## ESTADISTICA APLICADA II Tarea No. 5

Dr. Víctor M. Guerrero Ago-Dic, 2021

Ajuste un modelo de regresión lineal simple a los datos del siguiente cuadro, en el cual se presentan las variables Y =Índice de la Bolsa y X =Producto Nacional Bruto de un cierto país (PNB).

Realice el **análisis de residuos** y, en particular, **verifique** el supuesto de nocorrelación de los errores.

De existir autocorrelación, **corríjala** y compare los errores estándar de los coeficientes para los modelos SIN y CON corrección por autocorrelación.

Año       PNB       Índice         1990       515       618.04         1991       534       691.55         1992       575       639.76         1993       607       714.81         1994       650       834.05         1995       705       910.88         1996       772       873.60         1997       816       879.12         1998       873       906.00         1999       964       876.72         2000       1,016       753.19         2001       1,103       884.76         2002       1,213       950.71         2003       1,359       923.88         2004       1,473       759.37         2005       1,598       802.49         2006       1,783       974.92         2007       1,991       894.63         2008       2,250       820.23         2009       2,508       844.40         2010       2,732       891.41         2011       3,053       932.92         2012			
1991     534     691.55       1992     575     639.76       1993     607     714.81       1994     650     834.05       1995     705     910.88       1996     772     873.60       1997     816     879.12       1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48          2015     3,998 </td <td>Año</td> <td>PNB</td> <td>Índice</td>	Año	PNB	Índice
1992     575     639.76       1993     607     714.81       1994     650     834.05       1995     705     910.88       1996     772     873.60       1997     816     879.12       1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48     1,328.23	1990	515	618.04
1993     607     714.81       1994     650     834.05       1995     705     910.88       1996     772     873.60       1997     816     879.12       1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48        2015     3,998     1,328.23	1991	534	691.55
1994     650     834.05       1995     705     910.88       1996     772     873.60       1997     816     879.12       1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48        2015     3,998     1,328.23	1992	575	639.76
1995     705     910.88       1996     772     873.60       1997     816     879.12       1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23	1993	607	714.81
1996     772     873.60       1997     816     879.12       1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23	1994	650	834.05
1996     772     873.60       1997     816     879.12       1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
1997     816     879.12       1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23	1995	705	910.88
1998     873     906.00       1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
1999     964     876.72       2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23		816	
2000     1,016     753.19       2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23	1999	964	876.72
2001     1,103     884.76       2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
2002     1,213     950.71       2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23		,	
2003     1,359     923.88       2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23		,	
2004     1,473     759.37       2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23		,	
2005     1,598     802.49       2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23		,	
2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23	2004	1,473	759.37
2006     1,783     974.92       2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
2007     1,991     894.63       2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
2008     2,250     820.23       2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23		,	
2009     2,508     844.40       2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
2010     2,732     891.41       2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23	2009	2,508	844.40
2011     3,053     932.92       2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23	•010		004.44
2012     3,166     884.36       2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23			
2013     3,406     1,190.34       2014     3,765     1,178.48       2015     3,998     1,328.23		*	
2014   3,765   1,178.48     2015   3,998   1,328.23		*	
2015 3,998 1,328.23			
,	2014	3,765	1,178.48
,	2017	2.000	1 220 22
2016 4,209 1,592.76		,	
	2016	4,209	1,592.76