

# Anexos

## Anexo técnico 1 proyecciones

### Automatic Forecasting - INFLATION

Data variable: INFLATION

Number of observations = 10

Start index = 2001

Sampling interval = 1.0 year(s)

#### Forecast Summary

Nonseasonal differencing of order: 1

Forecast model selected: ARIMA(0,1,1) with constant

Number of forecasts generated: 5

Number of periods withheld for validation: 0

	<i>Estimation</i>	<i>Validation</i>
<i>Statistic</i>	<i>Period</i>	<i>Period</i>
RMSE	0.539383	
MAE	0.336923	
MAPE	5.51647	
ME	0.00476592	
MPE	-0.254615	

#### ARIMA Model Summary

<i>Parameter</i>	<i>Estimate</i>	<i>Std. Error</i>	<i>t</i>	<i>P-value</i>
MA(1)	1.52609	0.116861	13.0591	0.000004
Mean	0.494404	0.00987038	50.0897	0.000000
Constant	0.494404			

Backforecasting: yes

Estimated white noise variance = 0.31114 with 7 degrees of freedom

Estimated white noise standard deviation = 0.557799

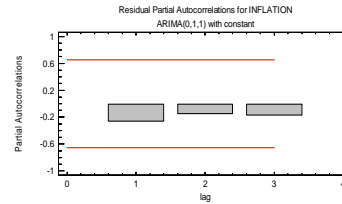
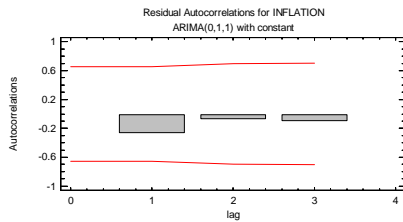
Number of iterations: 46

#### Forecast Table for INFLATION

Model: ARIMA(0,1,1) with constant

<i>Period</i>	<i>Data</i>	<i>Forecast</i>	<i>Residual</i>
2001	5.21		
2002	5.9	5.13045	0.769545
2003	4.82	5.22001	-0.400009
2004	6.2	5.92485	0.275146
2005	6.34	6.27451	0.0654933
2006	6.84	6.73446	0.105544
2007	6.12	7.17333	-1.05333
2008	8.26	8.22189	0.0381123
2009	8.98	8.69624	0.283758
2010	9.0	9.04136	-0.0413633

		<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
<i>Period</i>	<i>Forecast</i>	<i>Limit</i>	<i>Limit</i>
2011	9.55753	8.23854	10.8765
2012	10.0519	8.56155	11.5423
2013	10.5463	8.90233	12.1903
2014	11.0407	9.25629	12.8252
2015	11.5351	9.62053	13.4498



## Forecasting - UNEMPLOYMENT

Data variable: UNEMPLOYMENT

Number of observations = 11

Start index = 2000

Sampling interval = 1.0 year(s)

### Forecast Summary

Nonseasonal differencing of order: 2

Forecast model selected: ARIMA(0,2,2) with constant

Number of forecasts generated: 5

Number of periods withheld for validation: 0

	<i>Estimation</i>	<i>Validation</i>
<i>Statistic</i>	<i>Period</i>	<i>Period</i>
RMSE	0.636914	
MAE	0.35325	
MAPE	11.369	
ME	0.0304016	
MPE	-2.40563	

### ARIMA Model Summary

<i>Parameter</i>	<i>Estimate</i>	<i>Std. Error</i>	<i>t</i>	<i>P-value</i>
MA(1)	0.938435	0.224098	4.1876	0.005765
MA(2)	0.957422	0.531202	1.80237	0.121553
Mean	0.127952	0.0205146	6.23712	0.000786
Constant	0.127952			

Backforecasting: yes

Estimated white noise variance = 0.451764 with 6 degrees of freedom

Estimated white noise standard deviation = 0.672134

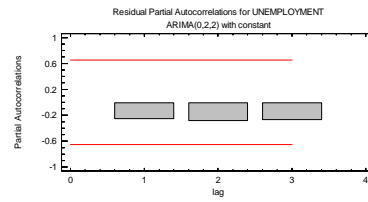
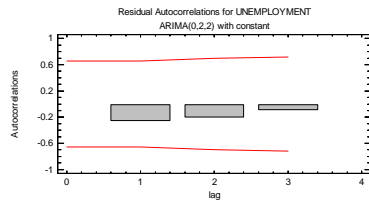
Number of iterations: 64

### Forecast Table for UNEMPLOYMENT

Model: ARIMA(0,2,2) with constant

<i>Period</i>	<i>Data</i>	<i>Forecast</i>	<i>Residual</i>
2000	3.2		
2001	2.01		
2002	1.38	1.63095	-0.250951
2003	1.6	1.54425	0.0557504
2004	1.98	2.1359	-0.1559
2005	2.01	2.58088	-0.570877
2006	4.2	2.85294	1.34706
2007	5.9	5.8004	0.0996009
2008	6.23	6.34478	-0.114783
2009	6.34	6.70031	-0.360308
2010	7.25	7.02597	0.224027

		<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
<i>Period</i>	<i>Forecast</i>	<i>Limit</i>	<i>Limit</i>
2011	8.42268	6.77803	10.0673
2012	9.50883	7.11027	11.9074
2013	10.7229	8.30894	13.1369
2014	12.065	9.3688	14.7612
2015	13.535	9.73751	17.3325



## Forecasting - PUENTE 1 CRUCES VEHICULARES

Data variable: PUENTE 1 CRUCES VEHICULARES

Number of observations = 15

Start index = 1996

Sampling interval = 1.0 year(s)

### Forecast Summary

Nonseasonal differencing of order: 1

Forecast model selected: ARIMA(2,1,1) with constant

Number of forecasts generated: 5

Number of periods withheld for validation: 0

	<i>Estimation</i>	<i>Validation</i>
<i>Statistic</i>	<i>Period</i>	<i>Period</i>
RMSE	160845.	
MAE	123987.	
MAPE	2.16069	
ME	-6837.71	
MPE	-0.160708	

### ARIMA Model Summary

<i>Parameter</i>	<i>Estimate</i>	<i>Std. Error</i>	<i>t</i>	<i>P-value</i>
AR(1)	0.795419	0.185348	4.29149	<b>0.001582</b>
AR(2)	-0.671257	0.126651	-5.30004	<b>0.000348</b>
MA(1)	1.22634	0.179375	6.83677	0.000045
Mean	84238.2	5737.32	14.6825	0.000000
Constant	73779.0			

Backforecasting: yes

Estimated white noise variance = 2.89101E10 with 10 degrees of freedom

Estimated white noise standard deviation = 170030.

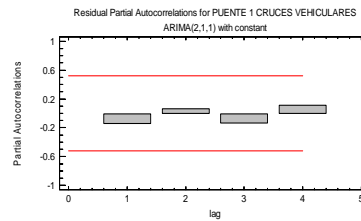
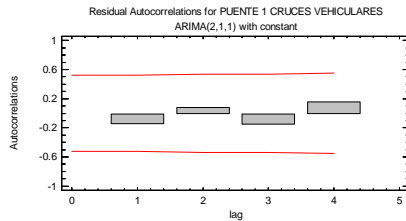
Number of iterations: 25

**Forecast Table for PUENTE 1 CRUCES VEHICULARES**

Model: ARIMA(2,1,1) with constant

Period	Data	Forecast	Residual
1996	4.80393E6		
1997	4.641E6	4.71585E6	-74851.5
1998	5.23852E6	5.0741E6	164419.
1999	5.83192E6	5.69531E6	136613.
2000	5.68933E6	5.80908E6	-119759.
2001	5.4237E6	5.39822E6	25480.9
2002	5.46957E6	5.35066E6	118909.
2003	5.49884E6	5.61232E6	-113487.
2004	5.551E6	5.70427E6	-153273.
2005	5.59829E6	5.83459E6	-236300.
2006	5.99649E6	5.96446E6	32031.1
2007	6.23967E6	6.31598E6	-76309.4
2008	6.48976E6	6.33316E6	156595.
2009	6.2654E6	6.40719E6	-141791.
2010	6.35272E6	6.16673E6	185995.

Period	Forecast	Lower 95.0% Limit	Upper 95.0% Limit
2011	6.41847E6	6.03962E6	6.79732E6
2012	6.48593E6	6.05003E6	6.92183E6
2013	6.56923E6	6.10187E6	7.03659E6
2014	6.66399E6	6.07127E6	7.25671E6
2015	6.75722E6	6.10894E6	7.4055E6



**Forecasting - PUENTE 1 CRUCES PEATONALES**

Data variable: PUENTE 1 CRUCES PEATONALES

Number of observations = 15  
 Start index = 1996  
 Sampling interval = 1.0 year(s)

**Forecast Summary**

Nonseasonal differencing of order: 1  
 Forecast model selected: ARIMA(0,1,1) with constant  
 Number of forecasts generated: 5  
 Number of periods withheld for validation: 0

	Estimation	Validation
Statistic	Period	Period
RMSE	255887.	
MAE	194319.	
MAPE	4.34456	
ME	-42135.1	
MPE	-1.26927	

**ARIMA Model Summary**

Parameter	Estimate	Smd. Error	t	P-value
MA(1)	1.20165	0.0830514	14.4688	0.000000
Mean	216536.	7260.87	29.8223	0.000000
Constant	216536.			

Backforecasting: yes

Estimated white noise variance = 7.44837E10 with 12 degrees of freedom

Estimated white noise standard deviation = 272917.

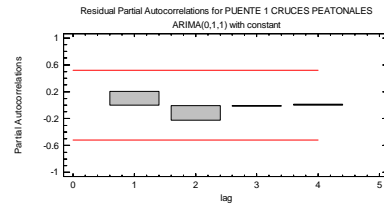
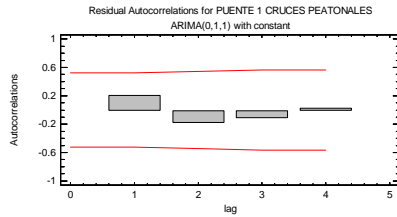
Number of iterations: 26

**Forecast Table for PUENTE 1 CRUCES PEATONALES**

Model: ARIMA(0,1,1) with constant

Period	Data	Forecast	Residual
1996	3.27779E6		
1997	3.18354E6	3.10001E6	83527.4
1998	3.14903E6	3.2997E6	-150673.
1999	3.80253E6	3.54662E6	255911.
2000	3.7E6	3.71155E6	-11549.9
2001	3.72693E6	3.93041E6	-203482.
2002	3.89757E6	4.18798E6	-290417.
2003	4.35937E6	4.46308E6	-103712.
2004	4.51968E6	4.70053E6	-180852.
2005	4.61359E6	4.95354E6	-339943.
2006	4.89689E6	5.23862E6	-341739.
2007	5.99831E6	5.52407E6	474239.
2008	5.89659E6	5.64498E6	251610.
2009	5.78626E6	5.81077E6	-24509.7
2010	6.02395E6	6.03225E6	-8301.79

Period	Forecast	Lower 95.0% Limit	Upper 95.0% Limit
2011	6.25046E6	5.65583E6	6.8451E6
2012	6.467E6	5.86039E6	7.0736E6
2013	6.68353E6	6.06519E6	7.30188E6
2014	6.90007E6	6.2702E6	7.52993E6
2015	7.1166E6	6.47543E6	7.75778E6



**Forecasting - PUENTE 2 CRUCES**

Data variable: PUENTE 2 CRUCES

Number of observations = 15  
 Start index = 1996  
 Sampling interval = 1.0 year(s)

**Forecast Summary**

Forecast model selected: Random walk  
 Number of forecasts generated: 5  
 Number of periods withheld for validation: 0

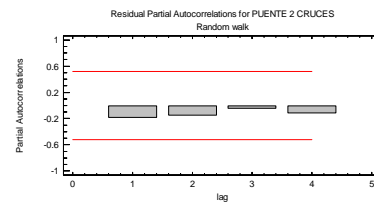
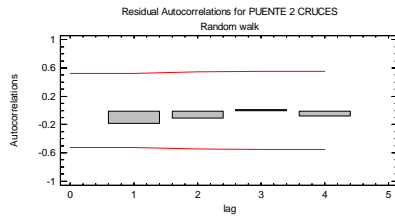
Statistic	Estimation	Validation
	Period	Period
RMSE	207363.	
MAE	112197.	
MAPE	2.47735	
ME	2.66092E-10	
MPE	-0.123932	

**Forecast Table for PUENTE 2 CRUCES**

Model: Random walk

Period	Data	Forecast	Residual
1996	4.79633E6		
1997	4.81938E6	4.76258E6	56796.7
1998	4.82269E6	4.78564E6	37053.7
1999	4.82636E6	4.78895E6	37412.7
2000	4.82155E6	4.79261E6	28932.7
2001	4.70097E6	4.7878E6	-86838.3
2002	4.72587E6	4.66722E6	58652.7
2003	4.79626E6	4.69213E6	104128.
2004	4.86785E6	4.76251E6	105339.
2005	4.86927E6	4.83411E6	35157.7
2006	4.89928E6	4.83552E6	63757.7
2007	5.00163E6	4.86554E6	136097.
2008	4.26935E6	4.96789E6	-698539.
2009	4.29837E6	4.23561E6	62759.7
2010	4.32391E6	4.26462E6	59290.7

		Lower 95.0%	Upper 95.0%
Period	Forecast	Limit	Limit
2011	4.29017E6	3.84219E6	4.73815E6
2012	4.25643E6	3.62289E6	4.88997E6
2013	4.22268E6	3.44676E6	4.99861E6
2014	4.18894E6	3.29298E6	5.0849E6
2015	4.1552E6	3.15348E6	5.15691E6



## Forecasting - BOVINO

Data variable: BOVINO

Number of observations = 9  
 Start index = 2002  
 Sampling interval = 1.0 year(s)

### Forecast Summary

Nonseasonal differencing of order: 2  
 Forecast model selected: ARIMA(2,2,0)  
 Number of forecasts generated: 5  
 Number of periods withheld for validation: 0

	Estimation	Validation
Statistic	Period	Period
RMSE	233.763	
MAE	159.368	
MAPE	5.17152	
ME	99.4799	
MPE	2.36165	

### ARIMA Model Summary

Parameter	Estimate	Std. Error	t	P-value
AR(1)	-1.17019	0.182226	-6.42163	0.001360
AR(2)	-0.953492	0.0870592	-10.9522	0.000110

Backforecasting: yes

Estimated white noise variance = 55880.6 with 5 degrees of freedom

Estimated white noise standard deviation = 236.391

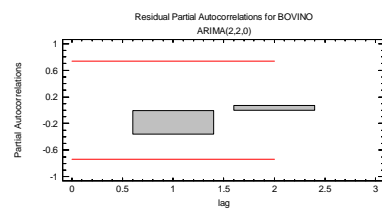
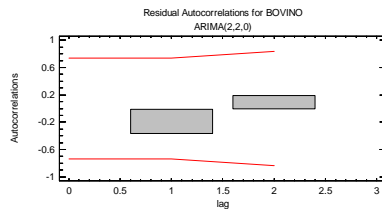
Number of iterations: 5

### Forecast Table for BOVINO

Model: ARIMA(2,2,0)

Period	Data	Forecast	Residual
2002	8078.0		
2003	6594.0		
2004	6329.0	6246.95	82.052
2005	5121.0	5140.33	-19.3328
2006	4228.0	3854.18	373.822
2007	3964.0	3865.53	98.4654
2008	2936.0	2663.6	272.396
2009	2012.0	2202.28	-190.275
2010	1774.0	1694.77	79.2314

Period	Forecast	Lower 95.0% Limit	Upper 95.0% Limit
2011	634.09	26.426	1241.75
2012	-104.514	-894.148	685.12
2013	-452.756	-1477.75	572.239
2014	-1640.44	-3207.32	-73.5575
2015	-2218.03	-4092.24	-343.809





## Forecasting - PUERCO

Data variable: PUERCO

Number of observations = 9  
 Start index = 2002  
 Sampling interval = 1.0 year(s)

### Forecast Summary

Nonseasonal differencing of order: 1  
 Forecast model selected: ARIMA(0,1,2) with constant  
 Number of forecasts generated: 5  
 Number of periods withheld for validation: 0

	Estimation	Validation
Statistic	Period	Period
RMSE	36.068	
MAE	21.7984	
MAPE	2.17941	
ME	5.35726	
MPE	0.674727	

### ARIMA Model Summary

Parameter	Estimate	Std. Error	t	P-value
MA(1)	-0.981219	0.841101	-1.16659	0.295986
MA(2)	-1.62324	0.348307	-4.66037	0.005530
Mean	-99.3083	112.23	-0.884861	0.416748
Constant	-99.3083			

Backforecasting: yes

Estimated white noise variance = 10768.7 with 5 degrees of freedom

Estimated white noise standard deviation = 103.772

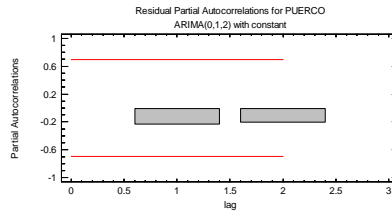
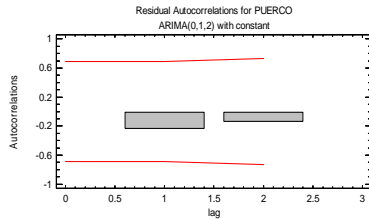
Number of iterations: 22

### Forecast Table for PUERCO

Model: ARIMA(0,1,2) with constant

Period	Data	Forecast	Residual
2002	1675.0		
2003	1186.0	1236.67	-50.666
2004	1082.0	1059.09	22.907
2005	958.0	922.925	35.0745
2006	926.0	930.291	-4.2911
2007	925.0	879.416	45.5844
2008	857.0	863.455	-6.4545
2009	821.0	825.353	-4.35288
2010	712.0	706.943	5.05662

		Lower 95.0%	Upper 95.0%
Period	Forecast	Limit	Limit
2011	610.588	343.832	877.343
2012	519.487	-72.5194	1111.49
2013	420.179	-708.968	1549.33
2014	320.871	-1162.19	1803.93
2015	221.563	-1545.91	1989.04



## Forecasting - CABRITO

Data variable: CABRITO

Number of observations = 9

Start index = 2002

Sampling interval = 1.0 year(s)

### Forecast Summary

Nonseasonal differencing of order: 1

Forecast model selected: ARIMA(0,1,2) with constant

Number of forecasts generated: 5

Number of periods withheld for validation: 0

	Estimation	Validation
Statistic	Period	Period
RMSE	62.48	
MAE	44.7074	
MAPE	5.70849	
ME	-4.14395	
MPE	0.486185	

### ARIMA Model Summary

Parameter	Estimate	Std. Error	t	P-value
MA(1)	-1.06767	0.764272	-1.39697	0.221258
MA(2)	-1.72768	0.673598	-2.56485	0.050350
Mean	-133.399	184.582	-0.72271	0.502238
Constant	-133.399			

Backforecasting: yes

Estimated white noise variance = 64104.0 with 5 degrees of freedom

Estimated white noise standard deviation = 253.188

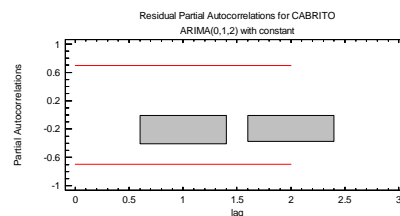
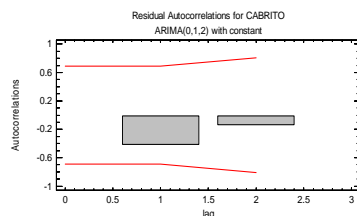
Number of iterations: 28

### Forecast Table for CABRITO

Model: ARIMA(0,1,2) with constant

Period	Data	Forecast	Residual
2002	2617.0		
2003	1418.0	1505.84	-87.843
2004	1200.0	1139.39	60.6115
2005	936.0	979.55	-43.5496
2006	821.0	860.822	-39.8216
2007	624.0	569.845	54.1548
2008	504.0	479.621	24.3787
2009	466.0	490.191	-24.1913
2010	372.0	348.891	23.1087

		Lower 95.0%	Upper 95.0%
Period	Forecast	Limit	Limit
2011	221.479	-429.363	872.32
2012	128.004	-1366.84	1622.85
2013	-5.39514	-2892.66	2881.87
2014	-138.794	-3938.53	3660.94
2015	-272.193	-4804.27	4259.88



## Forecasting - OVINO

Data variable: OVINO

Number of observations = 9

Start index = 2002

Sampling interval = 1.0 year(s)

### Forecast Summary

Nonseasonal differencing of order: 1

Forecast model selected: ARIMA(0,1,2) with constant

Number of forecasts generated: 5

Number of periods withheld for validation: 0

	Estimation	Validation
Statistic	Period	Period
RMSE	6.98695	
MAE	4.84599	
MAPE	6.99615	
ME	2.60586	
MPE	1.82046	

### ARIMA Model Summary

Parameter	Estimate	Std. Error	t	P-value
MA(1)	0.650746	0.159308	4.08482	0.009495
MA(2)	1.38447	0.248807	5.56446	0.002580
Mean	-6.59615	0.585592	-11.2641	0.000096
Constant	-6.59615			

Backforecasting: yes

Estimated white noise variance = 83.4696 with 5 degrees of freedom

Estimated white noise standard deviation = 9.13617

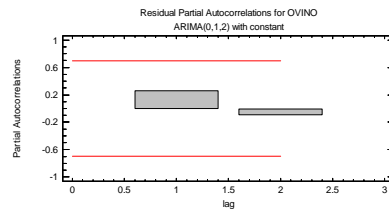
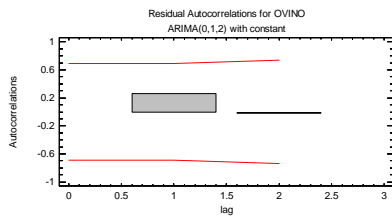
Number of iterations: 59

### Forecast Table for OVINO

Model: ARIMA(0,1,2) with constant

Period	Data	Forecast	Residual
2002	88.0		
2003	109.0	97.8496	11.1504
2004	115.0	110.996	4.0042
2005	94.0	90.3607	3.63927
2006	84.0	79.4919	4.5081
2007	72.0	69.4317	2.56826
2008	55.0	57.4912	-2.49121
2009	40.0	46.4693	-6.46931
2010	45.0	41.0627	3.93725

Period	Forecast	Lower 95.0% Limit	Upper 95.0% Limit
2011	44.7983	21.313	68.2836
2012	32.7511	7.87462	57.6276
2013	26.155	-8.62921	60.9391
2014	19.5588	-22.8798	61.9974
2015	12.9626	-35.9468	61.8721



## Anexo técnico 2

### Encuesta a 20 empresarios de cada sector de actividad económica para plasmar la percepción y perspectiva que tienen sobre el sector.

Conteste, marcando cada pregunta según su criterio en las preguntas cualitativas y acorde a los datos proporcionados (datos numéricos de empleo por sector, contribución a la reducción de la pobreza e IVA generado proporcionados en la hoja 2) asignar un valor entre 0 y 4 a cada variable.

Este puntaje intenta reflejar la magnitud, desde un punto de vista cualitativo, del efecto o impacto del sector en cada dimensión, el cual es representado por los siguientes puntos:

Neutro o nulo	0
Bajo	1
Medio	2
Alto	3
Muy Alto	4

- **Neutro o nulo:** Sectores o actividades que cuyas posibilidades de crecimiento son pocas o nulas como para ser consideradas importantes para el futuro de Nuevo Laredo.
  - **Bajo.** Sectores o actividades económicas cuyo crecimiento es poco probable o se mantiene sin cambio. Su crecimiento es marginal.
  - **Medio.** Sectores o actividades económicas cuyo crecimiento es impulsado por el crecimiento demográfico y es posible mediante impulso su crecimiento y mantenimiento de la fuerza laboral contenida en sí.
  - **Alto.** Sectores o actividades económicas cuyo crecimiento es prometedor con posibilidades de extenderse a largo plazo.
  - **Muy alto.** Sectores o actividades económicas cuyo crecimiento es sostenido e ininterrumpido a largo plazo creando bases sólidas para el crecimiento y desarrollo. Se consideran los pilares del crecimiento local.
1. ¿Qué valor asigna a cada variable vinculándolas a cada sector según datos proporcionados y los que se consideren a su juicio?

	Empleos	Importancia	Pobreza	Competitividad	Sostenibilidad	Infraestructura	Iva generado
Comercio internacional							
Transporte público y carga							
Comercio local							
Maquiladora e industria							
Construcción							
Turismo							
Servicios profesionales							
Otros servicios							
Rural							
Otros							

Datos del año 2010:

Concepto	Empleos	Ranking empleos	Pobreza(1)	Ranking pobreza	IVA generado (2)	Ranking iva
Comercio internacional	61,891	1	\$100,000	1	\$ 57,000,004,698.00	1
Transporte público y carga	36,257	2	\$35,000	2	\$1,127,004,296	3
Comercio local	16,218	6	21,000	4	\$ 561,881	6
Maquiladora e industria	15,247	7	46,000	3	\$ 1,113,000,001	4
Construcción	24,642	3	0		\$ 1,465,778,190	2
Turismo	3,957	9	0		\$ 441,990	7
Servicios profesionales	6,665	8	2	5	\$ 990,000	5
Otros servicios	22,447	4	0		\$ 321,861	8
Rural	1,008	10	0		\$ 12,000	9
Otros	19,327	5	0		\$ 5,000	10
<b>Totales</b>	<b>207,659</b>		<b>202002</b>		<b>\$ 60,708,119,917.00</b>	

Favor de agregar comentarios acerca del futuro del sector.

