title: "Dynamic Model - PCA"

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# PCA - Estimación directa

Lo que haremos ahore es obtener los estimadores con los componentes principales obtenidos en el tratamiento de los páneles, lo cuales ya son el número óptimo de componentes.

### **Pooling**

#### Bateadores

Bateadores: Modelo Pooling con PCA

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Dependent variable:

0 000 mm

Edadt	-0.006**	
	(0.003)	
Años contratot	-0.001	
	(0.004)	
Eqipot	0.001	
	(0.001)	
PCA1t	0.00002	
	(0.00003)	
PCA1t-1	-0.00000	
	(0.00002)	
Agentet	0.157*	
	(0.081)	
		-==

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Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

#### Starting pitcher

Lanzadores Iniciales: Modelo Pooling con PCA

Dependent variable:

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Edadt -0.008\*\*
(0.004)
Años contratot -0.006
(0.007)
Eqipot 0.003\*

	(0.002)
PCA1t	-0.002
	(0.006)
PCA2t	-0.0001
	(0.0001)
PCA1t-1	0.00001
	(0.00001)
PCA2t-1	-0.00000
	(0.00005)
Agentet	0.242*
	(0.142)
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Note:	*p<0.1; **p<0.05; ***p<0.01

Efectos fijos

#### Bateadores

Bateadores: Estimador Within con PCA

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Dependent variable:

Edadt	-0.004
	(0.006)
Años contratot	-0.032**
	(0.012)
Eqipot	0.001
	(0.001)
PCA1t	-0.00000
	(0.00004)
PCA1t-1	-0.00000
	(0.00004)
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Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## Starting pitcher

Edadt -0.030\*\*
(0.015)

Años contratot -0.025
(0.019)

Eqipot 0.004
(0.002)

PCA1t	-0.013		
	(0.008)		
PCA2t	-0.00001		
	(0.0001)		
PCA1t-1	-0.00001**		
	(0.0000)		
PCA2t-1	0.00001		
	(0.0001)		
=========			
Note:	*p<0.1; **p<0.05; ***p<0.01		

Efectos aleatorios

#### Bateadores

Bateadores: Efectos Aleatorios con PCA

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Dependent variable:

Edadt	-0.005**
	(0.003)
Años contratot	-0.003
	(0.004)
Eqipot	0.001
	(0.001)
PCA1t	0.00001
	(0.00003)
PCA1t-1	-0.00000
	(0.00002)
Agentet	0.148*
	(0.083)
============	

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Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

#### Starting pitcher

 ${\tt Lanzadores\ Iniciales:\ Efectos\ Aleatorios\ con\ PCA}$ 

Dependent variable:

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Edadt -0.010\*\*
(0.005)
Años contratot -0.006
(0.007)
Eqipot 0.003\*
(0.001)
PCA1t -0.003

	(0.006)			
PCA2t	-0.0001			
	(0.0001)			
PCA1t-1	0.00000			
	(0.0000)			
PCA2t-1	-0.00001			
	(0.00004)			
Agentet	0.310*			
	(0.173)			
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Note:	*p<0.1; **p<0.05; ***p<0.01			

#### First Differences

#### Bateadores

Bateadores: Primeras Diferencias con PCA Dependent variable: \_\_\_\_\_ \_\_\_\_\_ Edadt -0.011\*\*\* (0.002)Años contratot -0.045\*\*\* (0.009)Eqipot 0.002\*\*\* (0.001)PCA1t 0.00002 (0.00001)PCA1t-1 -0.00000 (0.00002)\_\_\_\_\_\_ \_\_\_\_\_ \*p<0.1; \*\*p<0.05; \*\*\*p<0.01 Note:

#### Starting pitcher

Lanzadores Iniciales: Primeras Diferencias con PCA

Dependent variable:

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Edadt -0.017\*
(0.009)
Años contratot -0.029\*\*\*
(0.009)
Eqipot 0.003\*\*\*
(0.001)
PCA1t -0.001
(0.003)

Mostremos los resultados de manera conjunta

Bateadores regulares: Modelos con PCA

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	Dependent variable:Y_Sueldo_regular_norm_t			
	Pooling	Within	RE	FD
	(1)	(2)	(3)	(4)
Edadt	-0.006***	-0.004	-0.005**	-0.011**
	(0.002)	(0.004)	(0.002)	(0.005)
Años contratot	-0.001	-0.032***	-0.003	-0.045***
	(0.004)	(0.009)	(0.004)	(0.010)
Eqipot	0.001	0.001	0.001	0.002*
1 1	(0.001)	(0.001)	(0.001)	(0.001)
PCA1t	0.00002	-0.00000	0.00001	0.00002
	(0.00003)	(0.00004)	(0.00003)	(0.00004)
PCA1t-1	-0.00000	-0.00000	-0.00000	-0.00000
	(0.00002)	(0.00004)	(0.00002)	(0.00004)
Agentet	0.157**		0.148**	
	(0.069)		(0.072)	
Observations	 538	 538	538	225
R2	0.018	0.064	0.014	0.135
Adjusted R2	0.009	-1.285	0.005	0.120
F Statistic	1.970* (df = 5; 53	2) 3.006** (df = 5; 220)	7.681	6.173*** (df = 5; 220)
Note:		============	======== p<0	.1; **p<0.05; ***p<0.01

Lanzadores Iniciales: Modelos con PCA

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#### Dependent variable: Y\_Sueldo\_regular\_norm\_t Within RE FD Pooling (3) (2) (1) (4) -0.008\*\* -0.030\*\*\* -0.010\*\* Edadt -0.017 (0.011) (0.004) -0.025 -0.006 (0.020) (0.009) (0.004)(0.014)Años contratot -0.006 -0.029 (0.020) (0.009) (0.020) 0.004\* 0.003\* 0.003 (0.009)Eqipot 0.003\*

Note:				**n<0 05: ***n<0 01
F Statistic	1.738 (df = 7; 198	8) 1.725 (df = 7; 81)	12.099*	1.168 (df = 7; 81)
Adjusted R2	0.025	-1.203	0.024	0.013
R2	0.058	0.130	0.058	0.081
Observations	206	206	206	 88
	(0.125)		(0.147)	
Constant	0.242*		0.310**	
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
pca2_t_1	-0.00000	0.00001	-0.00001	-0.0001
	(0.00001)	(0.00002)	(0.00001)	(0.00002)
Agentet	0.00001	-0.00001	0.00000	-0.00001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
PCA1t-1	-0.0001	-0.00001	-0.0001	-0.0001
	(0.006)	(0.010)	(0.006)	(0.011)
PCA1t	-0.002	-0.013	-0.003	-0.001
	(0.001)	(0.002)	(0.001)	(0.002)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01