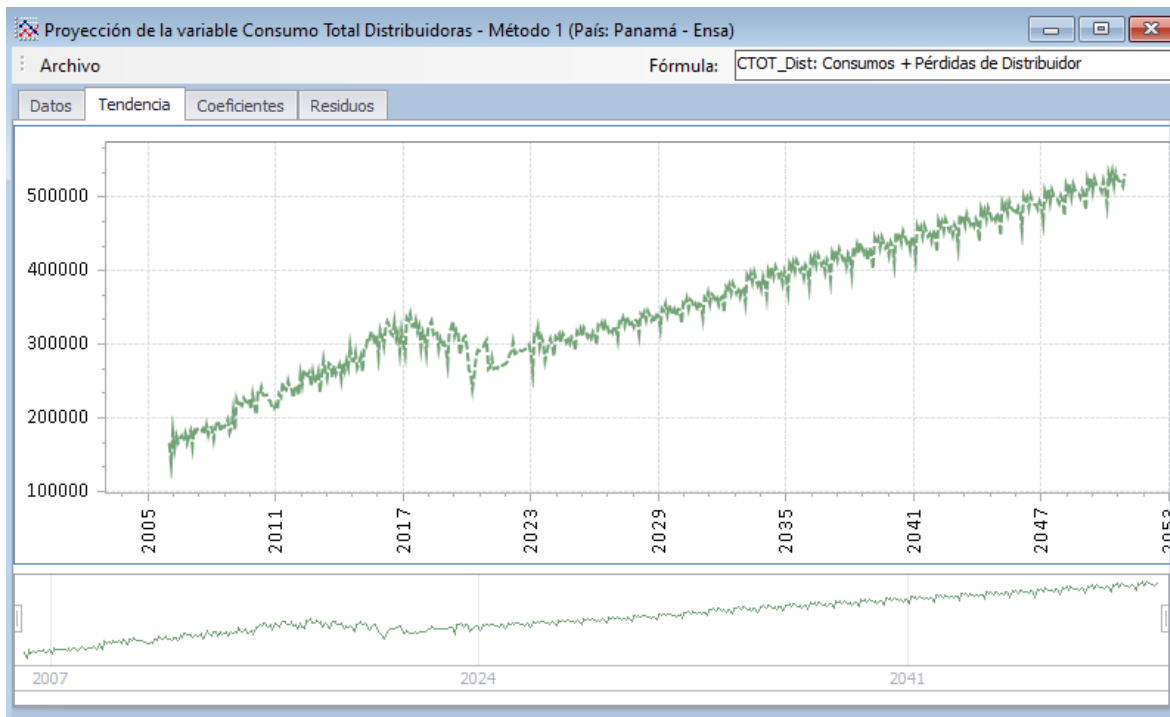
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	145.043	17.638	8.223	0
COTR(-12)	0.369	0.062	5.886	0
@seas(2)	-3.315	13.476	-0.246	0.805
@seas(3)	14.115	13.574	1.039	0.299
@seas(4)	10.039	13.509	0.743	0.458
@seas(5)	10.605	13.522	0.784	0.433
@seas(6)	10.647	13.532	0.786	0.432
@seas(7)	10.764	13.533	0.795	0.427
@seas(8)	10.224	13.527	0.755	0.45
@seas(9)	2.477	13.483	0.183	0.854
@seas(10)	12.37	13.543	0.913	0.362
@seas(11)	-5.96	13.493	-0.441	0.659
@seas(12)	1.199	13.476	0.089	0.929

Indicadores de bondad estadísticos:

Root Mean Squared Error: 35.2372064987288
Mean Absolute Error: 26.4459048584609
Mean Absolute Percent Error: 10.8392755199253
Theil Inequality Coefficient: 0.0802617997049412
Covariance Proportion: 215.271537316389

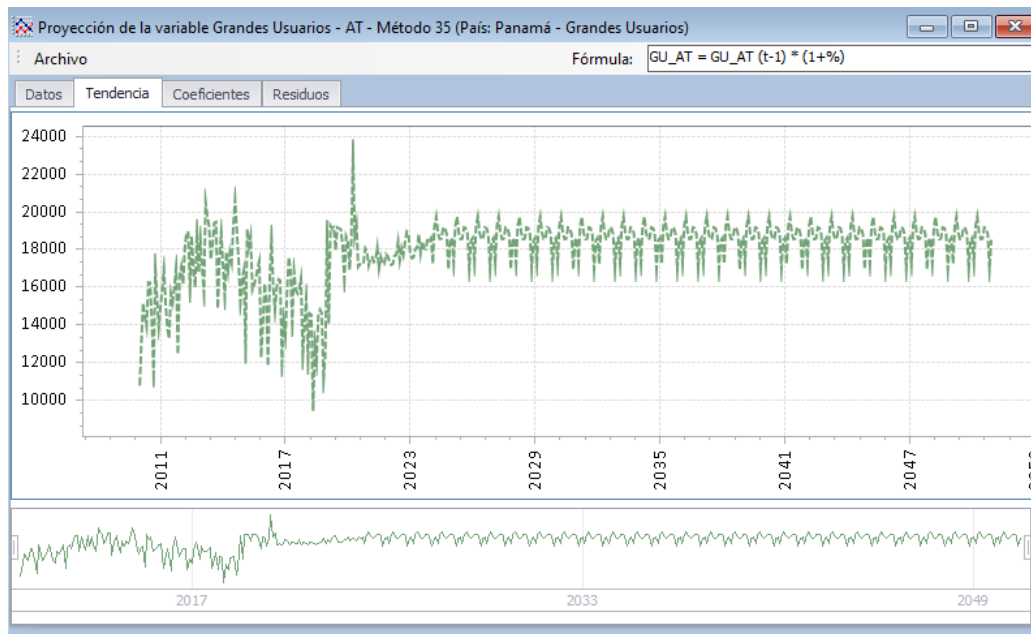
Akaike information criterion: 10.2413119336558
Schwarz information criterion: 10.4527607567929
Hannan-Quinn information criterion: 10.3268468172996
Durbin-Watson statistic: 0.621101676049713
Log-Likelihood: -1031.61381723289

Consumo Total



GRANDES USUARIOS

Alta Tensión



Proyección de la variable Grandes Usuarios - AT - Método 35 (País: Panamá - Grandes Usuarios)

Archivo F6rmula: $GU_AT = GU_AT(t-1) * (1+%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: GU_AT

Estadístico - F = 2.46180976531014
 Probabilidad Estadístico - F = 0.00597387588624928000
 R-Squared = 0.171214925097017
 R-Squared Ajustado = 0.101666527203061

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GU_AT(-12)	0.249	0.076	3.274	0.001
c	12716.503	1353.164	9.397	0
@seas(2)	-931.554	787.242	-1.183	0.238
@seas(3)	427.701	787.645	0.543	0.587
@seas(4)	768.41	790.573	0.971	0.332
@seas(5)	187.518	784.784	0.238	0.811
@seas(6)	-42.636	784.307	-0.054	0.956
@seas(7)	-26.727	784.721	-0.034	0.972
@seas(8)	375.343	785.965	0.482	0.63
@seas(9)	351.148	784.642	0.447	0.655
@seas(10)	146.102	786.156	0.185	0.852
@seas(11)	-1131.837	788.461	-1.435	0.153
@seas(12)	-100.638	783.752	-0.128	0.898

Indicadores de bondad estadísticos:

Root Mean Squared Error: 1961.68616656039
 Mean Absolute Error: 1494.63081554334
 Mean Absolute Percent Error: 8.51924762926627
 Theil Inequality Coefficient: 0.0579382894430039
 Covariance Proportion: 536082.660763953
 Akaike information criterion: 18.1175275068187
 Schwarz information criterion: 18.3716821740894
 Hannan-Quinn information criterion: 18.2207541283961
 Durbin-Watson statistic: 0.930794204404829
 Log-Likelihood: -1400.16714553185

Baja Tensión



Pérdidas Técnicas



Proyección de la variable Pérdidas de Energía - Técnicas - Método 31 (País: Panamá - Grandes Usuarios)

Archivo Fórmula: $PERT_GU = a + b * TEMP$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: PERT_GU

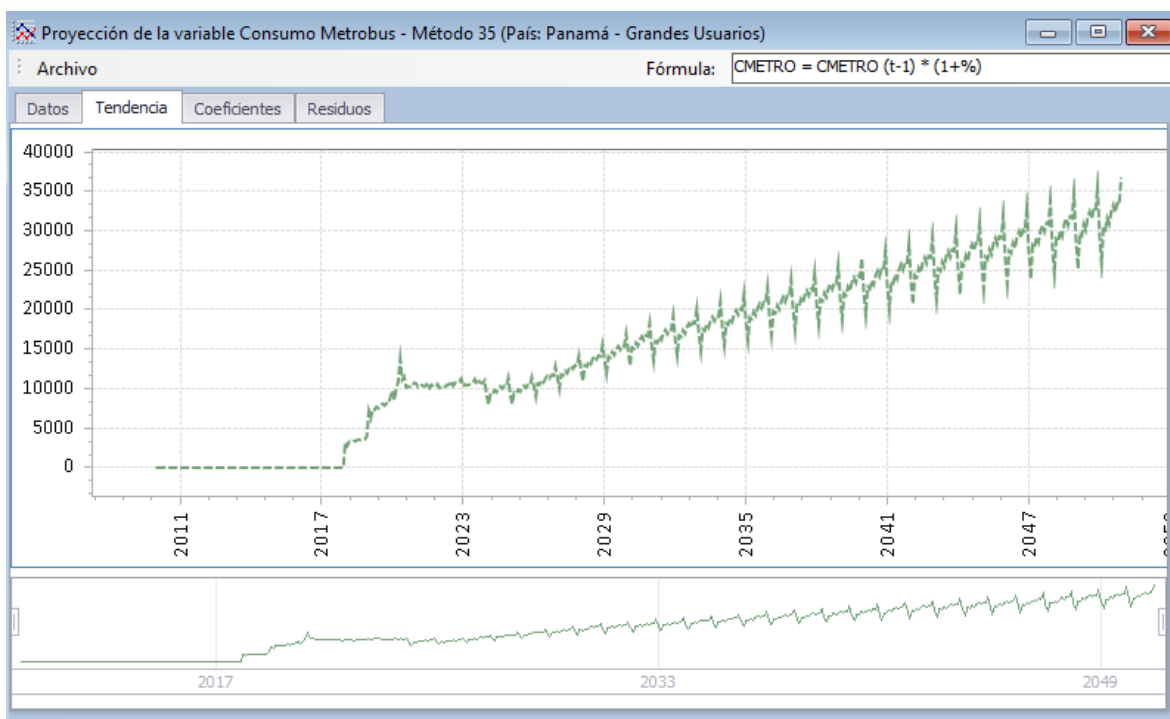
Estadístico - F = 35.2907844071458
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.763746616336222
 R-Squared Ajustado = 0.742105085008242

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	0.024	0.009	2.479	0.014
@seas (2)	-0.011	0.012	-0.888	0.375
@seas (3)	0	0.012	-0.005	0.995
@seas (4)	-0.013	0.012	-1.09	0.277
@seas (5)	-0.017	0.012	-1.388	0.167
@seas (6)	-0.012	0.012	-0.964	0.336
@seas (7)	-0.01	0.012	-0.802	0.423
@seas (8)	-0.012	0.012	-0.969	0.334
@seas (9)	-0.011	0.012	-0.938	0.349
@seas (10)	-0.017	0.012	-1.367	0.173
@seas (11)	-0.014	0.012	-1.14	0.256
@seas (12)	-0.012	0.012	-0.978	0.329
@trend	0.001	0	20.501	0

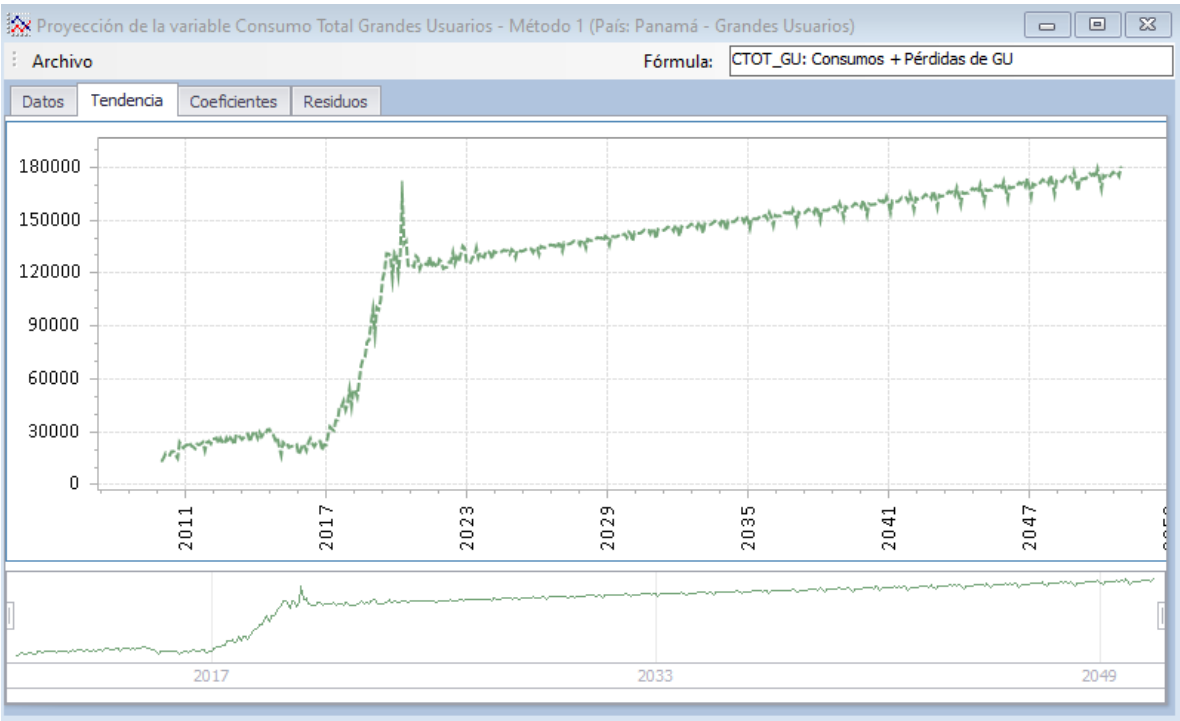
Indicadores de bondad estadísticos:

Root Mean Squared Error: 0.0296655138975939
 Mean Absolute Error: 0.0257720838189508
 Mean Absolute Percent Error: 40.66048265206
 Theil Inequality Coefficient: 0.123945980616611
 Covariance Proportion: 0.00284495246266079
 Akaike information criterion: -4.0171074901502
 Schwarz information criterion: -3.74899934504958
 Hannan-Quinn information criterion: -3.90816346846924
 Durbin-Watson statistic: 0.17456252372815
 Log-Likelihood: 302.231739290814

Consumo del Metro de Panamá



CONSUMO TOTAL DEL PAÍS



Proyección de la Demanda en el escenario Optimista.

EDECHI

Consumo Residencial



Proyección de la variable Consumo residencial - Método 39 (País: Panamá - Edechi)

Archivo Fórmula: $\log(\text{CRES}) = a + b * \log(\text{TEMP})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CRES

Estadístico - F = 165.020651237691
 Probabilidad Estadístico - F = 0.00000000000000000000
 R-Squared = 0.917100761307356
 R-Squared Ajustado = 0.91154327044528

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@trend	0.005	0	44.182	0
c	9.43	0.024	384.592	0
@seas(2)	-0.094	0.031	-3.01	0.002
@seas(3)	0.021	0.031	0.672	0.502
@seas(4)	0.004	0.031	0.143	0.886
@seas(5)	-0.006	0.031	-0.196	0.844
@seas(6)	-0.05	0.031	-1.61	0.109
@seas(7)	-0.058	0.031	-1.874	0.062
@seas(8)	-0.063	0.031	-2.019	0.044
@seas(9)	-0.1	0.031	-3.185	0.001
@seas(10)	-0.066	0.031	-2.12	0.035
@seas(11)	-0.104	0.031	-3.336	0.001
@seas(12)	-0.055	0.031	-1.758	0.08

Indicadores de bondad estadísticos:

Root Mean Squared Error: 2142.79220380218
 Mean Absolute Error: 1426.81609044075
 Mean Absolute Percent Error: 6.29499103620529
 Theil Inequality Coefficient: 0.0510872581531745
 Covariance Proportion: 30348222.342868

Akaike information criterion: -1.94012729266102
 Schwarz information criterion: -1.71956771017998
 Hannan-Quinn information criterion: -1.85075904549089
 Durbin-Watson statistic: 0.233301988648022
 Log-Likelihood: 199.252220095458

Consumo Comercial



Proyección de la variable Consumo comercial - Método 10 (País: Panamá - Edechi)

Archivo Fórmula: $\log(\text{CCOM}) = a + b * \log(\text{TEMP})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CCOM

Estadístico - F = 808.580189624982
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.809729852279941
 R-Squared Ajustado = 0.808728430449835

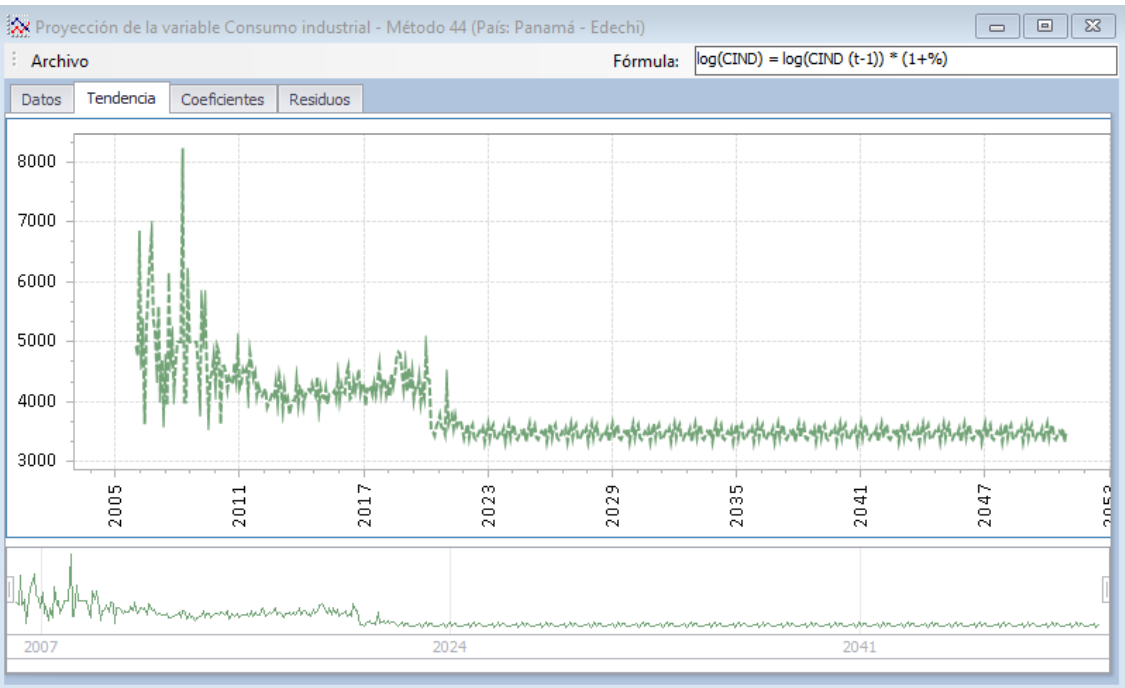
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	9.368	0.02	449.002	0
@trend	0.005	0	28.435	0

Indicadores de bondad estadísticos:

Root Mean Squared Error: 3527.18719763434
 Mean Absolute Error: 2581.82998173511
 Mean Absolute Percent Error: 11.4304304758163
 Theil Inequality Coefficient: 0.082195599079356
 Covariance Proportion: 32539120.5906986

Akaike information criterion: -1.01211260939924
 Schwarz information criterion: -0.978180365940615
 Hannan-Quinn information criterion: -0.998369802142294
 Durbin-Watson statistic: 0.383947587407405
 Log-Likelihood: 99.1628105023268

Consumo Industrial



Proyección de la variable Consumo industrial - Método 44 (País: Panamá - Edechi)

Archivo Fórmula: $\log(\text{CIND}) = \log(\text{CIND}(t-1)) * (1+\%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CIND

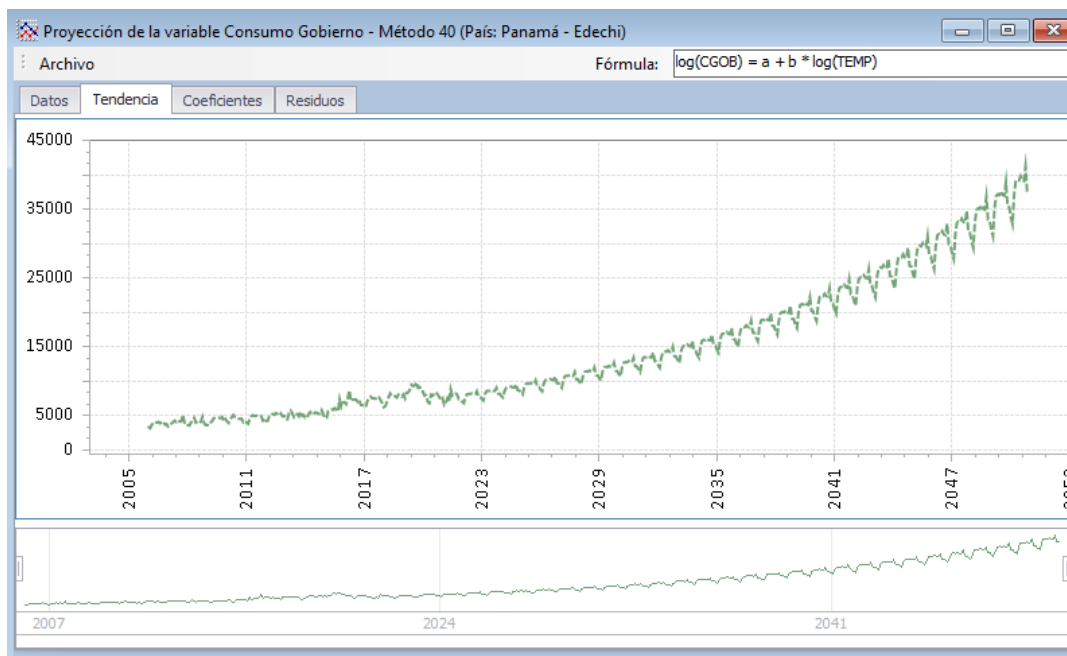
Estadístico - F =	3.6657818500008
Probabilidad Estadístico - F =	0.00006698911555305850
R-Squared =	0.208490975902804
R-Squared Ajustado =	0.151616075967676

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	5.384	0.547	9.826	0
LOG(CIND(-12))	0.358	0.065	5.5	0
@seas(2)	-0.042	0.037	-1.135	0.257
@seas(3)	-0.014	0.037	-0.389	0.697
@seas(4)	-0.002	0.037	-0.069	0.944
@seas(5)	-0.042	0.037	-1.125	0.261
@seas(6)	-0.048	0.037	-1.284	0.2
@seas(7)	-0.035	0.037	-0.941	0.347
@seas(8)	-0.022	0.037	-0.606	0.544
@seas(9)	-0.029	0.037	-0.795	0.427
@seas(10)	-0.013	0.037	-0.371	0.711
@seas(11)	-0.055	0.037	-1.483	0.139
@seas(12)	-0.024	0.037	-0.646	0.518

Indicadores de bondad estadísticos:

Root Mean Squared Error:	488.051115993609
Mean Absolute Error:	312.951178555679
Mean Absolute Percent Error:	7.30140208193599
Theil Inequality Coefficient:	0.0567657770747562
Covariance Proportion:	32094.402984023
Akaike information criterion:	-1.65141690939645
Schwarz information criterion:	-1.42081447016549
Hannan-Quinn information criterion:	-1.55791755023449
Durbin-Watson statistic:	1.51591334742001
Log-Likelihood:	161.62752184568

Consumo Gobierno



Proyección de la variable Consumo Gobierno - Método 40 (País: Panamá - Edechi)

Archivo Fórmula: $\log(\text{CJOB}) = a + b * \log(\text{TEMP})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CJOB

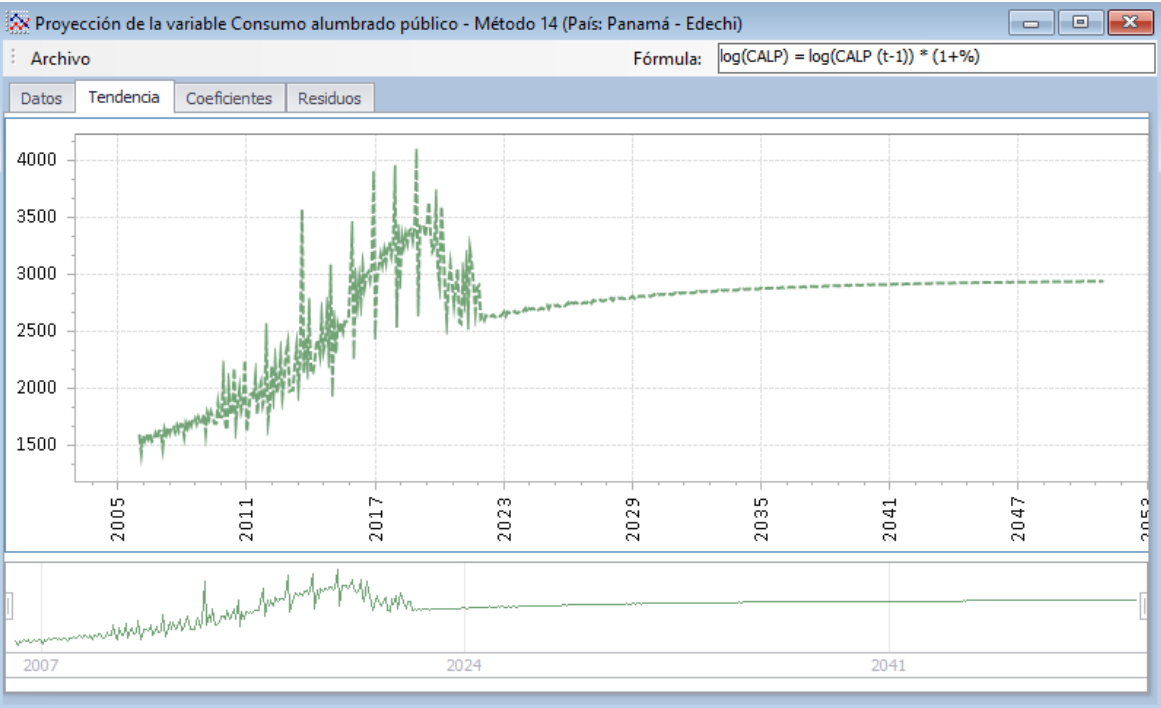
Estadístico - F = 135.868412760729
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.901073324208784
 R-Squared Ajustado = 0.89444136828982

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	8.1	0.025	321.171	0
@trend	0.004	0	39.207	0
@seas(2)	-0.034	0.032	-1.058	0.291
@seas(3)	0.078	0.032	2.44	0.015
@seas(4)	0.127	0.032	3.963	0
@seas(5)	0.13	0.032	4.045	0
@seas(6)	0.122	0.032	3.803	0
@seas(7)	0.133	0.032	4.138	0
@seas(8)	0.113	0.032	3.527	0
@seas(9)	0.106	0.032	3.286	0.001
@seas(10)	0.153	0.032	4.753	0
@seas(11)	0.054	0.032	1.677	0.095
@seas(12)	0.046	0.032	1.436	0.152

Indicadores de bondad estadísticos:

Root Mean Squared Error: 609.807020544616
 Mean Absolute Error: 443.982596814775
 Mean Absolute Percent Error: 7.03698288704284
 Theil Inequality Coefficient: 0.0504653272251897
 Covariance Proportion: 2365472.26428092
 Akaike information criterion: -1.88361656482872
 Schwarz information criterion: -1.66305698234767
 Hannan-Quinn information criterion: -1.79428831765858
 Durbin-Watson statistic: 0.505450547673965
 Log-Likelihood: 193.827190223557

Consumo alumbrado



Proyección de la variable Consumo alumbrado público - Método 14 (País: Panamá - Edechi)

Archivo Fórmula: $\log(\text{CALP}) = \log(\text{CALP}(t-1)) * (1+\%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CALP

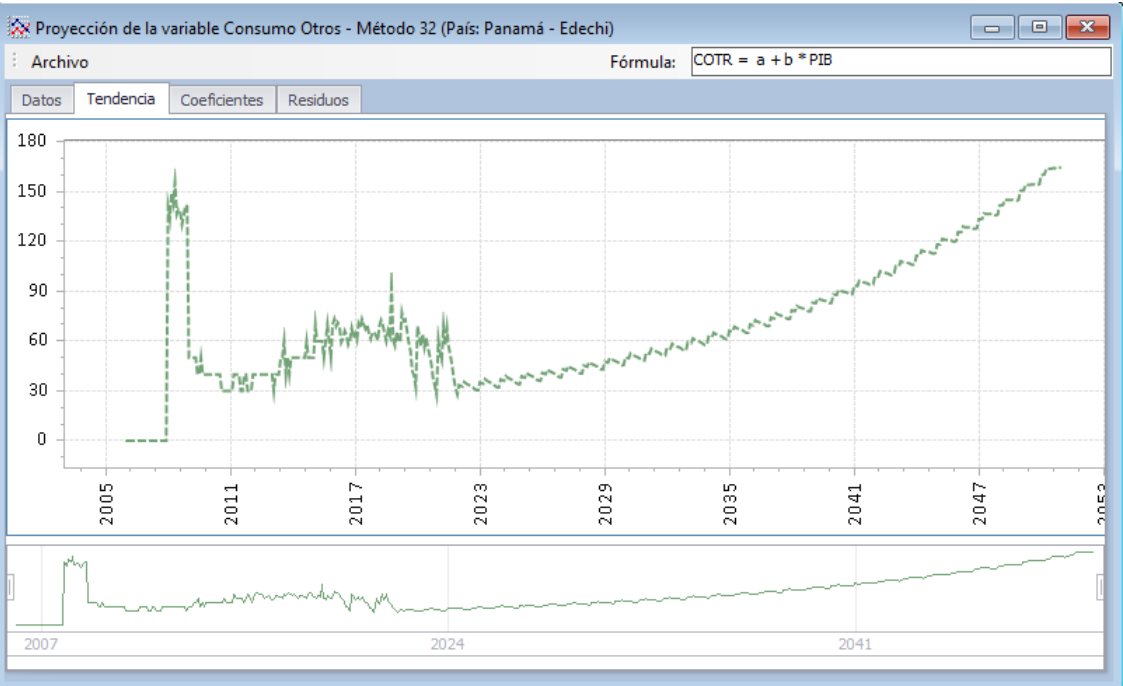
Estadístico - F =	1290.63932334586
Probabilidad Estadístico - F =	0.00000000000000000000
R-Squared =	0.878799377648094
R-Squared Ajustado =	0.878118475275331

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	0.894	0.191	4.666	0
CALP(-12)	0.889	0.024	35.925	0

Indicadores de bondad estadísticos:

Root Mean Squared Error:	365.858768610661
Mean Absolute Error:	280.573344832396
Mean Absolute Percent Error:	11.3651504505046
Theil Inequality Coefficient:	0.07364734409188
Covariance Proportion:	203534.593375636
Akaike information criterion:	-1.94709568708702
Schwarz information criterion:	-1.91161838874379
Hannan-Quinn information criterion:	-1.93271117029287
Durbin-Watson statistic:	1.51188722662189
Log-Likelihood:	177.238611837832

Consumo Otros



Proyección de la variable Consumo Otros - Método 32 (País: Panamá - Edechi)

Archivo Fórmula: $COTR = a + b * PIB$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: COTR

Estadístico - F = 1.55092354224893
Probabilidad Estadístico - F = 0.10995018785380100000
R-Squared = 0.0941803580592658
R-Squared Ajustado = 0.0334550189347474

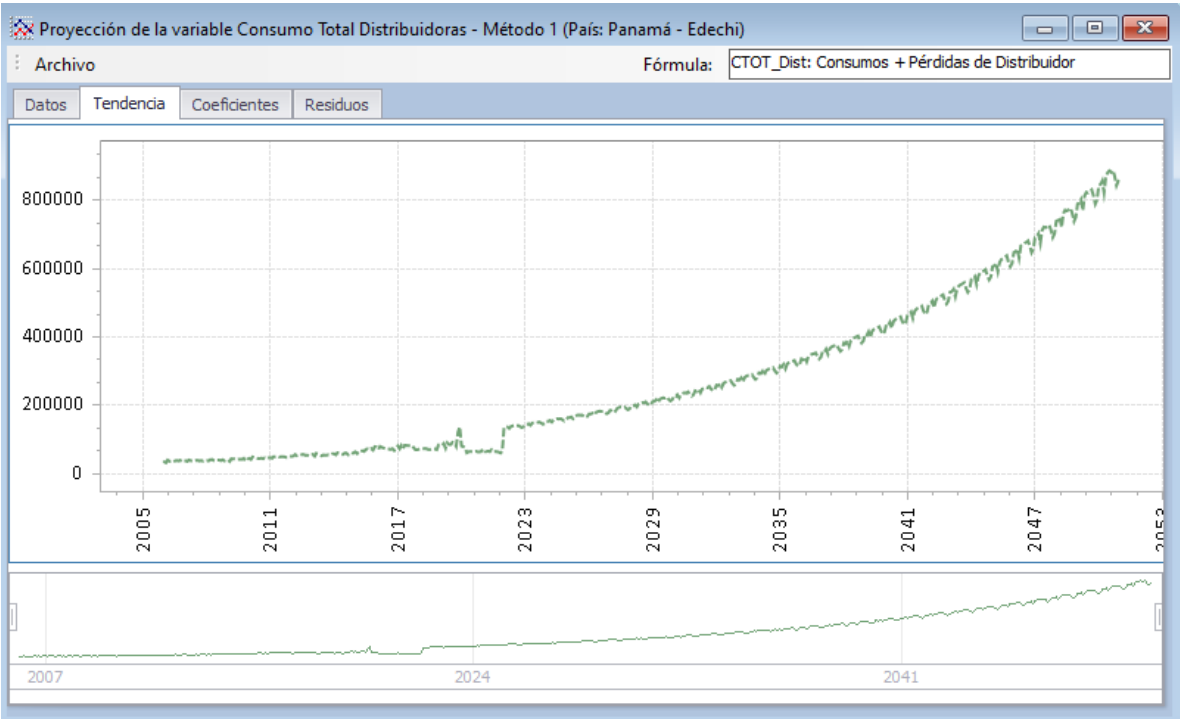
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	17.087	11.453	1.491	0.137
PIB	0.014	0.003	4.081	0
@seas(2)	-1.214	10.873	-0.111	0.911
@seas(3)	-2.259	10.902	-0.207	0.836
@seas(4)	2.994	10.873	0.275	0.783
@seas(5)	0.996	10.877	0.091	0.927
@seas(6)	-0.475	10.886	-0.043	0.965
@seas(7)	-1.874	10.875	-0.172	0.863
@seas(8)	-3.275	10.894	-0.3	0.764
@seas(9)	-4.874	10.883	-0.447	0.654
@seas(10)	-7.312	10.92	-0.669	0.503
@seas(11)	-8.859	10.884	-0.813	0.416
@seas(12)	-9.246	10.893	-0.848	0.397

Indicadores de bondad estadísticos:

Root Mean Squared Error: 29.6945681385315
Mean Absolute Error: 17.3005470976277
Mean Absolute Percent Error: 40.912521906198
Theil Inequality Coefficient: 0.267678368478155
Covariance Proportion: 91.6795832630499

Akaike information criterion: 9.75522200932307
Schwarz information criterion: 9.97578159180412
Hannan-Quinn information criterion: 9.84455025649321
Durbin-Watson statistic: 0.230156789050635
Log-Likelihood: -923.501312895015

Consumo Total



EDEMET

Consumo Residencial



Proyección de la variable Consumo residencial - Método 33 (País: Panamá - Edemet)

Archivo F6rmula: $CRES = a + b * PIB + c * POB$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CRES

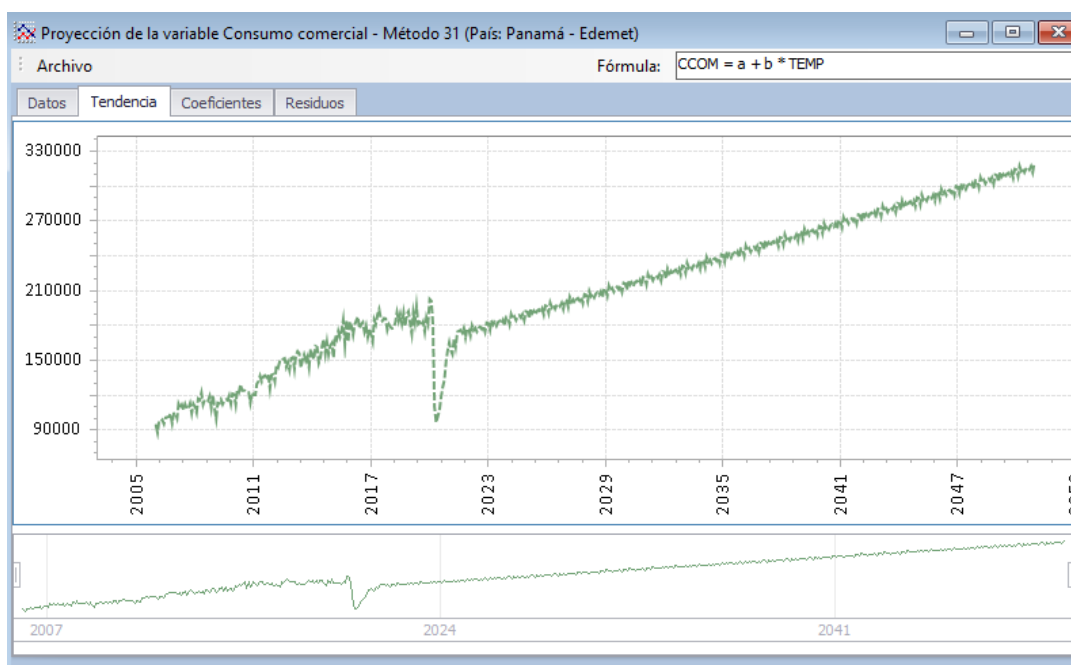
Estadístico - F =	58.7022496517536
Probabilidad Estadístico - F =	0.00000000000000000000
R-Squared =	0.797379974976155
R-Squared Ajustado =	0.783796509611428

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PIB/POB	118336385.073	4513369.629	26.219	0
c	-21156.959	5131.939	-4.122	0
@seas(2)	-7933.813	3763.248	-2.108	0.036
@seas(3)	-10485.377	3783.432	-2.771	0.006
@seas(4)	2.039	3763.42	0	0.999
@seas(5)	1184.189	3765.45	0.314	0.753
@seas(6)	-4562.329	3770.615	-1.209	0.227
@seas(7)	-1079.871	3763.995	-0.286	0.774
@seas(8)	-6487.718	3774.664	-1.718	0.087
@seas(9)	-7093.39	3767.87	-1.882	0.061
@seas(10)	-12687.362	3790.632	-3.347	0
@seas(11)	-10345.121	3768.007	-2.745	0.006
@seas(12)	-6976.624	3771.976	-1.849	0.066

Indicadores de bondad estadísticos:

Root Mean Square Error:	10277.4085770459
Mean Absolute Error:	6978.34183070961
Mean Absolute Percent Error:	7.4351774269239
Theil Inequality Coefficient:	0.0536745118185689
Covariance Proportion:	415671457.752879
Akaike information criterion:	21.4487005796474
Schwarz information criterion:	21.6692601621285
Hannan-Quinn information criterion:	21.5380288268176
Durbin-Watson statistic:	0.280606839425623
Log-Likelihood:	-2046.07525564615

Consumo Comercial



Proyección de la variable Consumo comercial - Método 31 (País: Panamá - Edemet)

Archivo Fórmula: $CCOM = a + b * TEMP$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CCOM

Estadístico - F = 27.72647480402
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.650197753912653
 R-Squared Ajustado = 0.626747324007356

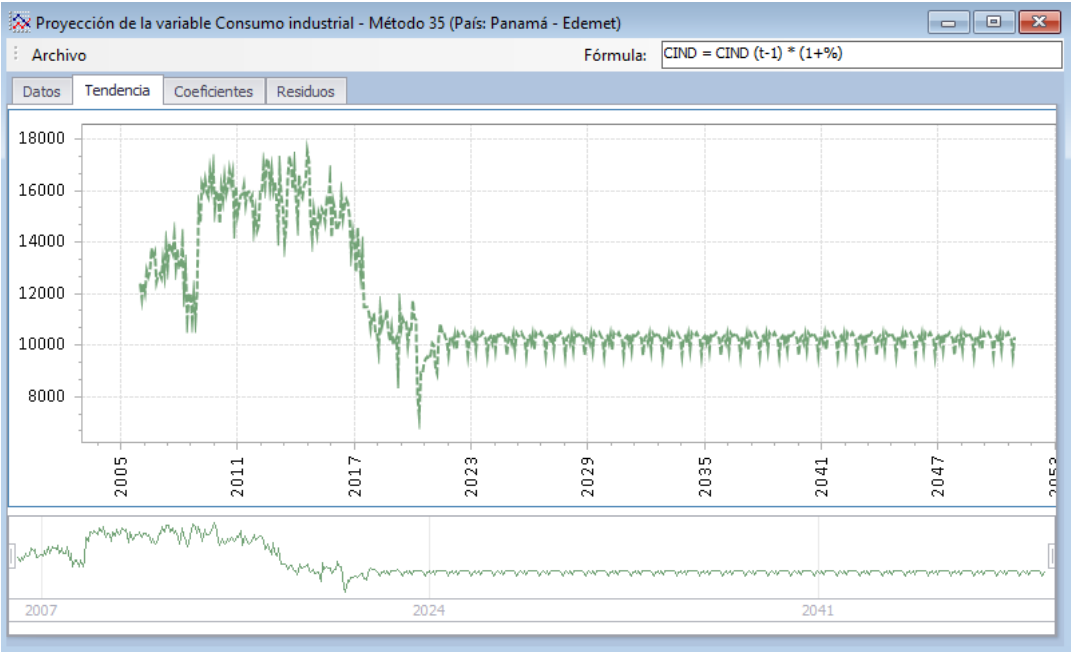
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	106853.096	5183.261	20.615	0
@seas(2)	-6548.155	6634.932	-0.986	0.325
@seas(3)	2347.349	6635.067	0.353	0.723
@seas(4)	-2503.341	6635.293	-0.377	0.706
@seas(5)	-739.971	6635.609	-0.111	0.911
@seas(6)	-4636.577	6636.016	-0.698	0.485
@seas(7)	-1594.823	6636.513	-0.24	0.81
@seas(8)	-809.865	6637.1	-0.122	0.903
@seas(9)	-3606.309	6637.777	-0.543	0.587
@seas(10)	-862.721	6638.545	-0.129	0.896
@seas(11)	-6901.241	6639.402	-1.039	0.3
@seas(12)	1038.479	6640.35	0.156	0.875
@trend	443.169	24.483	18.101	0

Indicadores de bondad estadísticos:

Root Mean Squared Error: 18119.8433060353
 Mean Absolute Error: 12404.8865669041
 Mean Absolute Percent Error: 7.95147745733738
 Theil Inequality Coefficient: 0.0605141321383144
 Covariance Proportion: 610283666.30019

Akaike information criterion: 22.5828195970556
 Schwarz information criterion: 22.8033791795366
 Hannan-Quinn information criterion: 22.6721478442257
 Durbin-Watson statistic: 0.21102399691836
 Log-Likelihood: -2154.95068131734

Consumo Industrial



Proyección de la variable Consumo industrial - Método 35 (País: Panamá - Edemet)

Archivo Fórmula: $CIND = CIND(t-1) * (1+%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CIND

Estadístico - F =	19.241284289992
Probabilidad Estadístico - F =	0.000000000000000000
R-Squared =	0.580291716914071
R-Squared Ajustado =	0.550133037889932

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	2444.572	969.03	2.812	0.005
@seas(2)	0.811	0.054	14.947	0
@seas(3)	-62.143	623.015	-0.099	0.92
@seas(4)	15.252	622.859	0.024	0.98
@seas(5)	-125.474	622.735	-0.201	0.84
@seas(6)	25.966	622.589	0.041	0.966
@seas(7)	-0.137	622.492	0	0.999
@seas(8)	5.364	622.428	0.008	0.993
@seas(9)	29.693	622.967	0.047	0.962
@seas(10)	-3.119	622.585	-0.005	0.996
@seas(11)	-27.252	622.577	-0.043	0.965
@seas(12)	-175.952	623.728	-0.281	0.778
CIND(-12)	-18.014	622.43	-0.028	0.976

Indicadores de bondad estadísticos:

Root Mean Squared Error:	2644.84156830322
Mean Absolute Error:	2430.88809979096
Mean Absolute Percent Error:	18.9641184551983
Theil Inequality Coefficient:	0.09919878935354091
Covariance Proportion:	96342.6527532129
Akaike information criterion:	17.7895079824697
Schwarz information criterion:	18.0201104217007
Hannan-Quinn information criterion:	17.8830073416317
Durbin-Watson statistic:	0.328003613592207
Log-Likelihood:	-1588.05571842227

Consumo Gobierno



Proyección de la variable Consumo Gobierno - Método 32 (País: Panamá - Edemet)

Archivo Fórmula: $CGOB = a + b * PIB$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CGOB

Estadístico - F = 30.5740551637096
Probabilidad Estadístico - F = 0.000000000000000000
R-Squared = 0.672094307004245
R-Squared Ajustado = 0.65011180244587

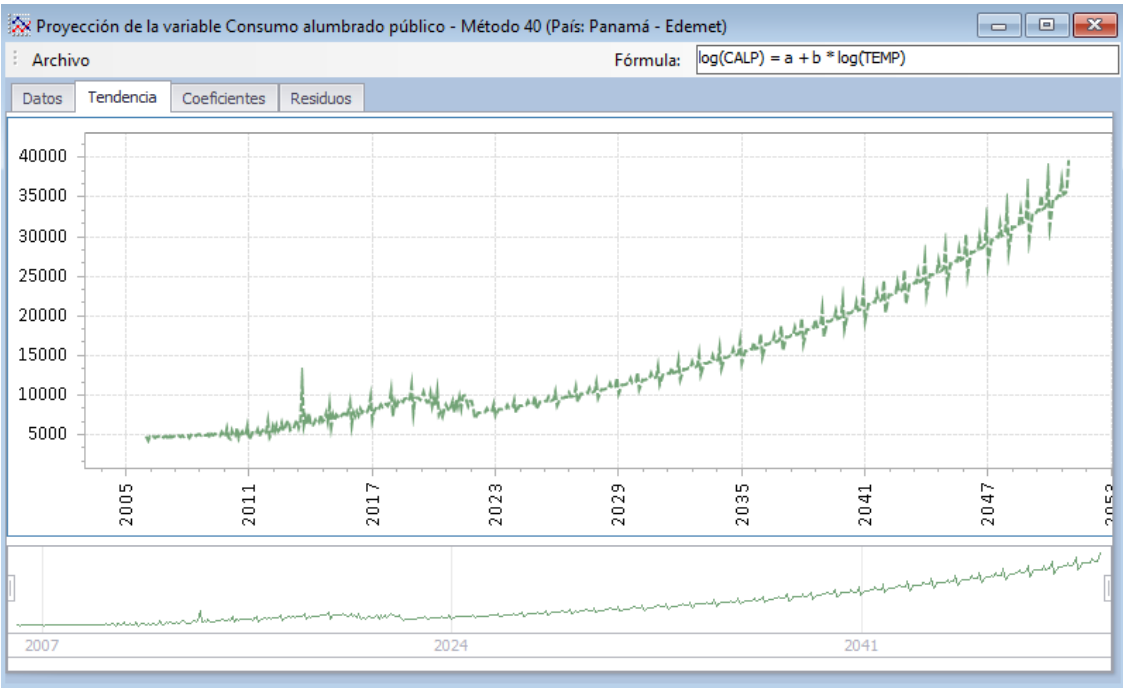
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	18589.572	1117.978	16.627	0
PIB	5.913	0.335	17.62	0
@seas (2)	-222.242	1061.312	-0.209	0.834
@seas (3)	990.225	1064.2	0.93	0.353
@seas (4)	3127.129	1061.361	2.946	0.003
@seas (5)	3632.908	1061.712	3.421	0
@seas (6)	2923.52	1062.611	2.751	0.006
@seas (7)	4677.97	1061.524	4.406	0
@seas (8)	1804.007	1063.371	1.696	0.091
@seas (9)	3205.459	1062.322	3.017	0.002
@seas (10)	3059.484	1065.899	2.87	0.004
@seas (11)	1088.021	1062.454	1.024	0.307
@seas (12)	1128.253	1063.287	1.061	0.29

Indicadores de bondad estadísticos:

Root Mean Squared Error: 2898.43877312526
Mean Absolute Error: 1770.65575972877
Mean Absolute Percent Error: 4.73817050394485
Theil Inequality Coefficient: 0.0398523684356471
Covariance Proportion: 17219063.2516201

Akaike information criterion: 18.9171487669065
Schwarz information criterion: 19.1377083493875
Hannan-Quinn information criterion: 19.0064770140766
Durbin-Watson statistic: 2.05673993595639
Log-Likelihood: -1803.04628162302

Consumo alumbrado



Proyección de la variable Consumo alumbrado público - Método 40 (País: Panamá - Edemet)

Archivo Fórmula: $\log(\text{CALP}) = a + b * \log(\text{TEMP})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CALP

Estadístico - F = 100.190194077189
Probabilidad Estadístico - F = 0.000000000000000000
R-Squared = 0.87041027293881
R-Squared Ajustado = 0.861722693471021

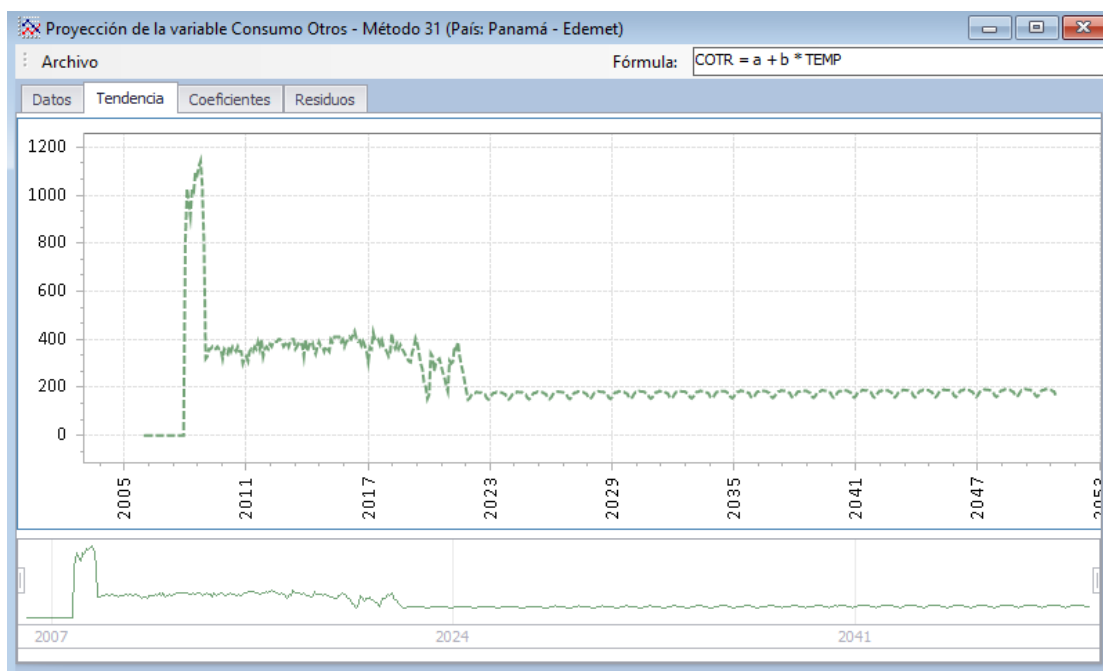
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	8.279	0.027	297.491	0
@trend	0.004	0	33.871	0
@seas(2)	0.051	0.035	1.445	0.15
@seas(3)	0.096	0.035	2.698	0.007
@seas(4)	0.09	0.035	2.53	0.012
@seas(5)	0.088	0.035	2.484	0.013
@seas(6)	0.095	0.035	2.675	0.008
@seas(7)	0.089	0.035	2.508	0.013
@seas(8)	0.139	0.035	3.927	0
@seas(9)	0.085	0.035	2.402	0.017
@seas(10)	0.084	0.035	2.378	0.018
@seas(11)	0.092	0.035	2.585	0.01
@seas(12)	0.184	0.035	5.184	0

Indicadores de bondad estadísticos:

Root Mean Squared Error: 768.637849035611
Mean Absolute Error: 543.373242771388
Mean Absolute Percent Error: 7.53758492372244
Theil Inequality Coefficient: 0.0543707190998216
Covariance Proportion: 2894648.61613585

Akaike information criterion: -1.68674756213601
Schwarz information criterion: -1.46618797965496
Hannan-Quinn information criterion: -1.59741931496587
Durbin-Watson statistic: 1.41195035995565
Log-Likelihood: 174.927765965057

Consumo Otros



Proyección de la variable Consumo Otros - Método 31 (País: Panamá - Edemet)

Archivo Fórmula: $COTR = a + b * TEMP$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: COTR

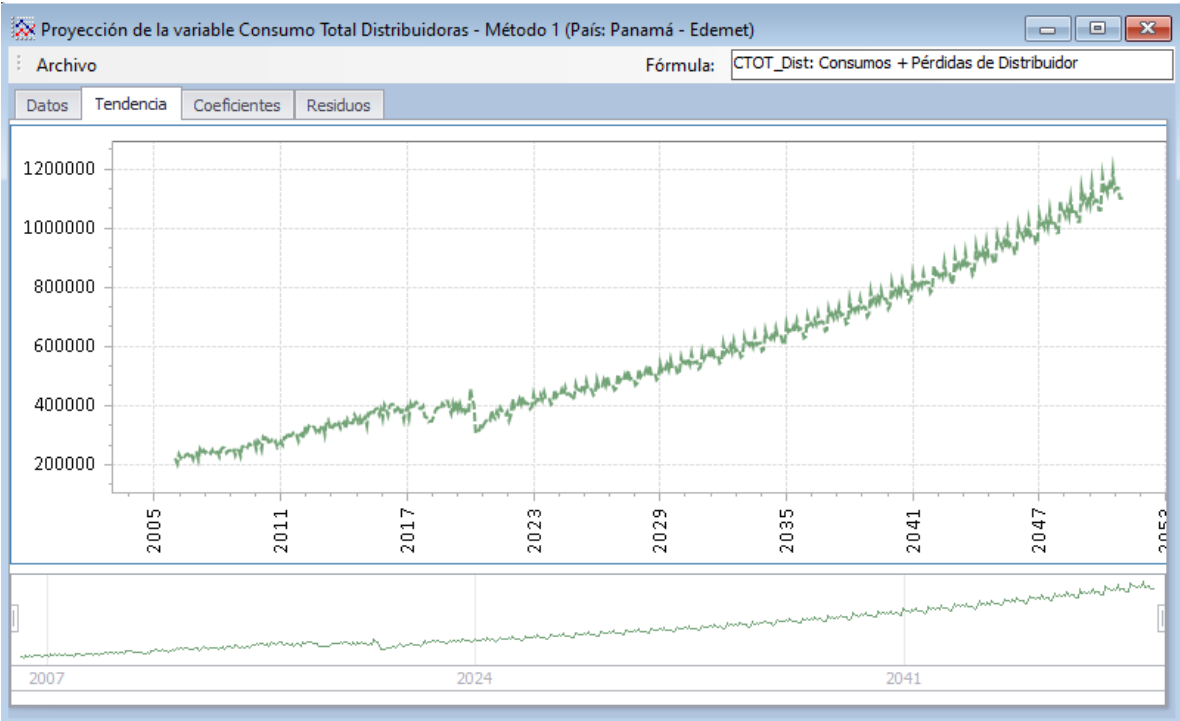
Estadístico - F = 0.158435362270013
 Probabilidad Estadístico - F = 0.99948745613706500000
 R-Squared = 0.0105097373116213
 R-Squared Ajustado = -0.0558248054384376

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	311.828	60.41	5.161	0
@seas (2)	27.03	77.33	0.349	0.727
@seas (3)	42.328	77.331	0.547	0.584
@seas (4)	41.35	77.334	0.534	0.593
@seas (5)	52.318	77.338	0.676	0.499
@seas (6)	48.133	77.342	0.622	0.534
@seas (7)	47.11	77.348	0.609	0.543
@seas (8)	46.061	77.355	0.595	0.552
@seas (9)	34.913	77.363	0.451	0.652
@seas (10)	30.265	77.372	0.391	0.696
@seas (11)	-2.299	77.382	-0.029	0.976
@seas (12)	-13.438	77.393	-0.173	0.862
@trend	0.074	0.285	0.262	0.793

Indicadores de bondad estadísticos:

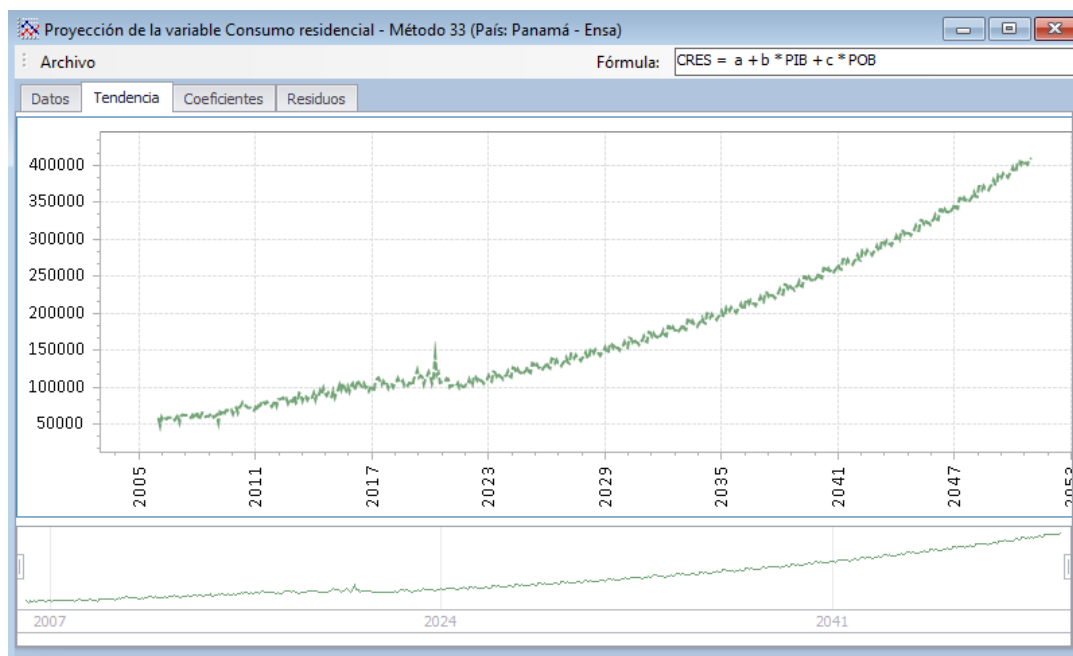
Root Mean Squared Error: 211.186958170556
 Mean Absolute Error: 113.650674651501
 Mean Absolute Percent Error: 33.1644314740687
 Theil Inequality Coefficient: 0.278904717696497
 Covariance Proportion: 473.712152376169
 Akaike information criterion: 13.6787813307541
 Schwarz information criterion: 13.8993409132352
 Hannan-Quinn information criterion: 13.7681095779242
 Durbin-Watson statistic: 0.132880336086371
 Log-Likelihood: -1300.16300775239

Consumo Total



ENSA

Consumo Residencial



Proyección de la variable Consumo residencial - Método 33 (País: Panamá - Ensa)

Archivo Fórmula: $CRES = a + b * PIB + c * POB$

Datos **Tendencia** **Coeficientes** Residuos

Variable Dependiente: CRES

Estadístico - F = 102.054362284139
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.872475545436638
 R-Squared Ajustado = 0.86392641999105

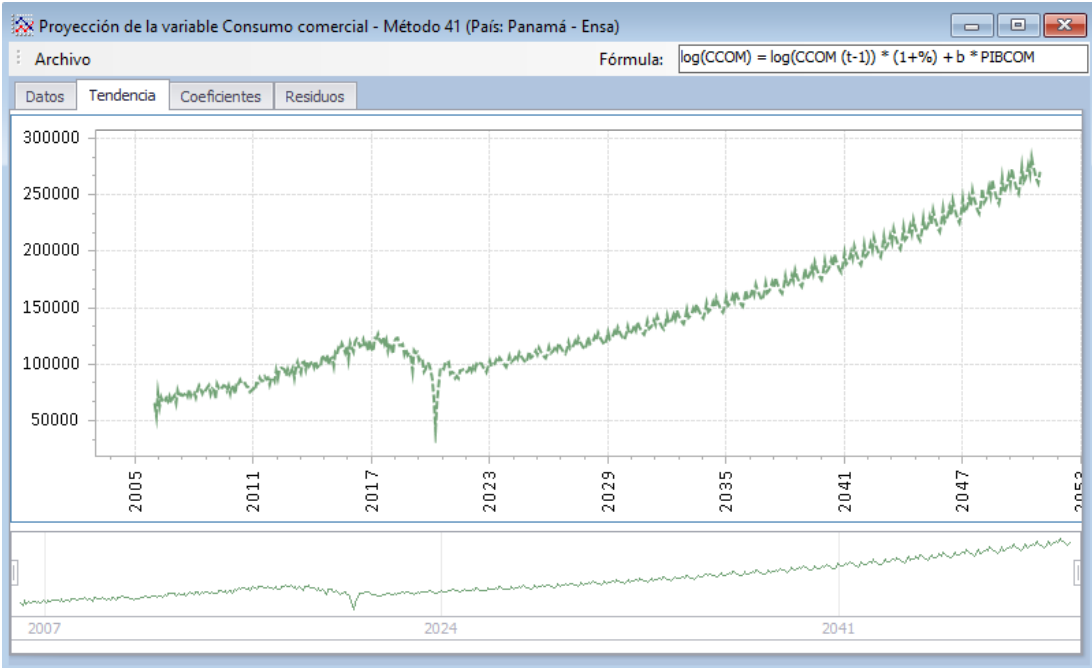
Variable	Coefficient	Std. Error	t-Statistic	Prob.
PIB/POB	103967316.181	3013338.828	34.502	0
c	-14736.356	3426.325	-4.3	0
@seas (2)	-7066.891	2512.522	-2.812	0.005
@seas (3)	-8856.857	2525.998	-3.506	0
@seas (4)	3358.193	2512.637	1.336	0.183
@seas (5)	2110.176	2513.992	0.839	0.402
@seas (6)	-3483.573	2517.44	-1.383	0.168
@seas (7)	170.304	2513.021	0.067	0.946
@seas (8)	-4661.512	2520.144	-1.849	0.066
@seas (9)	-5609.099	2515.608	-2.229	0.027
@seas (10)	-9324.192	2530.805	-3.684	0
@seas (11)	-5941.87	2515.7	-2.361	0.019
@seas (12)	-4690.261	2518.349	-1.862	0.064

Indicadores de bondad estadísticos:

Root Mean Squared Error: 6961.6935905598
 Mean Absolute Error: 4937.01796317327
 Mean Absolute Percent Error: 5.76064157007671
 Theil Inequality Coefficient: 0.0385696448365752
 Covariance Proportion: 322122576.288091

Akaike information criterion: 20.6407099570229
 Schwarz information criterion: 20.8612696395039
 Hannan-Quinn information criterion: 20.730038204193
 Durbin-Watson statistic: 0.698923114398222
 Log-Likelihood: -1968.5081558742

Consumo Comercial



Proyección de la variable Consumo comercial - Método 41 (País: Panamá - Ensa)

Archivo Fórmula: $\log(\text{CCOM}) = \log(\text{CCOM}(t-1)) * (1+\%) + b * \text{PIBCOM}$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CCOM

Estadístico - F = 26.2033328599684
Probabilidad Estadístico - F = 0.000000000000000000
R-Squared = 0.672353328081714
R-Squared Ajustado = 0.646694251365221

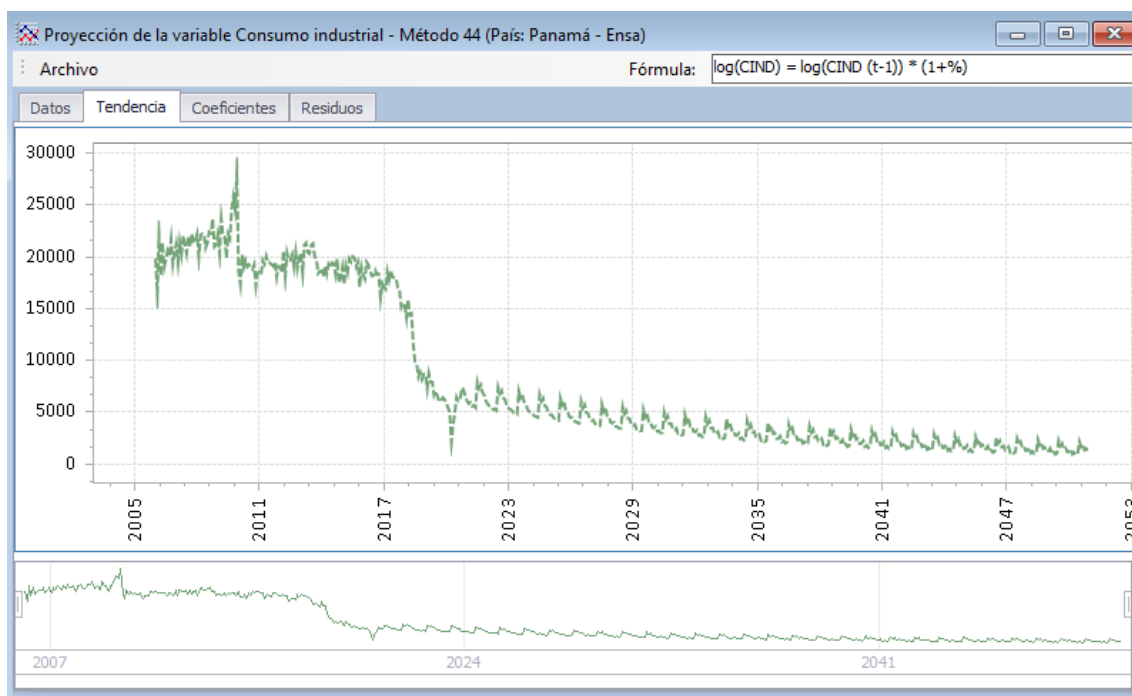
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.431	0.481	9.194	0
LOG(PIBCOM)	0.448	0.073	6.088	0
LOG(CCOM(-12))	0.368	0.065	5.594	0
@seas(2)	-0.033	0.038	-0.871	0.384
@seas(3)	-0.029	0.038	-0.767	0.443
@seas(4)	-0.021	0.038	-0.558	0.576
@seas(5)	-0.004	0.038	-0.112	0.91
@seas(6)	-0.025	0.038	-0.651	0.515
@seas(7)	0.007	0.038	0.195	0.845
@seas(8)	-0.013	0.038	-0.341	0.733
@seas(9)	-0.028	0.038	-0.726	0.468
@seas(10)	-0.043	0.039	-1.094	0.275
@seas(11)	-0.053	0.039	-1.36	0.175
@seas(12)	-0.033	0.038	-0.851	0.395

Indicadores de bondad estadísticos:

Root Mean Squared Error: 9499.89884698295
Mean Absolute Error: 6617.10105870959
Mean Absolute Percent Error: 6.71348979681475
Theil Inequality Coefficient: 0.0494607954522396
Covariance Proportion: 158057987.288314

Akaike information criterion: -1.60106556226241
Schwarz information criterion: -1.35272447385983
Hannan-Quinn information criterion: -1.50037394470338
Durbin-Watson statistic: 0.512172229657191
Log-Likelihood: 158.095900603616

Consumo Industrial



Proyección de la variable Consumo industrial - Método 44 (País: Panamá - Ensa)

Archivo Fórmula: $\log(\text{CIND}) = \log(\text{CIND}(t-1)) * (1+\%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CIND

Estadístico - F = 45.7829918194791
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.766888672070105
 R-Squared Ajustado = 0.750138157488316

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	0.044	0.415	0.107	0.914
LOG(CIND(-12))	0.987	0.042	23.365	0
@seas(2)	0.008	0.088	0.094	0.924
@seas(3)	-0.008	0.088	-0.098	0.921
@seas(4)	-0.001	0.088	-0.014	0.988
@seas(5)	-0.01	0.088	-0.115	0.908
@seas(6)	-0.005	0.088	-0.059	0.952
@seas(7)	0.017	0.088	0.195	0.845
@seas(8)	0.008	0.088	0.099	0.92
@seas(9)	0.013	0.088	0.147	0.883
@seas(10)	0.001	0.088	0.022	0.982
@seas(11)	0.006	0.088	0.07	0.943
@seas(12)	-0.003	0.088	-0.037	0.969

Indicadores de bondad estadísticos:

Root Mean Squared Error: 6213.76434313919
 Mean Absolute Error: 5378.53749609576
 Mean Absolute Percent Error: 48.6248654137301
 Theil Inequality Coefficient: 0.209628279625108
 Covariance Proportion: 16338281.6848243

Akaike information criterion: 0.0809053657885044
 Schwarz information criterion: 0.311507805019464
 Hannan-Quinn information criterion: 0.17440472495046
 Durbin-Watson statistic: 0.346232233689616
 Log-Likelihood: 5.7185170790346

Consumo Gobierno



Proyección de la variable Consumo Gobierno - Método 41 (País: Panamá - Ensa)

Archivo Fórmula: $\log(\text{CJOB}) = a + b * \log(\text{PIBt})$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CJOB

Estadístico - F = 90.4741963422749
 Probabilidad Estadístico - F = 0.000000000000000000
 R-Squared = 0.858463378695351
 R-Squared Ajustado = 0.848974890116269

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	4.23	0.189	22.325	0
LOG(PIB)	0.775	0.024	32.033	0
@seas(2)	-0.078	0.032	-2.439	0.015
@seas(3)	-0.014	0.032	-0.452	0.651
@seas(4)	0.006	0.032	0.188	0.85
@seas(5)	0.058	0.032	1.81	0.071
@seas(6)	0.021	0.032	0.665	0.506
@seas(7)	0.076	0.032	2.396	0.017
@seas(8)	0.042	0.032	1.319	0.188
@seas(9)	0.03	0.032	0.957	0.339
@seas(10)	0.014	0.032	0.456	0.648
@seas(11)	-0.006	0.032	-0.196	0.844
@seas(12)	-0.007	0.032	-0.241	0.809

Indicadores de bondad estadísticos:

Root Mean Squared Error: 2819.52730291414
 Mean Absolute Error: 1833.08570020775
 Mean Absolute Percent Error: 5.80244481328361
 Theil Inequality Coefficient: 0.0448495945865872
 Covariance Proportion: 39594459.7910646

Akaike information criterion: -1.8997139468223
 Schwarz information criterion: -1.67915436434126
 Hannan-Quinn information criterion: -1.81038569965217
 Durbin-Watson statistic: 0.761589494314482
 Log-Likelihood: 195.372538894941

Consumo alumbrado



Proyección de la variable Consumo alumbrado público - Método 32 (País: Panamá - Ensa)

Archivo Fórmula: $CALP = a + b * PIB$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: CALP

Estadístico - F = 212.783887760305
Probabilidad Estadístico - F = 0.00000000000000000000
R-Squared = 0.934489985304578
R-Squared Ajustado = 0.930098252475835

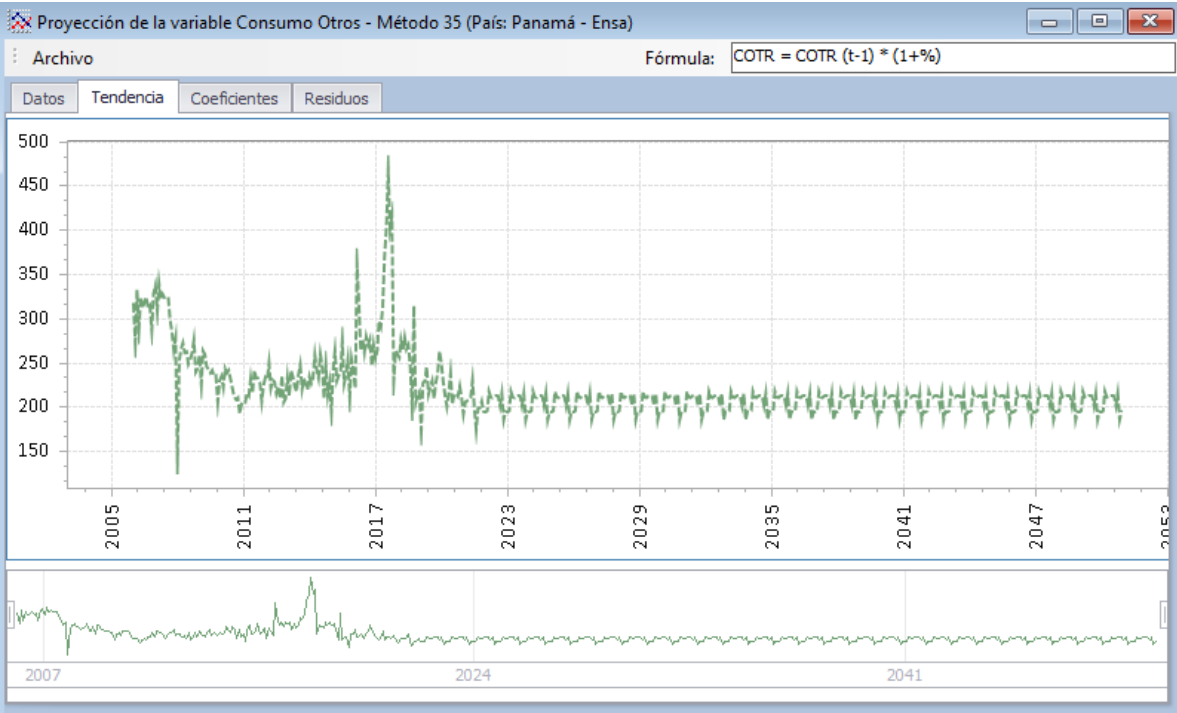
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	1797.184	74.511	24.119	0
PIB	1.126	0.022	50.375	0
@seas(2)	-19.83	70.735	-0.28	0.779
@seas(3)	-260.341	70.927	-3.67	0
@seas(4)	-65.102	70.738	-0.92	0.358
@seas(5)	-105.726	70.761	-1.494	0.136
@seas(6)	-140.23	70.821	-1.98	0.049
@seas(7)	14.687	70.749	0.207	0.835
@seas(8)	-111.754	70.872	-1.576	0.116
@seas(9)	-41.51	70.802	-0.586	0.558
@seas(10)	-249.43	71.04	-3.511	0
@seas(11)	-95.836	70.811	-1.353	0.177
@seas(12)	-69.094	70.866	-0.974	0.33

Indicadores de bondad estadísticos:

Root Mean Squared Error: 193.177641308202
Mean Absolute Error: 144.931684264251
Mean Absolute Percent Error: 3.0190263312224
Theil Inequality Coefficient: 0.0206036375744598
Covariance Proportion: 532329.670005195

Akaike information criterion: 13.500514106802
Schwarz information criterion: 13.721073689283
Hannan-Quinn information criterion: 13.5898423539721
Durbin-Watson statistic: 0.600514994847061
Log-Likelihood: -1283.04935425299

Consumo Otros



Proyección de la variable Consumo Otros - Método 35 (País: Panamá - Ensa)

Archivo Fórmula: $COTR = COTR(t-1) * (1+%)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: COTR

Estadístico - F = 3.26485561860855
Probabilidad Estadístico - F = 0.00029831401992129900
R-Squared = 0.190021324327389
R-Squared Ajustado = 0.131819263800016

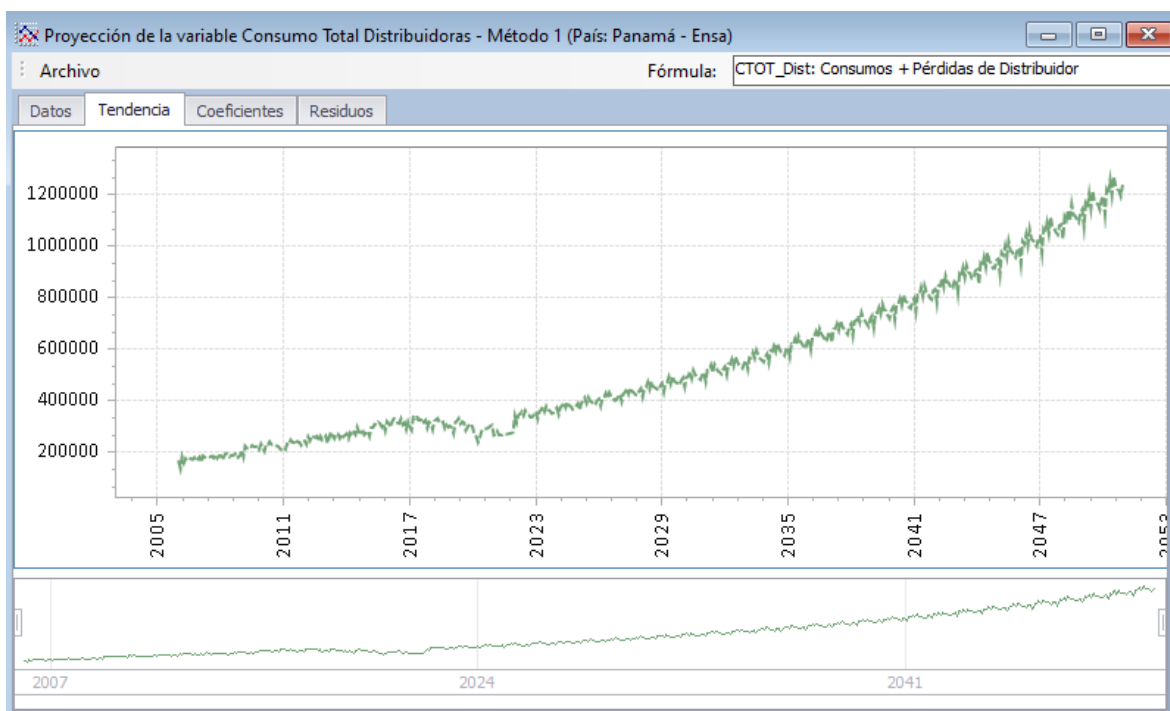
Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	149.91	20.03	7.484	0
COTR(-12)	0.344	0.07	4.902	0
@seas(2)	0.916	15.078	0.06	0.951
@seas(3)	17.885	15.197	1.176	0.24
@seas(4)	12.841	15.112	0.849	0.396
@seas(5)	12.393	15.127	0.819	0.413
@seas(6)	14.087	15.123	0.931	0.352
@seas(7)	14.439	15.151	0.953	0.341
@seas(8)	13.928	15.168	0.918	0.359
@seas(9)	5.536	15.084	0.367	0.714
@seas(10)	15.972	15.165	1.053	0.293
@seas(11)	-6.649	15.11	-0.44	0.66
@seas(12)	0.484	15.076	0.032	0.974

Indicadores de bondad estadísticos:

Root Mean Squared Error: 40.5645665694031
Mean Absolute Error: 27.4802606069946
Mean Absolute Percent Error: 11.1573572285896
Theil Inequality Coefficient: 0.082147328990814
Covariance Proportion: 241.490840640576

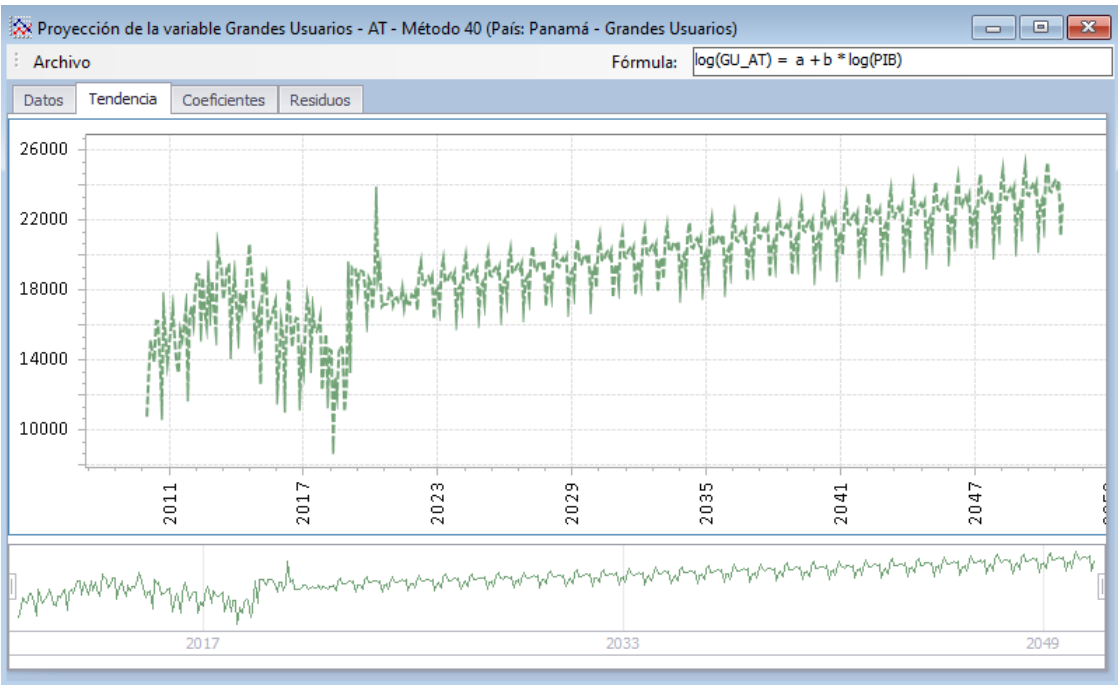
Akaike information criterion: 10.3484139590405
Schwarz information criterion: 10.5790163982715
Hannan-Quinn information criterion: 10.4419133182025
Durbin-Watson statistic: 0.577415563847248
Log-Likelihood: -918.357256313648

Consumo Total



GRANDES USUARIOS

Alta Tensión



Proyección de la variable Grandes Usuarios - AT - Método 40 (País: Panamá - Grandes Usuarios)

Archivo Fórmula: $\log(GU_AT) = a + b * \log(PIB)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: GU_AT

Estadístico - F = 1.76987222962894
Probabilidad Estadístico - F = 0.05957611094900050000
R-Squared = 0.139507886595116
R-Squared Ajustado = 0.0606841815503942

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	8.556	0.583	14.659	0
log(PIB)	0.141	0.073	1.927	0.056
@seas(2)	-0.063	0.058	-1.082	0.281
@seas(3)	0.054	0.058	0.921	0.358
@seas(4)	0.085	0.058	1.468	0.144
@seas(5)	0.019	0.058	0.329	0.742
@seas(6)	0.015	0.058	0.259	0.795
@seas(7)	0.032	0.058	0.558	0.577
@seas(8)	0.039	0.058	0.678	0.498
@seas(9)	0.024	0.058	0.418	0.676
@seas(10)	0.04	0.058	0.68	0.497
@seas(11)	-0.101	0.058	-1.729	0.086
@seas(12)	-0.011	0.058	-0.196	0.844

Indicadores de bondad estadísticos:

Root Mean Squared Error: 2059.03992644838
Mean Absolute Error: 1694.811198052
Mean Absolute Percent Error: 10.4050856124288
Theil Inequality Coefficient: 0.0637797703419229
Covariance Proportion: 760842.961006083

Akaike information criterion: -0.970960145778108
Schwarz information criterion: -0.70285200677497
Hannan-Quinn information criterion: -0.862016124097156
Durbin-Watson statistic: 0.919880758659102
Log-Likelihood: 82.9091304960238

Baja Tensión



Proyección de la variable Grandes Usuarios - BT - Método 31 (País: Panamá - Grandes Usuarios)

Archivo Fórmula: $GU_BT = a + b * TEMP (Estacional)$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: GU_BT

Estadístico - F = 29.3866143835893
Probabilidad Estadístico - F = 0.000000000000000000
R-Squared = 0.729137023532794
R-Squared Ajustado = 0.704325147825874

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	-16572.534	5444.387	-3.043	0.002
@seas(2)	-1944.889	6995.208	-0.278	0.781
@seas(3)	-588.688	6995.463	-0.084	0.933
@seas(4)	498.715	6995.888	0.071	0.943
@seas(5)	-956.591	6996.482	-0.142	0.886
@seas(6)	155.415	6997.246	0.022	0.982
@seas(7)	-754.689	6998.18	-0.107	0.914
@seas(8)	361.795	6999.283	0.051	0.958
@seas(9)	-448.604	7000.556	-0.064	0.949
@seas(10)	56.224	7001.999	0.008	0.993
@seas(11)	-742.557	7003.611	-0.106	0.915
@seas(12)	245.552	7005.392	0.035	0.972
@trend	644.449	34.469	18.696	0

Indicadores de bondad estadísticos:

Root Mean Squared Error: 16342.7610584645
Mean Absolute Error: 13991.0981481481
Mean Absolute Percent Error: 102.588379257931
Theil Inequality Coefficient: 0.198176914601447
Covariance Proportion: 718969333.596063

Akaike information criterion: 22.4215132810959
Schwarz information criterion: 22.6896214261965
Hannan-Quinn information criterion: 22.5304573027768
Durbin-Watson statistic: 0.0462602778111443
Log-Likelihood: -1601.3489562389

Pérdidas Técnicas



Proyección de la variable Pérdidas de Energía - Técnicas - Método 31 (País: Panamá - Grandes Usuarios)

Archivo Fórmula: $PERT_GU = a + b * TEMP$

Datos Tendencia Coeficientes Residuos

Variable Dependiente: PERT_GU

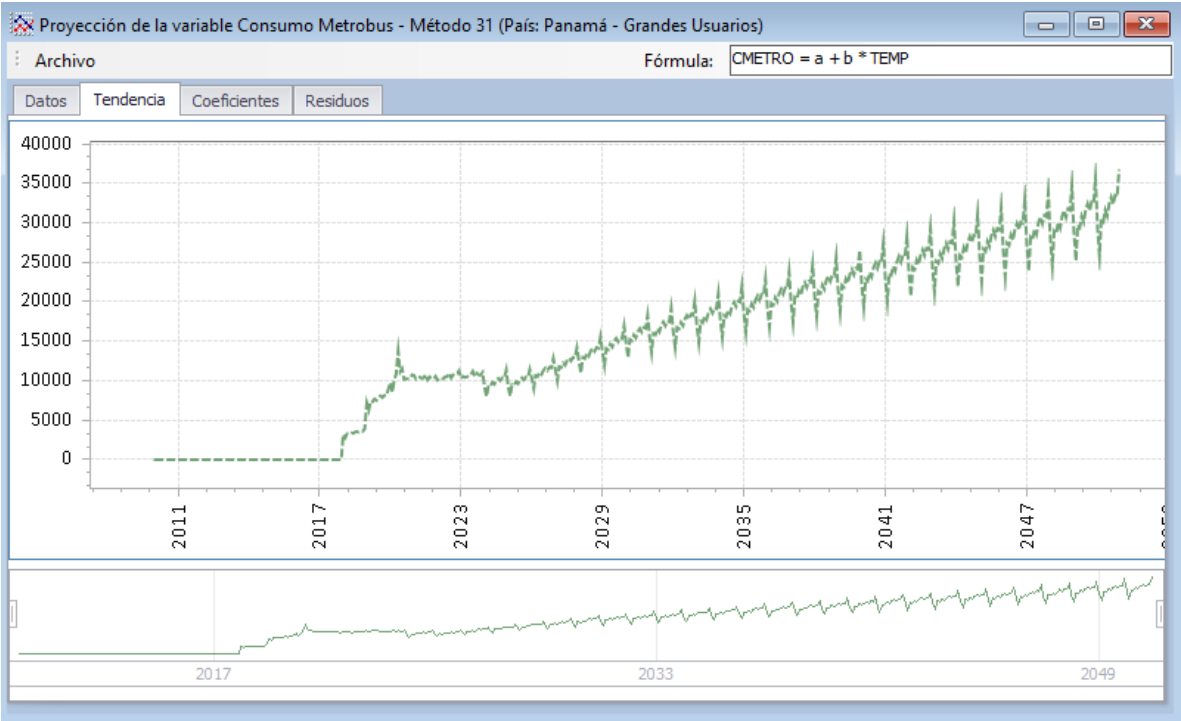
Estadístico - F =	35.3127013242889
Probabilidad Estadístico - F =	0.000000000000000000
R-Squared =	0.763858621887229
R-Squared Ajustado =	0.742227350609723

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	0.023	0.009	2.411	0.017
@seas(2)	-0.011	0.012	-0.883	0.378
@seas(3)	0	0.012	-0.006	0.994
@seas(4)	-0.013	0.012	-1.02	0.309
@seas(5)	-0.017	0.012	-1.382	0.169
@seas(6)	-0.012	0.012	-0.961	0.337
@seas(7)	-0.01	0.012	-0.801	0.424
@seas(8)	-0.012	0.012	-0.967	0.334
@seas(9)	-0.011	0.012	-0.873	0.384
@seas(10)	-0.017	0.012	-1.364	0.174
@seas(11)	-0.013	0.012	-1.074	0.284
@seas(12)	-0.012	0.012	-0.979	0.329
@trend	0.001	0	20.509	0

Indicadores de bondad estadísticos:

Root Mean Squared Error:	0.0298400998520709
Mean Absolute Error:	0.0259708462833463
Mean Absolute Percent Error:	41.2963396790525
Theil Inequality Coefficient:	0.124309964711492
Covariance Proportion:	0.00288032461365795
Akaike information criterion:	-4.0053716928414
Schwarz information criterion:	-3.73726354774079
Hannan-Quinn information criterion:	-3.89642767116045
Durbin-Watson statistic:	0.177357625307261
Log-Likelihood:	301.386761884581

Consumo del Metro de Panamá



CONSUMO TOTAL DEL PAÍS

