

# Determinants of youth survival at self-employment in Spain and economic cycle

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# Aim

- Research on the determinants of business survival with age as a control variable is abundant (Millán et al., 2012; Rocha et al., 2015; Parker, 2009).
- Fewer studies focus on the determinants of youth self-employment itself (Van Praag, 2003; Blanchflower and Meyer, 1994).
- Young individuals as common target of entrepreneurship policies because of their high unemployment rates and low self-employment rates (Greene, 2005; Green, 2013).
- Aim: study the determinants of survival in self-employment of young workers in Spain.
- Determinants of survival: socioeconomic characteristics of the individuals (sex, age, level of education), labour market trajectory (previous working periods and number of employment spells), industry, economic context.

# Gender and entrepreneurship

- Lower female self-employment rates
- Underperformance hypothesis (Marlow et al., 2008): lower female survival rates, lower success.
  - Access to funding, networks, etc.
- Is it a myth? (Marlow and McAdam, 2012)

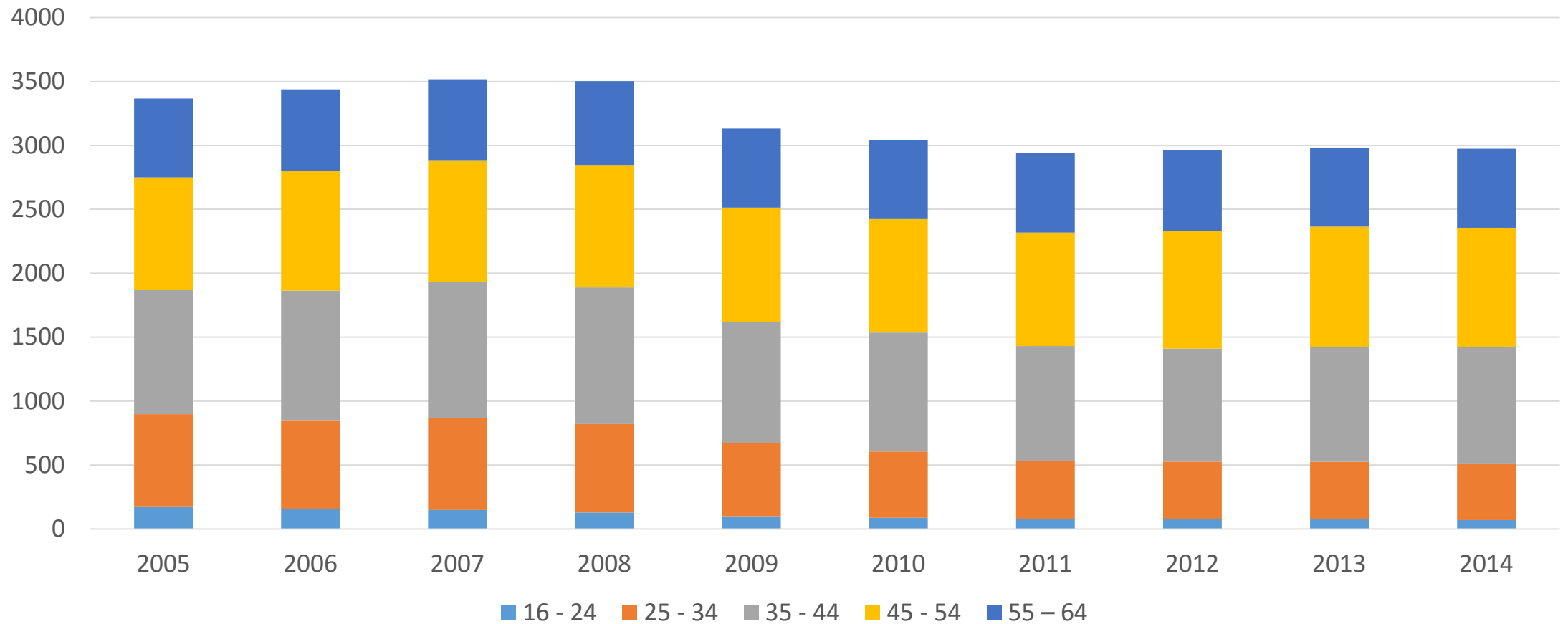
# Data

- For evolution of self-employment and youth self-employment in Spain: 2005-2014 LFS
- Description of profile of new self-employed workers and analysis of survival rates: 2005-2012 waves Continuous Sample of Working Lives (CSWL) dataset
  - Social Security registry: employment spells and previous labour market trajectory

# Methodology

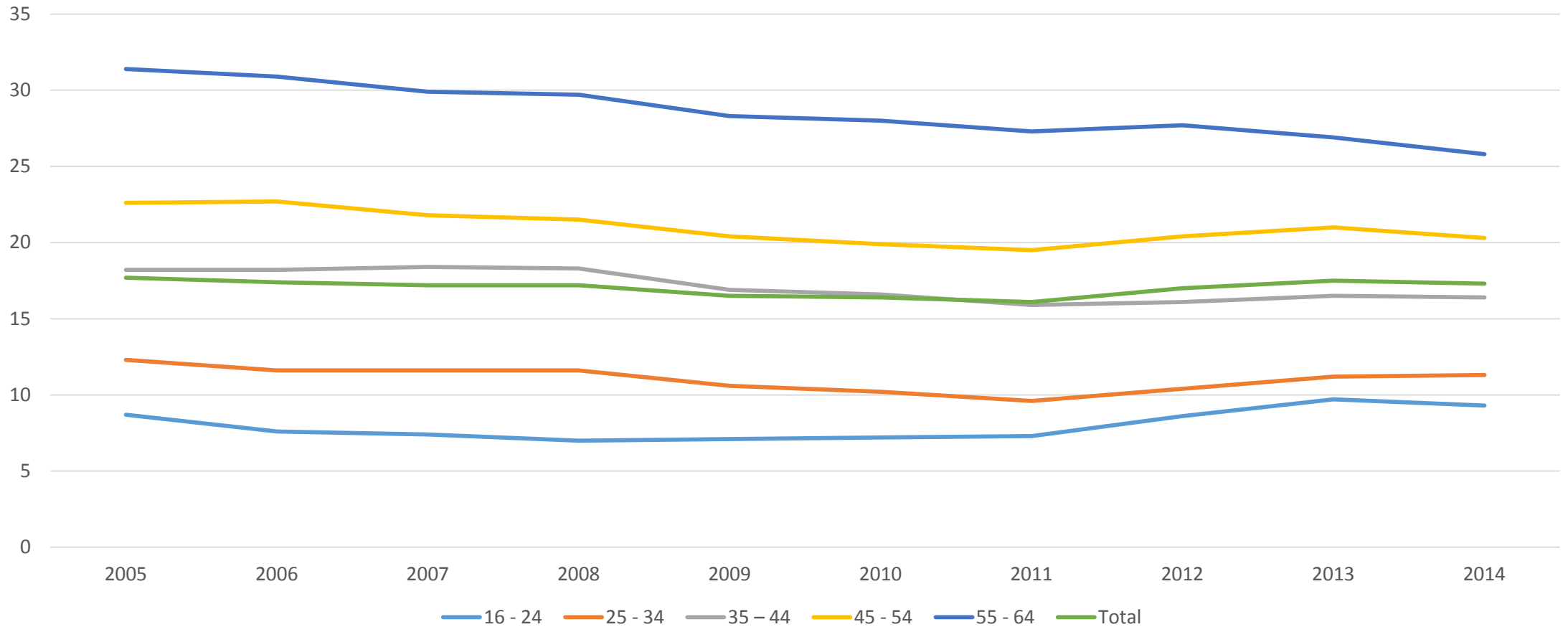
- Young workers: aged 16-34 (GEM, 2013).
- Dependent variable: time from business start-up.
- The probability of business survival: Kaplan-Meier survival curves.
- Determinants of business survival: Cox's proportional hazard model.
- Determinants of business survival: regressions by sex and age groups (16-24, 25-29 and 30-34).

# Self-employed workers by age (thousands)



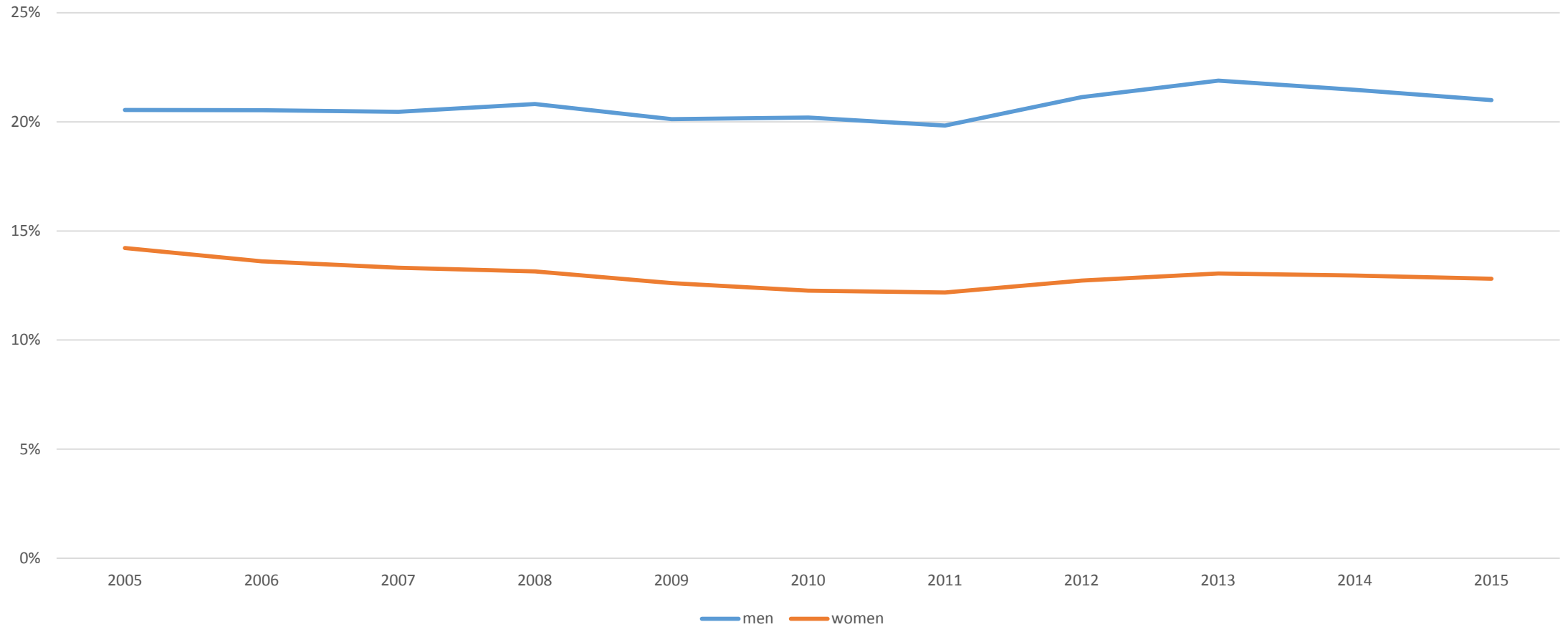
Source: LFS.

# Rate of self-employment (%)



Source: LFS.

# Rate of self-employment by sex



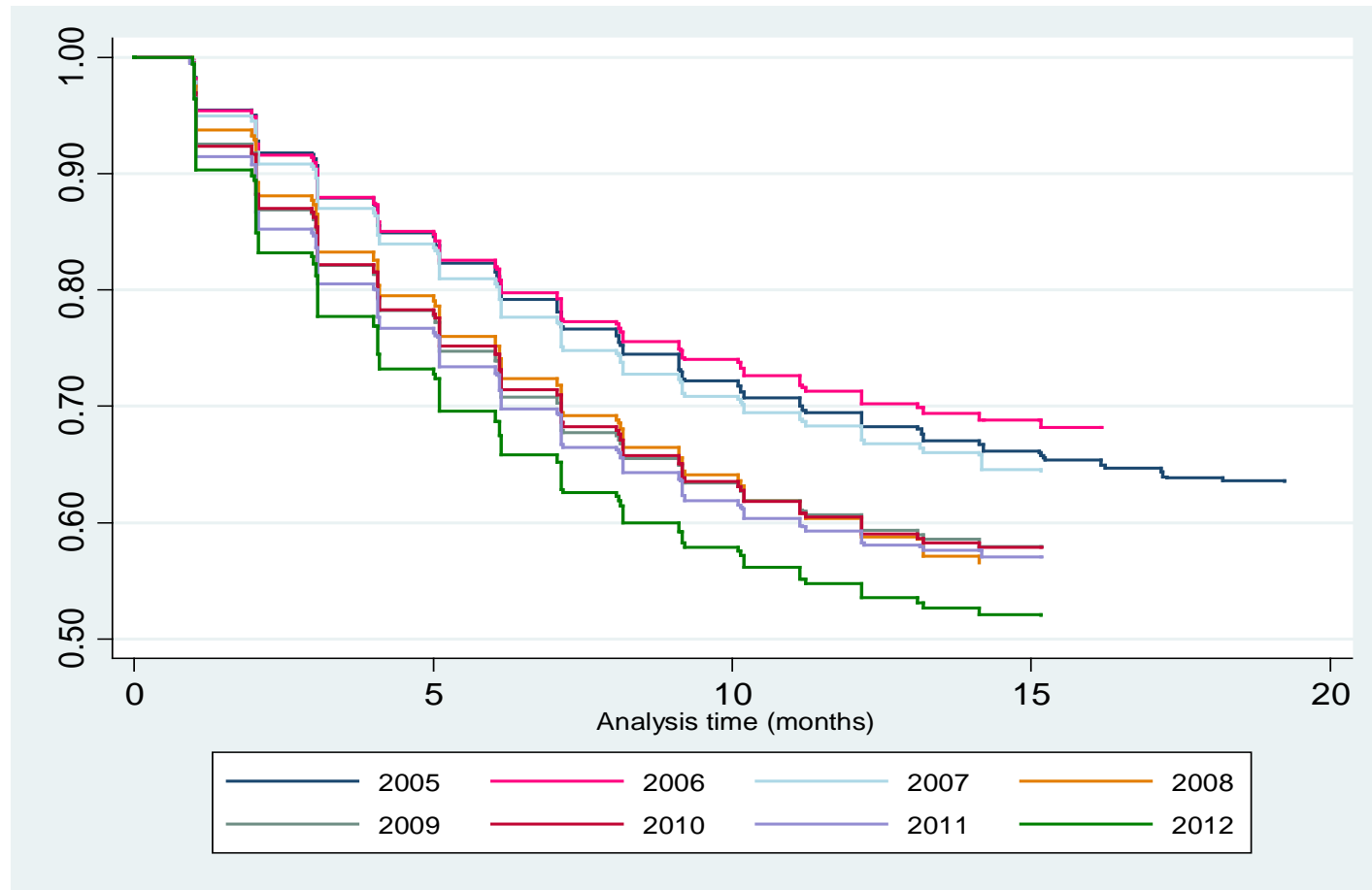


# Characteristics of new young self-employed workers (2005-2012).

	2005	2006	2007	2008	2009	2010	2011	2012
sex (male)	0.670	0.673	0.685	0.651	0.613	0.651	0.636	0.637
born in Spain	0.937	0.910	0.783	0.753	0.841	0.833	0.826	0.813
Level of education								
Primary	0.877	0.876	0.878	0.846	0.822	0.806	0.787	0.741
Professional secondary	0.089	0.081	0.082	0.078	0.065	0.081	0.072	0.098
Secondary	0.025	0.030	0.029	0.054	0.081	0.083	0.098	0.105
University	0.009	0.013	0.012	0.022	0.032	0.031	0.043	0.056
potential working time (years)	3.8	3.8	3.6	3.4	3.8	3.7	3.8	3.7
working time (years)	2.1	2.1	2.0	1.8	2.0	1.9	1.8	1.6
any self-employment period	0.142	0.157	0.127	0.170	0.226	0.183	0.185	0.207
any unemployment period	0.207	0.205	0.164	0.171	0.243	0.243	0.220	0.216
unemployment time (years)	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6
elapsed time from last employment to self-employment (years)	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.8
elapsed time from last employment to self-employment (%)								
first employment	0.238	0.213	0.333	0.323	0.223	0.260	0.293	0.277
< 3 months	0.375	0.394	0.338	0.325	0.325	0.273	0.270	0.287
3 – 6 months	0.108	0.108	0.101	0.109	0.121	0.118	0.107	0.117
6 months – 1 year	0.138	0.134	0.120	0.135	0.177	0.152	0.150	0.135
1 – 2 years	0.083	0.094	0.063	0.068	0.112	0.121	0.094	0.092
2 – 3 years	0.028	0.030	0.025	0.016	0.024	0.053	0.045	0.045
3 – 5 years	0.024	0.018	0.016	0.019	0.016	0.018	0.030	0.042
> 5 years	0.006	0.008	0.005	0.005	0.004	0.005	0.009	0.004

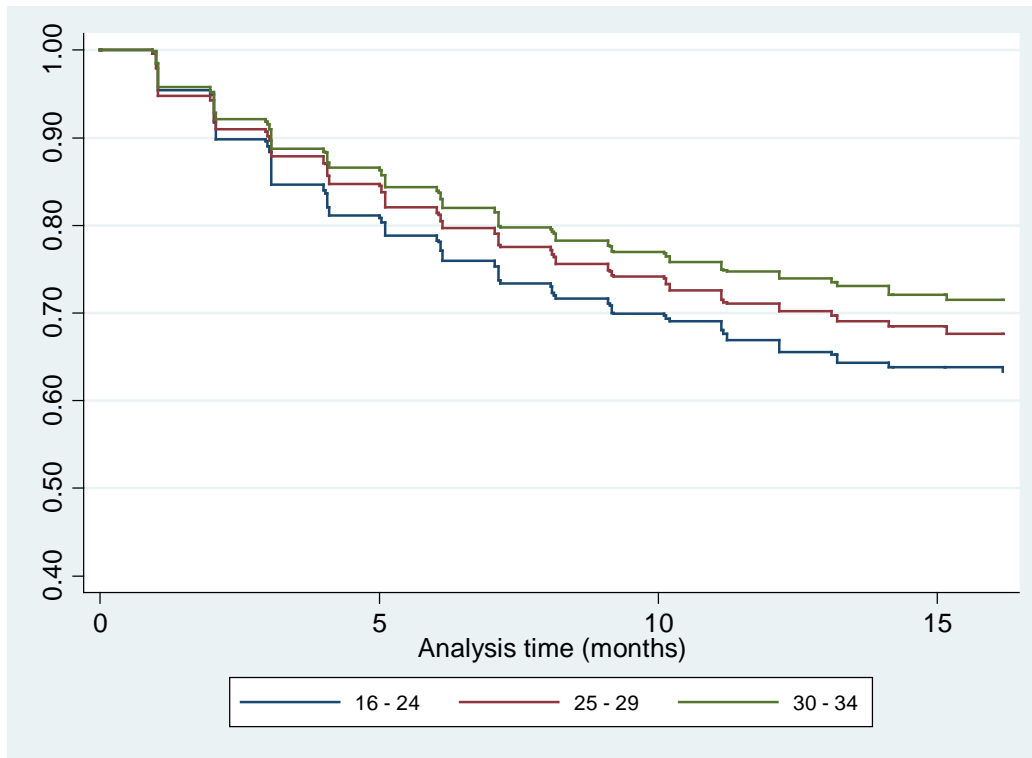
More than 60% are men. Slightly increasing the proportion of migrant workers. Improvement of the level of formal qualification. Increase in the proportion of people with unemployment and self-employment experience. Decrease in direct transitions from employment to self-employment.

# Survival in self-employment among the youth per year (2005-2012)

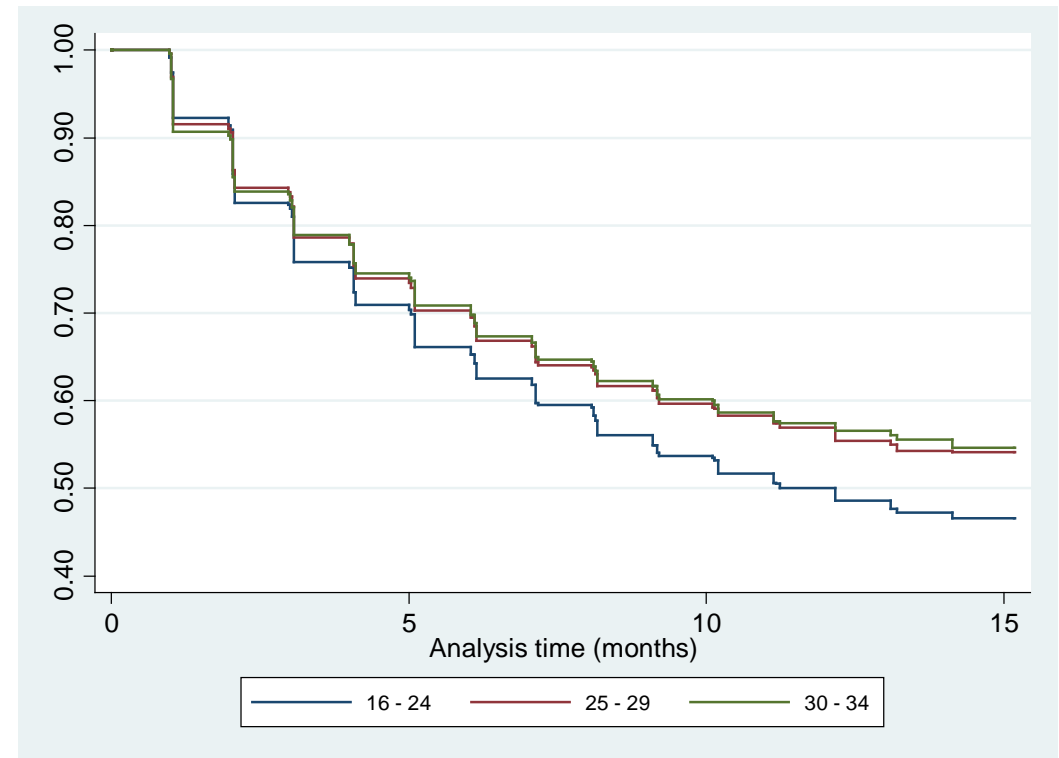


# Survival in self-employment among the youth by age group (2006, 2012)

**2006**



**2012**



# Determinants of business survival

		Model I			Model II			Model III		
		All			Men			Women		
		H.R.	S.E.		H.R.	S.E.		H.R.	S.E.	
age: 16-24	25 – 29	0.925	0.019	***	0.922	0.024	***	0.899	0.031	***
	30 – 34	0.968	0.022		1.015	0.029		0.866	0.033	***
sex (male)		1.117	0.018	***						
born in Spain		0.882	0.017	***	0.859	0.020	***	0.931	0.030	**
Level of education: ref Primary	Professional secondary	0.958	0.019	**	0.932	0.023	***	0.985	0.030	
	Secondary	0.929	0.024	***	0.959	0.031		0.874	0.037	***
	University	0.963	0.025		0.914	0.035	**	1.020	0.038	
labour experience: ref 10 - < 20 years	first employment	4.490	0.327	***	4.309	0.410	***	5.014	0.594	***
	< 1 year	3.148	0.122	***	2.931	0.138	***	3.691	0.270	***
	1 - <2 years	2.640	0.099	***	2.465	0.113	***	3.139	0.224	***
	2 - < 5 years	1.970	0.064	***	1.887	0.072	***	2.299	0.150	***
	5 - < 10 years	1.370	0.042	***	1.355	0.048	***	1.539	0.100	***
	+ 20 years	0.808	0.467		0.791	0.560		1.114	1.116	
any self-employment period		2.224	0.036	***	2.294	0.046	***	2.132	0.058	***
any unemployment period		1.165	0.020	***	1.145	0.025	***	1.186	0.035	***
elapsed time from last employment to self- employment: ref > 5 years	< 3 months	1.799	0.106	***	1.846	0.147	***	1.695	0.149	***
	3 – 6 months	2.021	0.121	***	1.910	0.155	***	2.110	0.190	***
	6 months – 1 year	2.184	0.130	***	2.051	0.165	***	2.298	0.205	***
	1 – 2 years	1.654	0.101	***	1.548	0.128	***	1.771	0.163	***
	2 – 3 years	1.525	0.103	***	1.516	0.136	***	1.484	0.151	***
	3 – 5 years	1.420	0.098	***	1.371	0.127	***	1.457	0.151	***
Industry	Agriculture	0.768	0.050	***	0.782	0.060	***	0.782	0.096	**
	Construction	1.435	0.052	***	1.559	0.067	***	0.997	0.082	
	Retail trade	0.964	0.035		1.009	0.046		0.852	0.052	***
	Hospitality	1.242	0.047	***	1.303	0.062	***	1.092	0.069	
	Transport	0.867	0.046	***	0.901	0.055	*	0.827	0.093	*
	Health	0.794	0.044	***	0.787	0.074	**	0.690	0.053	***
	Education	2.009	0.093	***	2.298	0.149	***	1.645	0.116	***
	Business services	1.376	0.051	***	1.449	0.067	***	1.214	0.075	***
	Other services	1.350	0.053	***	1.725	0.085	***	0.966	0.063	
Year: ref 2007	2005	0.990	0.029		0.994	0.036		0.976	0.047	
	2006	0.901	0.027	***	0.855	0.032	***	0.987	0.048	
	2008	1.270	0.037	***	1.360	0.049	***	1.112	0.054	**
	2009	1.228	0.037	***	1.346	0.051	***	1.046	0.052	
	2010	1.268	0.038	***	1.419	0.053	***	1.045	0.052	
	2011	1.313	0.039	***	1.463	0.054	***	1.105	0.054	**
	2012	1.582	0.044	***	1.688	0.060		1.414	0.066	***
Sample size		63933			39077			24856		

		Model I			Model II			Model III		
		All			Men			Women		
		H.R.	S.E.		H.R.	S.E.		H.R.	S.E.	
age: 16-24	25 – 29	0.925	0.019	***	0.922	0.024	***	0.899	0.031	***
	30 – 34	0.968	0.022		1.015	0.029		0.866	0.033	***
sex (male)		1.117	0.018	***						
born in Spain		0.882	0.017	***	0.859	0.020	***	0.931	0.030	**
Level of education: ref Primary	Professional secondary	0.958	0.019	**	0.932	0.023	***	0.985	0.030	
	Secondary	0.929	0.024	***	0.959	0.031		0.874	0.037	***
	University	0.963	0.025		0.914	0.035	**	1.020	0.038	

Male self-employed workers have a probability of exiting self-employment 11.7% higher than female self-employed workers

H1: rejected

		Model I			Model II			Model III		
		All			Men			Women		
		H.R.	S.E.		H.R.	S.E.		H.R.	S.E.	
age: 16-24	25 – 29	0.925	0.019	***	0.922	0.024	***	0.899	0.031	***
	30 – 34	0.968	0.022		1.015	0.029		0.866	0.033	***
sex (male)		1.117	0.018	***						
born in Spain		0.882	0.017	***	0.859	0.020	***	0.931	0.030	**
Level of education: ref Primary	Professional secondary	0.958	0.019	**	0.932	0.023	***	0.985	0.030	
	Secondary	0.929	0.024	***	0.959	0.031		0.874	0.037	***
	University	0.963	0.025		0.914	0.035	**	1.020	0.038	

Migrant workers have lower survival rates than non-migrants

H2: confirmed

		Model I			Model II			Model III		
		All			Men			Women		
		H.R.	S.E.		H.R.	S.E.		H.R.	S.E.	
age: 16-24	25 – 29	0.925	0.019	***	0.922	0.024	***	0.899	0.031	***
	30 – 34	0.968	0.022		1.015	0.029		0.866	0.033	***
sex (male)		1.117	0.018	***						
born in Spain		0.882	0.017	***	0.859	0.020	***	0.931	0.030	**
Level of education: ref Primary	Professional secondary	0.958	0.019	**	0.932	0.023	***	0.985	0.030	
	Secondary	0.929	0.024	***	0.959	0.031		0.874	0.037	***
	University	0.963	0.025		0.914	0.035	**	1.020	0.038	

Individuals with a secondary level of education have lower failure rates than those with a primary educational level. University level is significant only in the case of male workers. The impact is limited (hazard rates close to 1).

H3: confirmed

		Model I			Model II			Model III		
		All			Men			Women		
		H.R.	S.F.		H.R.	S.F.		H.R.	S.F.	
<b>labour experience: ref 10 - &lt; 20 years</b>	first employment	4.490	0.327	***	4.309	0.410	***	5.014	0.594	***
	< 1 year	3.148	0.122	***	2.931	0.138	***	3.691	0.270	***
	1 - <2 years	2.640	0.099	***	2.465	0.113	***	3.139	0.224	***
	2 - < 5 years	1.970	0.064	***	1.887	0.072	***	2.299	0.150	***
	5 - < 10 years	1.370	0.042	***	1.355	0.048	***	1.539	0.100	***
	+ 20 years	0.808	0.467		0.791	0.560		1.114	1.116	
<b>any self-employment period</b>		2.224	0.036	***	2.294	0.046	***	2.132	0.058	***
<b>any unemployment period</b>		1.165	0.020	***	1.145	0.025	***	1.186	0.035	***
<b>elapsed time from last employment to self- employment: ref &gt; 5 years</b>	< 3 months	1.799	0.106	***	1.846	0.147	***	1.695	0.149	***
	3 – 6 months	2.021	0.121	***	1.910	0.155	***	2.110	0.190	***
	6 months – 1 year	2.184	0.130	***	2.051	0.165	***	2.298	0.205	***
	1 – 2 years	1.654	0.101	***	1.548	0.128	***	1.771	0.163	***
	2 – 3 years	1.525	0.103	***	1.516	0.136	***	1.484	0.151	***
	3 – 5 years	1.420	0.098	***	1.371	0.127	***	1.457	0.151	***

Individuals without experience in the labour market have a lower probability of survival in self-employment than people with previous labour market experience. The probability of exiting is 4-5 times higher.

H4: confirmed



		Model I			Model II			Model III		
		All			Men			Women		
		H.R.	S.E.		H.R.	S.E.		H.R.	S.E.	
labour experience: ref 10 - < 20 years	first employment	4.490	0.327	***	4.309	0.410	***	5.014	0.594	***
	< 1 year	3.148	0.122	***	2.931	0.138	***	3.691	0.270	***
	1 - <2 years	2.640	0.099	***	2.465	0.113	***	3.139	0.224	***
	2 - < 5 years	1.970	0.064	***	1.887	0.072	***	2.299	0.150	***
	5 - < 10 years	1.370	0.042	***	1.355	0.048	***	1.539	0.100	***
	+ 20 years	0.808	0.467		0.791	0.560		1.114	1.116	
any self-employment period		2.224	0.036	***	2.294	0.046	***	2.132	0.058	***
any unemployment period		1.165	0.020	***	1.145	0.025	***	1.186	0.035	***
elapsed time from last employment to self- employment: ref > 5 years	< 3 months	1.799	0.106	***	1.846	0.147	***	1.695	0.149	***
	3 – 6 months	2.021	0.121	***	1.910	0.155	***	2.110	0.190	***
	6 months – 1 year	2.184	0.130	***	2.051	0.165	***	2.298	0.205	***
	1 – 2 years	1.654	0.101	***	1.548	0.128	***	1.771	0.163	***
	2 – 3 years	1.525	0.103	***	1.516	0.136	***	1.484	0.151	***
	3 – 5 years	1.420	0.098	***	1.371	0.127	***	1.457	0.151	***

Workers with self-employment experience are twice as likely to exit self-employment than workers without self-employment experience

H5: confirmed

		Model I			Model II			Model III		
		All			Men			Women		
		H.R.	S.E.		H.R.	S.E.		H.R.	S.E.	
labour experience: ref 10 - < 20 years	first employment	4.490	0.327	***	4.309	0.410	***	5.014	0.594	***
	< 1 year	3.148	0.122	***	2.931	0.138	***	3.691	0.270	***
	1 - < 2 years	2.640	0.099	***	2.465	0.113	***	3.139	0.224	***
	2 - < 5 years	1.970	0.064	***	1.887	0.072	***	2.299	0.150	***
	5 - < 10 years	1.370	0.042	***	1.355	0.048	***	1.539	0.100	***
	+ 20 years	0.808	0.467		0.791	0.560		1.114	1.116	
any self-employment period		2.224	0.036	***	2.294	0.046	***	2.132	0.058	***
any unemployment period		1.165	0.020	***	1.145	0.025	***	1.186	0.035	***
elapsed time from last employment to self- employment: ref > 5 years	< 3 months	1.799	0.106	***	1.846	0.147	***	1.695	0.149	***
	3 – 6 months	2.021	0.121	***	1.910	0.155	***	2.110	0.190	***
	6 months – 1 year	2.184	0.130	***	2.051	0.165	***	2.298	0.205	***
	1 – 2 years	1.654	0.101	***	1.548	0.128	***	1.771	0.163	***
	2 – 3 years	1.525	0.103	***	1.516	0.136	***	1.484	0.151	***
	3 – 5 years	1.420	0.098	***	1.371	0.127	***	1.457	0.151	***

Lower failure rates correspond to workers that have not been in employment in the last five years (push entrepreneurs).

H6: rejected

		Model I			Model II			Model III		
		All			Men			Women		
		H.R.	S.E.		H.R.	S.E.		H.R.	S.E.	
Year: ref 2007	2005	0.990	0.029		0.994	0.036		0.976	0.047	
	2006	0.901	0.027	***	0.855	0.032	***	0.987	0.048	
	2008	1.270	0.037	***	1.360	0.049	***	1.112	0.054	**
	2009	1.228	0.037	***	1.346	0.051	***	1.046	0.052	
	2010	1.268	0.038	***	1.419	0.053	***	1.045	0.052	
	2011	1.313	0.039	***	1.463	0.054	***	1.105	0.054	**
	2012	1.582	0.044	***	1.688	0.060		1.414	0.066	***

The economic downturn affects survival negatively.

H7: confirmed

# Discussion of results

- female young self-employed workers higher survival rates than men. Contradicts literature (Millán et al. 2012). Data limitation: no information on family situation which affects survival by women (Rybczynski, 2015). Yet, Spain.. low fertility rates + precariousness
- The youngest have a clear disadvantage
- Importance of experience in labour market to explain business survival
- Overall, lack of employment experience and low qualification reduce the probability of survival. Thus, programmes fostering transitions into self-employment via funding insufficient; improving the skills of the prospective self-employed among the youngest is essential. Also, women deserve more attention!