

WEB解説7.5 ラグ変数

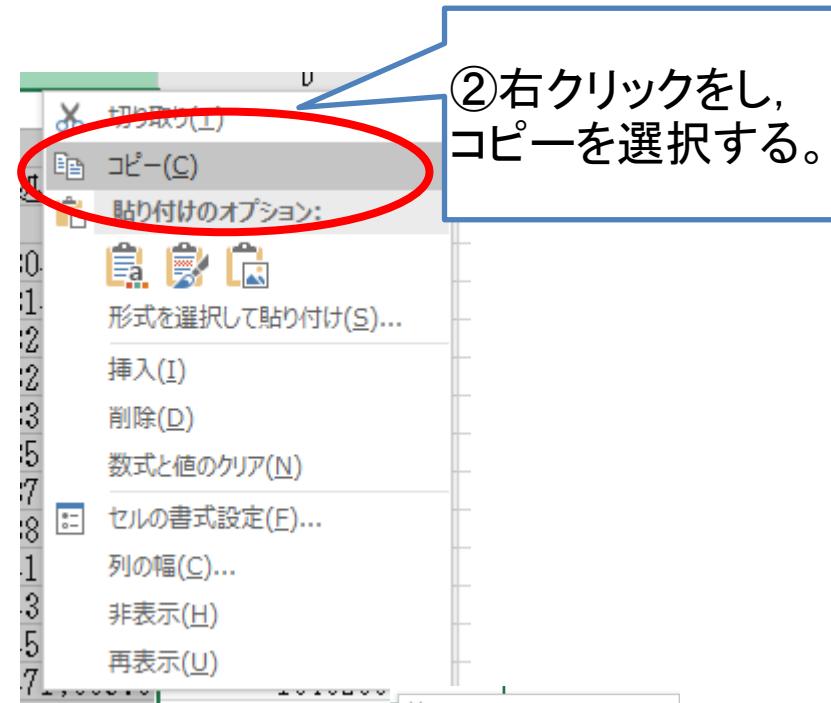
消費関数の例

ラグ変数の作成

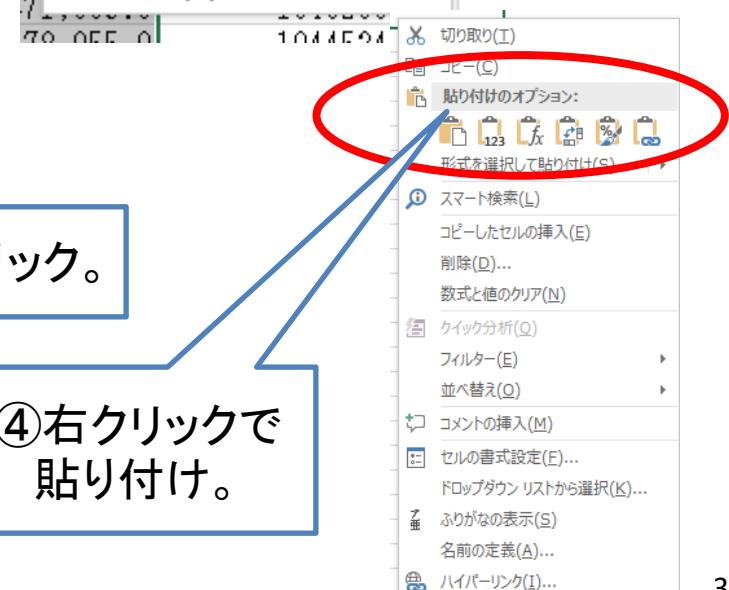
	A	B	C	D
1	消費関数用年次データ1980-2007			
2		実質民間最終消費支出	実質国民総可処分所得	実質金融資産残高
3		RC	RYD	RMA
4				
5	1980	178,232.9	304,774.9	457507.3739
6	1981	181,000.2	314,386.4	489346.8401
7	1982	188,722.4	322,011.9	527042.1117
8	1983	194,070.8	329,101.9	582493.4679
9	1984	198,450.2	338,908.7	629559.5402
10	1985	205,919.8	358,121.7	683019.2135
11	1986	212,428.1	371,861.8	763625.7174
12	1987	220,709.3	386,722.5	846323.348
13	1988	230,958.4	410,766.9	954802.7263
14	1989	241,157.6	431,427.2	1070629.374
15	1990	252,408.6	455,788.9	1027010.021
16	1991	257,039.6	471,835.9	1046293.788
17	1992	262,234.2	478,055.9	1044534.187
18	1993	264,250.6	478,547.3	1101718.217
19	1994	269,749.5	480,173.3	1161100.293
20	1995	274,169.7	487,568.1	1212521.722
21	1996	280,003.0	499,707.8	1257892.059
22	1997	281,316.8	505,048.8	1263504.377
23	1998	278,649.6	498,183.1	1289971.984
24	1999	280,997.9	497,518.0	1389274.803
25	2000	282,786.3	505,945.9	1414657.1
26	2001	287,422.5	505,478.2	1409891.287
27	2002	290,572.0	508,863.0	1419756.276
28	2003	299,500.1	517,710.4	1404007.547

		C	D
1	消費関数用年次データ1980 - 2007		
2	実質民間最終消費支出 RC	実質国民総可処分所得 RYD	実質金融資産残高 RMA
5	1980	178,232.9	304,774.9
6	1981	181,000.2	314,386.4
7	1982	188,722.4	322,011.9
8	1983	194,070.8	329,101.9
9	1984	198,450.2	338,908.7
10	1985	205,919.3	358,121.7
11	1986	212,428.7	371,861.8
12	1987	220,700.0	386,722.5
13	1988	230.0	410,766.9
14	1989	240.6	431,427.2
15	1990	208.6	455,788.9
16	1991	1039.6	471,835.9
17	1992	1234.2	478,055.9
		478,547.3	1101718.217
		480,173.3	1161100.293
		487,568.1	1212521.722

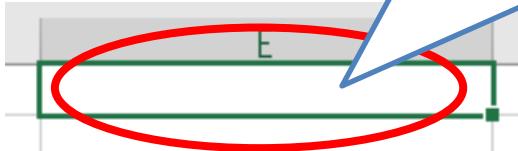
①Cと書いてあるところをクリックし、C列全体を選択。



②右クリックをし、コピーを選択する。



③空いているE1セルをクリック。



④右クリックで貼り付け。

確 認

A	B	C	D	E
1	消費関数用年次データ1980-2007			
2				
3	実質民間最終消費支出	実質国民総可処分所得	実質金融資産残高	実質国民総可処分所得 (不突)
4	RC	RYD	RMA	RYD
5	1980	178,232.9	304,774.9	457507.3739
6	1981	181,000.2	314,386.4	489346.8401
7	1982	188,722.4	322,011.9	527042.1117
8	1983	194,070.8	329,101.9	582493.4679
9	1984	198,450.2	338,908.7	629559.5402
10	1985	205,919.8	358,121.7	683019.2135
11	1986	212,428.1	371,861.8	763625.7174
12	1987	220,709.3	386,722.5	846323.348
13	1988	230,958.4	410,766.9	954802.7263
14	1989	241,157.6	431,427.2	1070629.374
15	1990	252,408.6	455,788.9	1027010.021
16	1991	257,039.6	471,835.9	1046293.788
17	1992	262,234.2	478,055.9	1044534.187
18	1993	264,250.6	478,547.3	1101718.217
19	1994	269,749.5	480,173.3	1161100.293
20	1995	274,169.7	487,568.1	1212521.722
21	1996	280,003.0	499,707.8	1257892.059
22	1997	281,316.8	505,048.8	1263504.377
23	1998	278,649.6	498,183.1	1289971.984
24	1999	280,997.9	497,518.0	1389274.803
25	2000	282,786.3	505,945.9	1414657.1
26	2001	297,422.5	505,470.9	1400001.997

一期前に変数を調整する

The screenshot shows a Microsoft Excel spreadsheet with data in columns D, E, and F. The data includes '実質金融資産残高' (Real Financial Assets Balance) and '実質国民総収入' (Real Gross National Income) for various years. A context menu is open over the data in column E, with the '挿入(I)...' (Insert) option highlighted and circled in red. A callout box ① describes this step. A separate callout box ② points to the 'セルの挿入' (Insert Cell) dialog box, where the '下方向にシフト(D)' (Shift Down) option is selected and circled in red. A callout box ③ points to the 'OK' button in the dialog box, which is also circled in red. A callout box ④ points to the newly inserted row in the spreadsheet, which contains the text '可処分所得 (不突合を含む)' (Disposable Income (including non-comparable)) and has a circled red border around its entire row.

① コピーした変数の一番上のセルで右クリックし「挿入」を選ぶ。

② 下方向にシフトを選ぶ。

③ OK

④ 確認。

	実質金融資産残高	実質国民総収入	可処分所得 (不突合を含む)
RMA	457507.3739	304,774.9	
.9	489346.8401	314,386.4	
.9	527042.1117	322,011.9	
.9	582493.4679	329,101.9	
.7	629559.5402	338,908.7	
.7	683019.2135		

変数名を「RYD_1」とする

	A	B	C	D	E	F
1	消費関数用年次データ1980-2007					
2						
3		実質民間最終消費支出 RC	実質国民総可処分所得 RYD	実質金融資産残高 RMA	実質国民総可処分所得 (不適合を含まず RYD_1)	
4	1980	178,232.9	304,774.9	457507.3739		
5	1981	181,000.2	314,386.4	489346.8401	304,774.9	
6	1982	188,722.4	322,011.9	527042.1117	314,386.4	
7	1983	194,070.8	329,101.9	582493.4679	322,111.9	
8	1984	198,450.2	338,908.7	629559.5402	329,101.9	
9	1985	205,919.8	358,121.7	683019.2135	338,908.7	
10	1986	212,428.1	371,861.8	763625.7174	358,121.7	
11	1987	220,709.3	386,722.5	846323.348	371,861.8	
12	1988	230,958.4	410,766.9	954802.7263	386,722.5	
13	1989	241,157.6	431,427.2	1070629.374	410,766.9	
14	1990	252,408.6	455,788.9	1027010.021	431,427.2	
15	1991	257,039.6	471,835.9	1046293.788	455,788.9	
16	1992	262,234.2	478,055.9	1044534.187	471,835.9	
17						

RYD_1と
入力。

同様にラグ付内生変数を作成

	A	B	C	D	E	F
1	消費関数用年次データ1980-2007					
2						
3	実質民間最終消費支出	実質国民総可処分所得	実質金融資産残高	実質国民総可処分所得	(不突合を含まず)	
4	RC	RYD	RMA	RYD_1	RC_1	
5	1980	178,232.9	304,774.9	457507.3739		
6	1981	181,000.2	314,386.4	489346.8401	304,774.9	178,232.9
7	1982	188,722.4	322,011.9	527042.1117	314,386.4	181,000.2
8	1983	194,070.8	329,101.9	582493.4679	322,011.9	188,722.4
9	1984	198,450.2	338,908.7	629559.5402	329,101.9	194,070.8
10	1985	205,919.8	358,121.7	683019.2135	338,908.7	198,450.2
11	1986	212,428.1	371,861.8	763825.7174	358,121.7	205,919.8
12	1987	220,709.3	386,722.5	846323.348	371,861.8	212,428.1
13	1988	230,958.4	410,766.9	954802.7263	386,722.5	220,709.3
14	1989	241,157.6	431,427.2	1070629.374	410,766.9	230,958.4
15	1990	252,408.6	455,788.9	1027010.021	431,427.2	241,157.6
16	1991	257,039.6	471,835.9	1046293.788	455,788.9	252,408.6
17	1992	262,234.2	478,055.9	1044534.187	471,835.9	257,039.6
18	1993	264,250.6	478,547.3	1101718.217	478,055.9	262,234.2
19	1994	269,749.5	480,173.3	1161100.293	478,547.3	264,250.6
20	1995	274,169.7	487,568.1	1212521.722	480,173.3	269,749.5
21	1996	280,003.0	499,707.8	1257892.059	487,568.1	274,169.7
22	1997	281,316.8	505,048.8	1263504.377	499,707.8	280,003.0
23	1998	278,649.6	498,183.1	1289971.984	505,048.8	281,316.8
24	1999	280,997.9	497,518.0	1389274.803	498,183.1	278,649.6
25	2000	282,786.3	505,945.9	1414657.1	497,518.0	280,997.9
26	2001	287,422.5	505,478.2	1409891.287	505,945.9	282,786.3
27	2002	290,572.0	508,863.0	1419756.276	505,478.2	287,422.5
28	2003	292,592.1	517,713.4	1484907.547	508,863.0	290,572.0
29	2004	298,443.1	530,307.1	1536396.174	517,713.4	292,592.1
30	2005	303,925.5	545,316.8	1665349.514	530,307.1	298,443.1
31	2006	309,510.2	553,582.2	1703642.329	545,316.8	303,925.5
32	2007	319,617.7	566,452.0	1679010.444	553,582.2	309,510.2
33					566,452.0	319,617.7

データが一期前の数字か確認

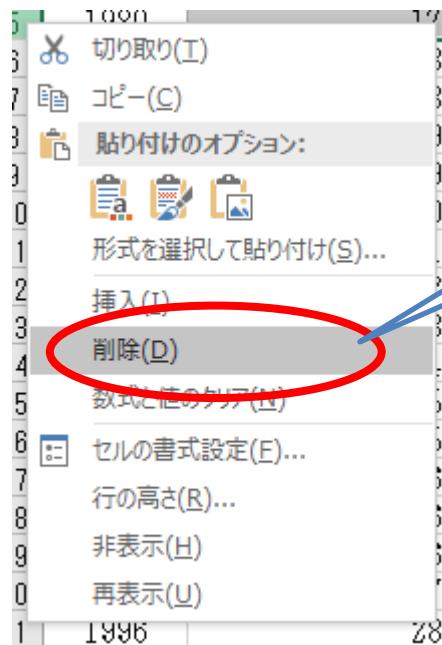
	A	B	C	D	E	F
1	消費関数用年次データ1980－2007					
2		実質民間最終消費支出	実質国民総可処分所得	実質金融資産残高	実質国民総可処分所得（不完全を含まず）	
3		RC	RYD	RMA	RWD_1	RC_1
4	1980	178,232.9	304,774.9	457507.3734	304,774.9	178,232.9
5	1981	181,000.2	314,386.4	489346.8401	314,386.4	181,000.2
6	1982	188,722.4	322,011.9	527042.1117	314,386.4	188,722.4
7	1983	194,070.8	329,101.9	582493.4679	322,011.9	194,070.8
8	1984	198,450.2	338,908.7	629559.5402	329,101.9	198,450.2
9	1985	205,919.8	358,121.7	683019.2135	338,908.7	205,919.8
10	1986	212,428.1	371,861.8	763625.7174	358,121.7	212,428.1
11	1987	220,709.3	386,722.5	846323.348	371,861.8	220,709.3
12	1988	230,958.4	410,766.9	954802.7263	386,722.5	230,958.4
13	1989	241,157.6	431,427.2	1070629.374	410,766.9	241,157.6
14	1990	252,408.6	455,788.9	1027010.021	431,427.2	252,408.6
15	1991	257,039.6	471,835.9	1046293.788	455,788.9	257,039.6
16	1992	262,234.2	478,055.9	1044534.187	471,835.9	262,234.2
17	1993	264,250.6	478,547.3	1101718.217	478,055.9	264,250.6
18	1994	269,749.5	480,173.3	1161100.293	478,547.3	269,749.5
19	1995	274,169.7	487,568.1	1212521.722	480,173.3	274,169.7
20	1996	280,003.0	499,707.8	1257892.059	487,568.1	280,003.0
21	1997	281,316.8	505,048.8	1263504.377	499,707.8	281,316.8
22	1998	278,649.6	498,183.1	1289971.984	505,048.8	278,649.6
23	1999	280,997.9	497,518.0	1389274.803	498,183.1	280,997.9
24	2000	282,786.3	505,945.9	1414657.1	497,518.0	282,786.3
25	2001	287,422.5	505,478.2	1409891.287	505,945.9	287,422.5
26	2002	290,572.0	508,863.0	1419756.276	505,478.2	290,572.0
27	2003	292,592.1	517,713.4	1484907.547	508,863.0	292,592.1
28	2004	298,443.1	530,307.1	1536396.174	517,713.4	298,443.1
29	2005	303,925.5	545,316.8	1665349.514	530,307.1	303,925.5
30	2006	309,510.2	553,582.2	1703642.329	545,316.8	309,510.2
31	2007	319,617.7	566,452.0	1679010.444	553,582.2	319,617.7
32					566,452.0	
33						

調整
必要

①数字5でクリックし、列全体を選択。

消費関数用年次データ1980-2007					
	実質民間最終消費支出	実質国民総可処分所得	実質金融資産残高	実質国民総可処分所得（不突合を含ます）	
	RYD	RMA	RYD 1	RC 1	
1980	178,232.9	304,774.9	457507.3739		
1981	181,000.2	314,386.4	489346.8401	304,774.9	
1982	188,722.4	322,011.9	527042.1117	314,386.4	
1983	194,070.8	329,101.9	582493.4679	322,011.9	
1984	198,450.2	338,908.7	629559.5402	329,101.9	

②右クリックし、削除。

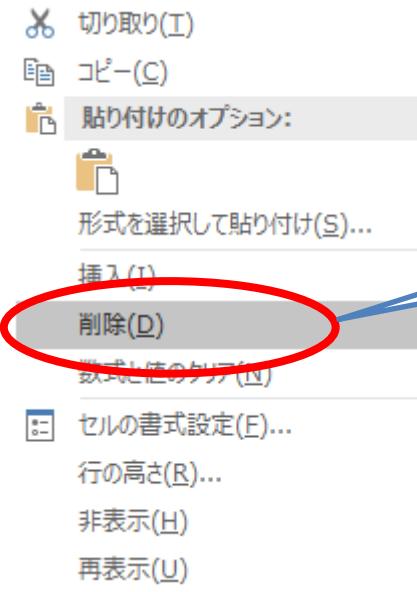


③確認

A	B	C	D	E	F
1	消費関数用年次データ1980-2007				
2					
3	実質民間最終消費支出	実質国民総可処分所得	実質金融資産残高	実質国民総可処分所得（不突合を含ます）	
4	RYD	RMA	RYD 1	RC 1	
1981	181,000.2	314,386.4	489346.8401	304,774.9	178,232.9
1982	188,722.4	322,011.9	527042.1117	314,386.4	181,000.2
1983	194,070.8	329,101.9	582493.4679	322,011.9	188,722.4
1984	198,450.2	338,908.7	629559.5402	329,101.9	194,070.8
1985	205,919.8	358,121.7	683019.2135	338,908.7	198,450.2
1986	212,428.1	371,861.8	763625.7174	358,121.7	205,919.8

31	2007	319,617.7	566,452.0	1679010.444	553,582.2	309,510.2
32					566,452.0	319,617.7
33						

①数字32上でクリックし、列全体を選択。



②右クリックし、削除。

③確認。

29	2005	303,925.5	545,316.8	1665349.514	530,307.1	298,443.1
30	2006	309,510.2	553,582.2	1703642.329	545,316.8	303,925.5
31	2007	319,617.7	566,452.0	1679010.444	553,582.2	309,510.2
32						
33						

A	B	C	D	E	F
1	消費関数用年次データ1981－2007				
2					
3	実質民間最終消費支出 RC	実質国民総可処分所得 RYD	実質金融資産残高 RMA	実質国民総可処分所得(不突合を含まず) RYD_1	
4					RC_1
5	1981	181,000.	314,386.4	489346.8401	304,774.9
6	1982	188,722.4	322,011.9	527042.1117	314,386.4
7	1983	194,070.8	329,101.9	582493.4679	322,011.9
8	1984	198,450.2	338,908.7	629559.5402	329,101.9
9	1985	205,919.8	349,121.7	683019.2135	338,908.7
10	1986	212,428.1	361.8	763625.7174	358,121.7
11	1987	220,709.3			371,861.8
12	1988	230,958.4			386,722.5
13	1989	241,157.6			410,766.9
14	1990	252,408.6			431,427.2
15	1991	257,039.6			455,788.9
16	1992	262,234.2			471,835.9
17	1993	264,250.6			478,055.9
18	1994	269,749.5	480,173.3	1161100.293	478,547.3
19	1995	274,169.7	487,568.1	1212521.722	480,173.3
20	1996	280,003.0	499,707.8	1257892.059	487,568.1
21	1997	281,316.8	505,048.8	1263504.377	499,707.8
22	1998	278,649.6	498,183.1	1289971.984	505,048.8
23	1999	280,997.9	497,518.0	1389274.803	498,183.1
24	2000	282,786.3	505,945.9	1414657.1	497,518.0
25	2001	287,422.5	505,478.2	1409891.287	505,945.9
26	2002	290,572.0	508,863.0	1419756.276	505,478.2
27	2003	292,592.1	517,713.4	1484907.547	508,863.0
28	2004	298,443.1	530,307.1	1536396.174	517,713.4
29	2005	303,925.5	545,316.8	1665349.514	530,307.1
30	2006	309,510.2	553,582.2	1703642.329	545,316.8
31	2007	319,617.7	566,452.0	1679010.444	553,582.2
32					309,510.2

年代の変化にあわせ、
タイトルを修正すると
わかりやすい。

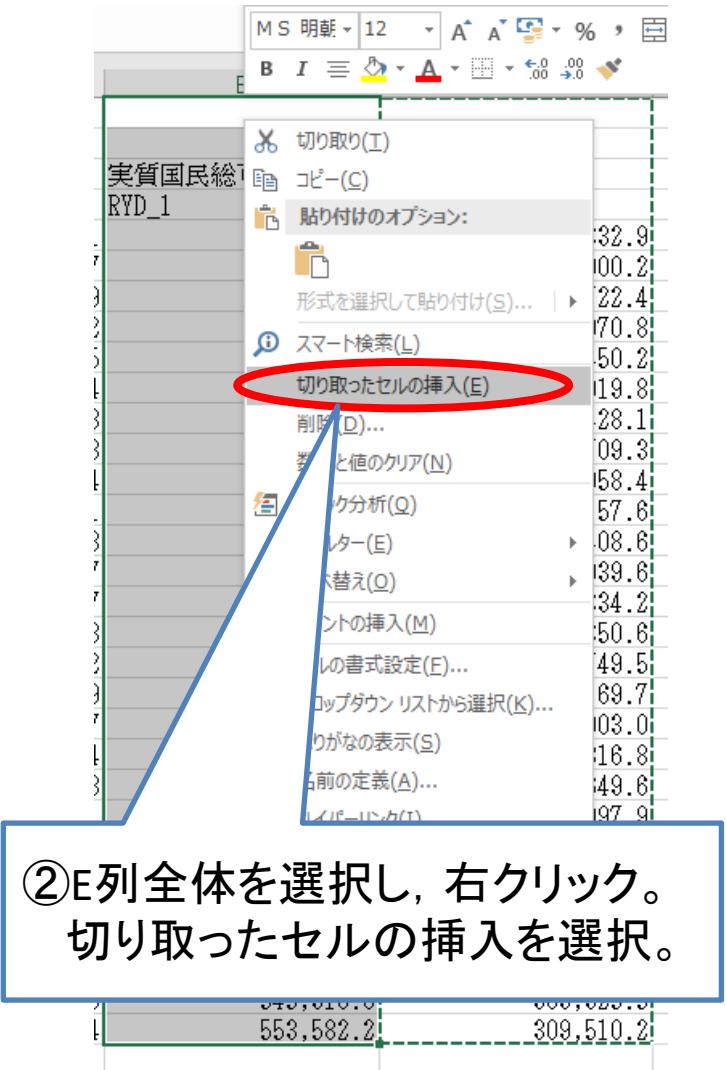
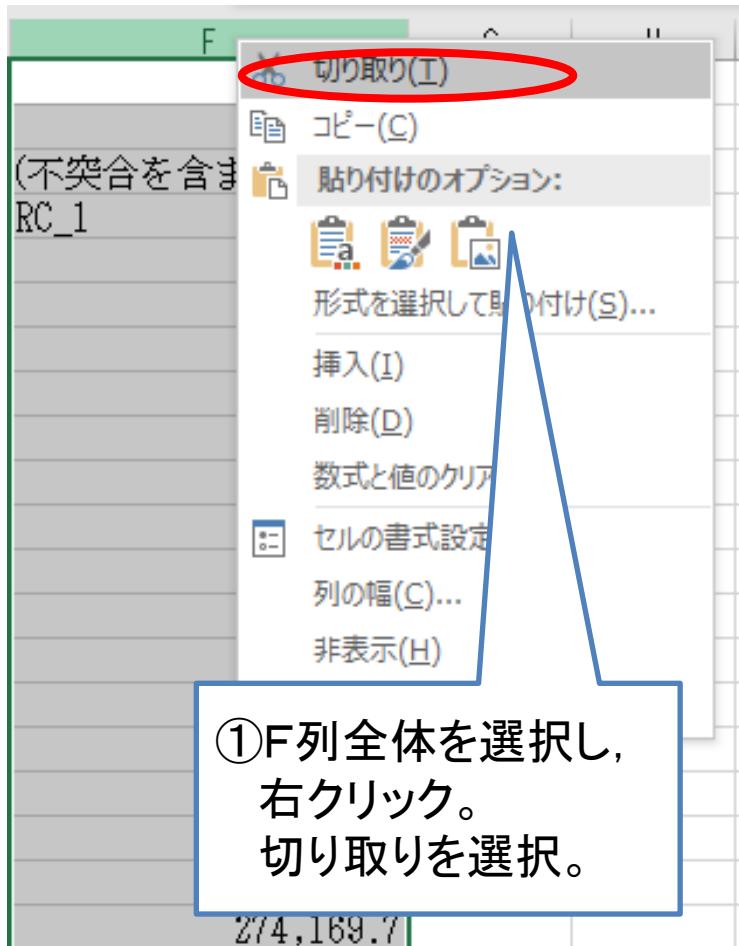
以下のデータで回帰

	A	B	C	D	E	F
1	消費関数用年次データ1981－2007					
2						
3	実質民間最終消費支出 実質国民総可処分所得 実質金融資産残高 実質国民総可処分所得（不窓を含まず）					
4	RC	RYD	RMA	RYD_1	RC_1	
5	1981	181,000.2	314,386.4	489346.8401	304,774.9	178,232.9
6	1982	188,722.4	322,011.9	527042.1117	314,386.4	181,000.2
7	1983	194,070.8	329,101.9	582493.4679	322,011.9	188,722.4
8	1984	198,450.2	338,908.7	629559.5402	329,101.9	194,070.8
9	1985	205,919.8	358,121.7	683019.2135	338,908.7	198,450.2
10	1986	212,428.1	371,861.8	763625.7174	358,121.7	205,919.8
11	1987	220,709.3	386,722.5	846323.348	371,861.8	212,428.1
12	1988	230,958.4	410,766.9	954802.7263	386,722.5	220,709.3
13	1989	241,157.6	431,427.2	1070629.374	410,766.9	230,958.4
14	1990	252,408.6	455,788.9	1027010.021	431,427.2	241,157.6
15	1991	257,039.6	471,835.9	1046293.788	455,788.9	252,408.6
16	1992	262,234.2	478,055.9	1044534.187	471,835.9	257,039.6
17	1993	264,250.6	478,547.3	1101718.217	478,055.9	262,234.2
18	1994	269,749.5	480,173.3	1161100.293	478,547.3	264,250.6
19	1995	274,169.7	487,568.1	1212521.722	480,173.3	269,749.5
20	1996	280,003.0	499,707.8	1257892.059	487,568.1	274,169.7
21	1997	281,316.8	505,048.8	1263504.377	499,707.8	280,003.0
22	1998	278,649.6	498,183.1	1289971.984	505,048.8	281,316.8
23	1999	280,997.9	497,518.0	1389274.803	498,183.1	278,649.6
24	2000	282,786.3	505,945.9	1414657.1	497,518.0	280,997.9
25	2001	287,422.5	505,478.2	1409891.287	505,945.9	282,786.3
26	2002	290,572.0	508,863.0	1419756.276	505,478.2	287,422.5
27	2003	292,592.1	517,713.4	1484907.547	508,863.0	290,572.0
28	2004	298,443.1	530,307.1	1536396.174	517,713.4	292,592.1
29	2005	303,925.5	545,316.8	1665349.514	530,307.1	298,443.1
30	2006	309,510.2	553,582.2	1703642.329	545,316.8	303,925.5
31	2007	319,617.7	566,452.0	1679010.444	553,582.2	309,510.2

推定結果

31	2007	319,617.7	566,452.0	1679010.444	553,582.2	309,510.2			
32									
33									
34	概要								
35									
36	回帰統計								
37	重相関 R	0.998695042							
38	重決定 R ²	0.997391786							
39	補正 R ²	0.997051585							
40	標準誤差	2181.314167							
41	観測数	27							
42									
43	分散分析表								
44	自由度	変動	分散	観測された分散比	有意 F				
45	回帰	3	41849174447	13949724816	2931.765301	7.65584E-30			
46	残差	23	109437024.4	4758131.496					
47	合計	26	41958611472						
48									
49	係数	標準誤差	t	P-値	下限 95%	上限 95%	下限 95.0%	上限 95.0%	
50	切片	49143.13409	6003.133425	8.188247183	2.88345E-08	36724.70644	61561.56	36724.71	61561.56
51	RYD	0.216849174	0.066929069	3.239984897	0.003615612	0.078395845	0.355303	0.078396	0.355303
52	RMA	0.029948088	0.005227539	5.728907859	7.79756E-06	0.0191341	0.040762	0.019134	0.040762
53	RYD_1	0.168455964	0.058479705	2.88058846	0.008443757	0.047481477	0.28943	0.047481	0.28943
54									
55									

変数を入れ替える



1	消費関数用年次データ1981-2007	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32				
					実質民間最終消費支出	実質国民総可処分所得	実質金融資産残高																													
					RC	RYD	RMA	RC_1																												
					181,000.2	314,386.4	489346.8401	178,232.9																												
5	1981				188,722.4	322,011.9	527042.1117	181,000.2																												
6	1982				194,070.8	329,101.9	582493.4679	188,722.4																												
7	1983				198,450.2	338,908.7	629559.5402	194,070.8																												
8	1984				205,919.8	358,121.7	683019.2135	198,450.2																												
9	1985				212,428.1	371,861.8	763625.7174	205,919.8																												
10	1986				220,709.3	386,722.5	846323.348	212,428.1																												
11	1987				230,958.4	410,766.9	954802.7263	212,428.1																												
12	1988				241,157.6	431,427.2	1070629.374	241,157.6																												
13	1989				252,408.6	455,788.9	1027010.021	252,408.6																												
14	1990				257,039.6	471,835.9	1046293.788	257,039.6																												
15	1991				262,234.2	478,055.9	1044534.187	262,234.2																												
16	1992				264,250.6	478,547.3	1101718.217	264,250.6																												
17	1993				269,749.5	480,173.3	1161100.293	269,749.5																												
18	1994				274,169.7	487,568.1	1212521.722	274,169.7																												
19	1995				280,003.0	499,707.8	1257892.059	274,169.7																												
20	1996				281,316.8	505,048.8	1263504.377	280,003.0																												
21	1997				278,649.6	498,183.1	1289971.984	281,316.8																												
22	1998				280,997.9	497,518.0	1389274.803	278,649.6																												
23	1999				282,786.3	505,945.9	1414657.1	280,997.9																												
24	2000				287,422.5	505,478.2	1409891.287	282,786.3																												
25	2001				290,572.0	508,863.0	1419756.276	287,422.5																												
26	2002				292,592.1	517,713.4	1484907.547	290,572.0																												
27	2003				298,443.1	530,307.1	1536396.174	292,592.1																												
28	2004				303,925.5	5316.8	1665349.514	298,443.1																												
29	2005				309,510.2	582.2	1703642.329	303,925.5																												
30	2006				319,617.7	52.0	1679010.444	309,510.2																												

①確認。

②このデータで回帰。

推定結果

52	RMA	0.029948088	0.005227539	5.728907859	7.79756E-06	0.0191341	0.040762	0.019134	0.040762	
53	RYD_1	0.168455964	0.058479705	2.88058846	0.008443757	0.047481477	0.28943	0.047481	0.28943	
54										
55										
56										
57	概要									
58										
59	回帰統計									
60	重相関 R	0.999099763								
61	重決定 R ²	0.998200337								
62	補正 R ²	0.997965599								
63	標準誤差	1811.933326								
64	観測数	27								
65										
66	分散分析表									
67										
68	自由度	変動	分散	観測された分散比	有意 F					
68	回帰	3	41883100117	13961033372	4252.390501	1.07378E-31				
69	残差	23	75511354.72	3283102.379						
70	合計	26	41958611472							
71										
72	係数	標準誤差	t	P-値	下限 95%	上限 95%	下限 95.0%	上限 95.0%		
73	切片	32064.08255	5429.902888	5.905093187	5.09525E-06	20831.47261	43296.69	20831.47	43296.69	
74	RYD	0.228867406	0.040892122	5.59685819	1.07475E-05	0.144275607	0.313459	0.144276	0.313459	
75	RMA	0.018860711	0.004784545	3.942007428	0.000649616	0.008963126	0.028758	0.008963	0.028758	
76	RC_1	0.394389881	0.083406007	4.728554871	9.15685E-05	0.22185141	0.566928	0.221851	0.566928	
77										