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# Self-employment, Start-up Incentives and Political Ideology

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## Abstract

We find evidence that public start-up incentives promote self-employment. This public policy seems to affect more women than men.

**JEL Classification:** L26, J21, J58.

**Keywords:** Self-employment, start-up incentives, political ideology.

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# 1 Introduction

Economic theory suggests that entrepreneurial activity, including self-employment or business ownership, which is the most commonly used condition to identify an entrepreneur, propels economic growth by enhancing productivity and innovation (see van Praag and Versloot, 2007). Nonetheless, self employment rates have been decreasing and a significant gender gap in self-employment rates has been emerging over the last decades in several OECD countries (OECD, 2011).

Previous studies have analysed the determinants of self-employment, focusing mainly on the role of individuals' economic incentives (e.g., Lazear and Moore, 1984), parental backgrounds (e.g., Marino and Parrotta, 2015), individual living (e.g., Blanchflower, 2000) or working (e.g., Marino et al, 2012) environments, and macroeconomic conditions (e.g., Parker et al., 2012). However, to the best of our knowledge, there is no empirical evidence concerning the effects of public start-up incentives on self-employment rates or on the ratio between female and male self-employment rates.

Our aim is to fill this gap using data for a panel of 20 OECD countries over the period 1990-2007. We implement a linear model estimation approach, controlling for a set of labour market policies and characteristics as well as allowing for country and year fixed effects to control for both unobserved heterogeneity and global economic trends. However, because public support for start-ups likely responds to economic contingencies, we adopt an IV estimation strategy exploiting voter past political ideology as an instrument for the GDP share of public expenditure for start-up incentives.

We find evidence that start-up incentives favour self-employment, especially among women. Specifically, we find that a 0.1 % (or approximately 4 standard deviation) increase in the share of GDP devoted to start-up incentive expenditures increases the self-employment rate and the female to male self employment rate ratio by 0.18 % and 0.22 %, respectively. These findings suggest that public support for start-ups is an effective policy tool to promote both self-employment and women's engagement in entrepreneurial activities.

The remainder of this paper is presented in the following order: data, estimation strategy, results and conclusions.

## 2 Data

Combining information from the OECD Labour Market Statistics, World Development Indicators (WDI), Manifesto Research Group (MRG) Project, and Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS) databases, we built a nearly balanced sample of 20 countries over a period of 18 years (1990-2007). We restrict the sample to those countries for which all relevant data are

available over the sample period: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, the United Kingdom, and the United States. Furthermore, to exclude the pervasive effects of the Great Recession (2008-2010), we do not consider the most recent years when most countries increased their shares of public spending on start-up incentives.

Table 1 reports the descriptions, sources and descriptive statistics for our variables. The average self-employment rate is approximately 2.7 %, and the average proportion of females who are self-employed is two-thirds of their male counterparts. The median voter’s ideology is neither left nor right wing. On average, start-up incentives represent approximately 0.02

### 3 Estimation strategy

To investigate the effect of startup incentives on self-employment rates and on the ratio between female and male self-employment, we perform the following linear regression approach:

$$y_{it} = \gamma StartupIncentives_{it} + X'_{it}\beta + u_i + \eta_t + \varepsilon_{it} \quad (1)$$

$y_{it}$  indicates either the *self-employment rate* or *female vs male self-employment*, where the latter is defined as ratio between female and male self-employment rates.  $X'_{it}$  includes an extensive set of control variables on labour market policies and labour market characteristics, and  $u_i$  and  $\eta_t$  are country and time fixed effects, respectively. For regressions in which *female vs male self-employment* is the dependent variable, we include both the female and male unemployment rates, rather than only the overall unemployment rate.

As public policies might respond to idiosyncratic economic conditions and expectations, we implement an instrumental variable strategy based on the assumption that past political ideology is an exogenous determinant of our variables of interest. Specifically, we compute the median voter’s ideological position as in Kim and Fording (2001). In addition, because simultaneity between present changes in political ideology and economic conditions may still bias our analyses, we use a 5-year moving average, MA(5), of the contemporaneous political ideology indicator to allow for a lagged effect of political ideology on the variable of interest.

### 4 Results

Table 2 reports the results of both OLS (with country and year fixed effects) and FE (within effects) regression models with the self-employment rate as the dependent variable. We find that the parameter of interest is

significant and robust to the inclusion of controls for labour market policies and labour market characteristics. We observe that a 0.1 % (or approximately 4 standard deviation) increase in the GDP share of start-up incentive expenditure is related to a 0.08 % increase in the self-employment rate. Similarly, Table 3 reports the results for the relation between start-up incentives and female to male self-employment. Start-up incentives seem to favour female over male self-employment, although this parameter is not significant across all specifications.

Table 4 reports the results of our IV estimation strategy. The first stage regression shows the strength of our instrumental variable, the median voter's ideological position, on each variable of interest (i.e., the F-test on the excluded instrument scores are largely above the reference threshold of 10). Right parties seem to devote more resources to entrepreneurship than do left parties.

The second stage estimates confirm and reinforce the FE results: The parameters on our key variable indicate a sizable and significant impact on both dependent variables. We find that a 0.1 % (or approximately 4 standard deviation) increase in the GDP share of start-up incentive expenditure increases the self-employment rate and the female to male self-employment rate ratio by 0.18 % and 0.22 %, respectively.

## 5 Conclusions

We find evidence that start-up incentives promote self-employment, especially among women. Our findings show that political ideology influences the extent to which a country resorts to start-up incentives and that start-up incentive policies can effectively stimulate entrepreneurial activity.

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Table 1: *Descriptive statistics*

	<i>Mean</i>	<i>Standard deviation</i>	<i>Min</i>	<i>Max</i>
<i>Dependent variable</i>				
Self-employment rate (% of civilian employment, OECD source)	2.697	0.439	1.96	3.865
Female vs male self-employment (female to male self-employment rate ratio, WDI source)	0.668	0.217	0.289	1.45
<i>Key variables</i>				
Start-up incentives (% of GDP, OECD source)	0.019	0.028	0	0.19
Median voter's ideology index MA(5) (á la Kim and Fording (2001), MRG Project source)	0.003	0.167	-0.427	0.516
<i>Labour market policies</i>				
Employment rehabilitation (% of GDP, OECD source)	0.102	0.15	0	0.62
Job creation (% of GDP, OECD source)	0.125	0.155	0	0.64
Training (% of GDP, OECD source)	0.252	0.193	0.01	1.06
Employment incentives (% of GDP, OECD source)	0.118	0.148	0	0.88
Early retirement (% of GDP, OECD source)	0.16	0.275	0	1.19
Out-of-work support (% of GDP, OECD source)	1.276	0.848	0.16	4.79
<i>Labour market characteristics</i>				
Union coverage (% values, ICTWSS source)	67.163	25.994	13.1	99
Union density (% values, ICTWSS source)	36.737	20.728	7.544	83.863
Unit Labour Cost (index OECD base year 2005=100)	2.348	3.154	-5.24	23.407
Unemployment rate (% of labour force, OECD source)	7.632	3.579	1.806	24.171
Female unemployment rate (% of female labour force, WDI source)	8.602	4.999	1.825	31.625
Male unemployment rate (% of male labour force, WDI source)	6.995	3.122	1.81	19.69
Employment protection legislation (regular contract, OECD version 1)	2.149	0.934	0.257	4.833
Employment protection legislation (temporary contract, OECD version 1)	1.91	1.391	0.25	4.875
<i>Observations</i>		354		
<i>Countries</i>		20		

Table 2: *Main results, All*

	OLS estimates			FE estimates		
	(i)	(ii)	(iii)	(i)	(ii)	(iii)
Start-up incentives	0.9978*	0.8977*	0.8032**	0.9978*	0.8977*	0.7833**
	(0.5080)	(0.5100)	(0.3120)	(0.4934)	(0.4950)	(0.3082)
Employment rehabilitation		-0.0549	-0.1563		-0.0549	-0.1657
		(0.2152)	(0.1920)		(0.2088)	(0.1884)
Job Creation		0.0115	0.0848		0.0115	0.0808
		(0.1175)	(0.1124)		(0.1141)	(0.1089)
Training		-0.0867	-0.0701		-0.0867	-0.0718
		(0.0733)	(0.0614)		(0.0712)	(0.0590)
Employment incentives		-0.1652	-0.0065		-0.1652	0.0099
		(0.1007)	(0.0755)		(0.0978)	(0.0750)
Early retirement		-0.1155	-0.1456		-0.1155	-0.1329
		(0.1354)	(0.1024)		(0.1314)	(0.1015)
Out-of-work support		0.0148	-0.0506**		0.0148	-0.0533***
		(0.0252)	(0.0212)		(0.0245)	(0.0199)
Union coverage			0.0002			0.0003
			(0.0013)			(0.0012)
Union density			-0.0068*			-0.0062**
			(0.0035)			(0.0031)
Unit labour Cost			-0.0005			-0.0007
			(0.0032)			(0.0031)
Unemployment rate			0.0192***			0.0196***
			(0.0041)			(0.0040)
EPL regular contracts			-0.0040			0.0155
			(0.0337)			(0.0318)
EPL temporary contracts			-0.0152			-0.0133
			(0.0142)			(0.0141)
Observations	354	354	354	354	354	354
Clusters	20	20	20	20	20	20
R-squared	0.980	0.982	0.986	0.5663	0.5990	0.6927

*Note:* The dependent variable is the logarithm of self-employment rate, as a proportion of civilian employment. All specifications include country and year fixed effects. Standard errors are heteroskedasticity robust and clustered at the country level.



Table 3: *Main results, Women vs Men*

	OLS estimates			FE estimates		
	(i)	(ii)	(iii)	(i)	(ii)	(iii)
Start-up incentives	0.1198 (0.3025)	0.5520* (0.2693)	0.5138* (0.2551)	0.1198 (0.2934)	0.5520** (0.2610)	0.3367 (0.6946)
Employment rehabilitation		0.2145 (0.1850)	0.1887 (0.1604)		0.2145 (0.1793)	-0.2308 (0.3300)
Job Creation		-0.0869 (0.1030)	-0.0473 (0.0719)		-0.0869 (0.0998)	-0.5966 (0.4023)
Training		-0.1891** (0.0683)	-0.1627*** (0.0552)		-0.1891** (0.0662)	-0.8182*** (0.2298)
Employment incentives		-0.2058** (0.0962)	-0.0848 (0.0828)		-0.2058** (0.0932)	0.0529 (0.1746)
Early retirement		0.1631 (0.1287)	0.0451 (0.0935)		0.1631 (0.1248)	0.4200*** (0.1292)
Out-of-work support		-0.0012 (0.0236)	-0.0010 (0.0262)		-0.0012 (0.0229)	0.1250 (0.0799)
Union coverage			-0.001 (0.0009)			-0.0027 (0.0023)
Union density			-0.0033 (0.0030)			-0.0047*** (0.0016)
Unit labour Cost			-0.0018 (0.0024)			-0.0288** (0.0128)
Female unemployment rate			0.0198*** (0.0057)			0.0065 (0.0168)
Male unemployeny rate			-0.0251*** (0.0085)			-0.0373 (0.0308)
EPL regular contracts			0.0893*** (0.0276)			0.0953*** (0.0305)
EPL temporary contracts			-0.0008 (0.0149)			0.0570 (0.0553)
Observations	340	340	340	340	340	340
Clusters	20	20	20	20	20	20
R-squared	0.9664	0.9730	0.9786	0.4189	0.5340	0.2680

*Note:* The dependent variable is the ratio between female and male self-employment. All specifications include country and year fixed effects. Standard errors are heteroskedasticity robust and clustered at the country level.

Table 4: *IV results*

	All		Women vs men	
	<i>First stage</i>	<i>Second stage</i>	<i>First stage</i>	<i>Second stage</i>
Start-up incentives		1.7949** (0.9162)		2.2065*** (0.7846)
Ideology	0.0522*** (0.0114)		0.0573*** (0.0120)	
Employment rehabilitation	-0.1067*** (0.025)	-0.0517 (0.1249)	-0.0951*** (0.0343)	0.3477 (0.1294)
Job Creation	0.0018 (0.0146)	0.0856* (0.0487)	0.0060 (0.0172)	-0.0483 (0.0506)
Training	0.0088 (0.0133)	-0.078* (0.0412)	0.0228* (0.0129)	-0.1962*** (0.0377)
Employment incentives	0.0744*** (0.0191)	-0.0754 (0.0799)	0.0547*** (0.0198)	-0.1655** (0.0708)
Early retirement	-0.0219 (0.0186)	-0.1260** (0.0554)	-0.0086 (0.0221)	0.0485 (0.0607)
Out-of-work support	0.0165*** (0.0045)	-0.0675*** (0.0205)	0.0104* (0.0057)	-0.0174 (0.0149)
Union coverage	0.0006*** (0.0002)	-0.0007 (0.0011)	0.0006*** (0.0002)	-0.0024** (0.0009)
Union density	-0.0019*** (0.0006)	-0.0047* (0.0027)	-0.0021*** (0.0007)	0.0068** (0.003)
Unit labour Cost	0.0002 (0.0004)	-0.0008 (0.0017)	0.0004 (0.0004)	-0.0026 (0.0018)
Unemployment rate	-0.001 (0.0009)	0.0203*** (0.0024)		
Female Unemployment rate			-0.0015 (0.0012)	0.0233*** (0.0044)
Male Unemployment rate			0.0017 (0.0021)	-0.0288*** (0.0061)
EPL regular contracts	0.0481*** (0.0167)	-0.048123 (0.0519)	0.0526*** (0.0172)	0.0053 (0.0491)
EPL temporary contracts	-0.0066*** (0.0024)	-0.0066 (0.0109)	0.0073*** (0.0027)	0.0155 (0.0105)
Observations	354	354	340	340
Clusters	20	20	20	20
R-squared	0.4825	0.6670	0.4384	0.5186
F test of excluded instruments	F(1, 304) = 21.09		F(1, 289) = 22.68	

*Note:* All specifications are panel IVFE regressions. Standard errors are heteroskedasticity robust and clustered at the country level.