Unemployment Benefits Crowd Out Nascent Entrepreneurial Activity

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ABSTRACT AND KEYWORDS	
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Free Keywords	entrepreneurship, business startups, unemployment benefits
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Unemployment benefits crowd out nascent entrepreneurial activity

Abstract

Analyzing a cross-country panel of 16 OECD countries from 2002 to 2005, we find that higher unemployment benefits crowd out nascent entrepreneurial activity. Our results hold regardless of entrepreneurial motivation (necessity or opportunity) and entrepreneurial type (imitative or innovative).

JEL Codes: M13, J23, J65

Keywords: Entrepreneurship, Business Startups, Unemployment Benefits

1 Introduction

Although some evidence exists of a negative relationship between unemployment benefits and established self-employment (Parker and Robson, 2004), the relationship between unemployment benefits and start-up activity remains unclear. This is largely due to the lack of appropriate data since such a relationship can be properly understood only by looking at individuals who are actually in the process of starting a business. In other words, by considering all individuals who attempt to start a business rather than focusing only on those who have succeeded. Thank to new available data, we fill this gap by focusing on *nascent* rather than *established* entrepreneurship thereby capturing the effects of unemployment benefits on *start-up propensity.*

Using data for 16 developed countries, we provide robust empirical evidence that generous unemployment benefits are negatively related to entrepreneurial activity. We show this to be true regardless of entrepreneurial motivation and type. To the extent that entrepreneurship is important for growth, our results suggest that unemployment benefits can generate a costly crowding out effect.

2 Data

Table 1 describes the data used in our analysis. Annual data on nascent entrepreneurial activity are taken from the Global Entrepreneurship Monitor (GEM) study. Every year, GEM conducts a representative population survey of at least 2000 people in each participating country. Individuals classify as *nascent entrepreneurs* if they claim to be engaged in starting a business they will at least partially own and that has paid wages or profits for no more than 6 months (Reynolds et al., 2005).

GEM data allow us to divide nascent entrepreneurs between those who are starting a business to pursue a profitable opportunity but could be otherwise employed (*opportunity entrepreneurs*), and those who are starting because no better employment option is available (*necessity entrepreneurs*). The average share of necessity nascent entrepreneurs across countries and time in our sample is 14%.

In an alternative, entrepreneurs may be distinguished between innovators, who consider starting a business because of the monopolistic rents generated by their innovation, and imitators, who replicate existing businesses. GEM data allow us to divide nascent entrepreneurs between those who have many competitors and whose technology and product or service are already established (*imitative entrepreneurs*) and those who have introduced at least some innovation (*innovative entrepreneurs*) (Koellinger, 2008). The average share of purely imitative nascent entrepreneurs across countries and time in our sample is 27%.

Annual data on unemployment rates and public out-of-work income maintenance and support for the same countries and years are taken from the OECD Employment Outlook (2005, 2006, 2007).

The average generosity of unemployment benefits at the individual level is approximated by an index obtained by dividing the public spending on out-of-work income maintenance and support, measured in percent of GDP, by one plus the current unemployment rate. This index controls for the fact that an increase in unemployment rises public spending on out-of-work income maintenance and support without necessarily increasing unemployment benefits at the individual level. A high index value suggests generous average unemployment benefits compared to the national income. Unfortunately, our proxy for unemployment benefits does not capture possible differences in support schemes enjoyed by formerly employed and self-employed although such differences may be important (Hessels et al., 2007).

Analysis

We analyze a balanced cross-country panel with 16 countries and four annual observations (2002 to 2005) using random and fixed effects linear models that control for unobserved heterogeneity across countries (Wooldridge, 2002). Thus, we rule out alternative explanations for the estimated coefficients which might be due to unobserved heterogeneity. We estimate two alternative models with different measures for the generosity of unemployment benefits, one using the unemployment support index and another using the original share of public out-of-work income maintenance and support as percent of GDP. All regression results are qualitatively identical for both measures.

Table 2 shows regression results for the prevalence of nascent entrepreneurial activity across countries and time. The results suggest that high levels of unemployment benefits crowd out nascent entrepreneurial activity. Unemployment benefits are negatively associated to nascent entrepreneurial activity and highly significant in all models. Specification tests suggest that unobserved heterogeneity is highly significant and the difference in coefficients between random and fixed effects is not significant according to the Hausman test, thus supporting the random effects specification.

In Table 3, necessity nascent entrepreneurs are excluded. Our results show again a significant negative effect of unemployment benefits. Thus, the results suggest that higher unemployment

benefits influence negatively even the share of individuals trying to start businesses because they perceive desirable opportunities. Furthermore, Table 4 shows that the share of opportunity and necessity entrepreneurs is unaffected by variations in unemployment benefits.

We now turn to the distinction between innovative and imitative entrepreneurs. In Table 5, imitative nascent entrepreneurs are excluded. Again, our results show a significant negative effect of unemployment benefits. This suggests that generous unemployment benefits crowd out innovative entrepreneurial activity.

In addition, Table 6 shows no influence of unemployment *benefits* on the ratio of innovative to imitative nascent entrepreneurs. Across the countries in our sample, such ratio is about 7 to 3 on average, with significant fluctuations across countries and time. Unemployment *levels*, however, do affect the ratio: Not surprisingly, higher levels of unemployment are associated with lower shares of innovative and higher shares of purely imitative nascent entrepreneurs.

Conclusion

Our results fill a gap in the employment choice literature by providing evidence that generous unemployment benefits are negatively related to nascent entrepreneurship and that this is true regardless of entrepreneurial motivation and type. In other words, higher unemployment benefits seem to reduce the overall entrepreneurial propensity of a country. If entrepreneurial activity is important for economic growth, our results suggest that the opportunity costs of unemployment benefits may be higher than what is normally assumed in the labor economics studies.

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Table 1: Four year averages for nascent entrepreneurial activity, unemployment, and public unemployment expenditures in 16 countries, 2002-2005

Country	Nascent entrepreneurs (% of adult pop 18-64)*	Share of opportunity nascent entrepreneurs (% of adult nascent entrepreneurs)*	Share of innovative nascent entrepreneurs (% of adult nascent entrepreneurs)*	Unemployment rate (% of adult pop 18-64)[+]	Unemployment support[1] (% of GDP)[+]	Unemployment support index[2]
Australia	5.73	87	77	5.8	0.69	0.65
Belgium	2.37	91	68	8.1	1.96	1.81
Canada	5.24	85	76	7.3	0.71	0.66
Denmark	2.90	94	84	5.1	1.81	1.72
Finland	2.96	88	67	8.8	1.53	1.41
France	3.05	73	68	9.3	1.57	1.44
Germany	3.99	75	70	9.1	2.23	2.05
Ireland	4.84	81	78	4.5	0.80	0.76
Japan	0.92	83	68	5.0	0.47	0.45
Netherlands	2.59	90	72	3.9	1.98	1.90
New Zealand	8.41	86	73	4.4	0.67	0.64
Norway	4.14	92	74	4.4	0.82	0.78
Spain	2.60	85	56	10.5	1.44	1.31
Sweden	1.66	90	76	6.0	1.19	1.12
UK	2.66	86	80	4.9	0.25	0.23
USA	7.66	86	76	5.6	0.34	0.32

* Data from Global Entrepreneurship Monitor

[+] Data from OECD Employment Outlook

[1] Public out-of-work income maintenance and support

[2] Support index = (Public out-of-work income maintenance and support in % of GDP) [+] / (1 + Unemployment rate in % of total labour force) [+]

Table 2: Regression results on prevalence of nascent entrepreneurial activity across 16 countries, 2002-2005

	Random effects		Fixed effects		Random effects		Fixed effects	
Unemployment support index[+]	-176.7**	(84.36)	-294.6*	(163.3)	-	-	-	-
Unemployment support in % of GDP	-	-	-	-	-1.67**	(0.80)	-2.83*	(1.57)
Unemployment rate	0.13	(0.18)	0.35	(0.27)	0.15	(0.19)	0.39	(0.28)
Constant	4.64**	(1.15)	4.52**	(1.43)	4.52**	(1.14)	4.36**	(1.40)
Model diagnostics								
Hausman Test (Prob > Chi2)	0.94				0.94			
R2	0.13		0.11		0.13		0.11	
Rho	0.87**		0.88**		0.87**		0.88**	

N = 64. Standard errors in parentheses.
All models include time dummies.
** significant at > 95% confidence
* significant at > 90% confidence

Table 3: Regression results on prevalence of opportunity nascent entrepreneurial activity across 16 countries, 2002-2005

	Random effects		Fixed effects		Random effects		Fixed effects	
Unemployment support index[+]	-146.7**	(69.54)	-247.4*	(133.0)	-	-	-	-
Unemployment support in % of GDP	-	-	-	-	-1.38**	(0.66)	-2.36*	(1.28)
Unemployment rate	0.55	(0.15)	0.23	(0.22)	0.07	(0.15)	0.26	(0.23)
Constant	4.23**	(0.95)	4.19**	(1.17)	4.13**	(0.94)	4.04**	(1.14)
Model diagnostics								
Hausman Test (Prob > Chi2)	0.94				0.93			
R2	0.15		0.12		0.15		0.12	
Rho	0.87		0.89		0.87		0.89	

N = 64. Standard errors in parentheses.
All models include time dummies.
** significant at > 95% confidence
* significant at > 90% confidence

Table 4: Regression results on the share of opportunity vs. necessity nascent entrepreneurs across 16 countries, 2002-2005

	Random effects		Fixed effects		Random effects		Fixed effects	
Unemployment support index[+]	1.65	(2.54)	-7.07	(12.5)	-	-	-	-
Unemployment support in % of GDP	-	-	-	-	0.02	(0.02)	-0.07	(0.12)
Unemployment rate	-0.02	(0.01)	-0.01	(0.02)	-0.02	(0.01)	-0.01	(0.02)
Constant	0.94**	(0.04)	1.01**	(0.11)	0.94**	(0.04)	1.01**	(0.11)
Model diagnostics								
Hausman Test (Prob > Chi2)	0.98				0.98			
R2	0.14		0.04		0.14		0.04	
Rho	0.36		0.60		0.36		0.60	

N = 64. Standard errors in parentheses.
All models include time dummies.
** significant at > 95% confidence
* significant at > 90% confidence

Table 5: Regression results on prevalence of innovative nascent entrepreneurial activity across 16 countries, 2002-2005

	Random effects		Fixed effects		Random effects		Fixed effects	
Unemployment support index[+]	-133.3**	(63.4)	-221.3*	(123.5)	-	-	-	-
Unemployment support in % of GDP	-	-	-	-	-1.26**	(0.60)	-2.11*	(1.18)
Unemployment rate	0.02	(0.14)	0.17	(0.20)	0.04	(0.14)	0.19	(0.21)
Constant	3.90**	(0.86)	3.91**	(0.00)	3.81**	(0.86)	3.78**	(1.05)
Model diagnostics								
Hausman Test (Prob > Chi2)	0.96				0.96			
R2	0.17		0.14		0.17		0.14	
Rho	0.87**		0.88**		0.87**		0.88**	

N = 64. Standard errors in parentheses.
All models include time dummies.
**significant at > 95% confidence
* significant at > 90% confidence

Table 6: Regression results on the share of innovative vs. imitative nascent entrepreneurs across 16 countries, 2002-2005

	Random effects		Fixed effects		Random effects		Fixed effects	
Unemployment support index[+]	0.34	(2.32)	6.11	(15.0)	-	-	-	-
Unemployment support in % of GDP	-	-	-	-	0.00	(0.02)	0.06	(0.14)
Unemployment rate	-0.02**	(0.01)	-0.02	(0.02)	-0.02**	(0.01)	-0.02	(0.03)
Constant	0.85**	(0.04)	0.78**	(0.13)	0.85**	(0.04)	0.78**	(0.00)
Model diagnostics								
Hausman Test (Prob > Chi2)	1.00				1.00			
R2	0.34		0.18		0.34		0.18	
Rho	0.18		0.41*		0.18		0.41*	

N = 64. Standard errors in parentheses.
All models include time dummies.
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