Internet Appendix for "Can Unemployment Insurance Spur Entrepreneurial Activity? Evidence From France"

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ABSTRACT

This appendix contains three Sections. Section I contains an exact derivation of the model described in Section II of the main article. Section II makes an attempt at running a cost-benefit analysis of the reform. Section III contains results of various robustness tests, including replications of all our results using the alternative treatment variable (fraction of zero-employee firms instead of fraction of sole proprietorships).

[1] Citation format: Hombert, Johan, Antoinette Schoar, David Sraer, and David Thesmar, Internet Appendix for "Can Unemployment Insurance Spur Entrepreneurial Activity? Evidence From France," *Journal of Finance*, Doi: 10.1111/jofi.12880. Please note: Wiley-Blackwell is not responsible for the content or functionality of any additional information provided by the authors. Any queries (other than missing material) should be directed to the authors of the article.

I. Derivation of the Model

A. *Solving the Model*

Solving the model is simple. First, start with the entrepreneurial decisions. Maximizing profits with respect to l gives labor demand and the expected profit of a successful entrepreneur,

$$l = \frac{\beta}{1-\beta} p_s^{\frac{1}{1-\beta}} A\theta \qquad \text{and} \qquad \pi = p_s^{\frac{1}{1-\beta}} A\theta - c_s.$$

Given the indirect utility written above, an individual becomes an entrepreneur if and only if

$$\begin{aligned} & q \log(p_s^{\frac{1}{1-\beta}} A\theta - c_s) + (1-q)\log(b) \geq \ln(1) \\ \Leftrightarrow \qquad & A\theta \geq \theta_s \equiv p_s^{-\frac{1}{1-\beta}} \left(b^{-\frac{1-q}{q}} + c_s \right), \end{aligned} \tag{IA.1}$$

so that production in industry s is given by

$$Y_s = \int_{A\theta \geq \theta_s} q \frac{1}{1-\beta} p_s^{\frac{\beta}{1-\beta}} A\theta dF(\theta) = \frac{q}{1-\beta} p_s^{\frac{\beta}{1-\beta}} \frac{\phi}{\phi - 1} \theta_s \left(\frac{A\theta_0}{\theta_s} \right)^{\phi}.$$

We now write the two market-clearing conditions. Aggregating over individual consumption leads to

$$p_T X_T^{\frac{1}{\sigma}} = p_C X_C^{\frac{1}{\sigma}}.$$

Given that markets clear, we have $X_s = Y_s$ for $s \in \{T, C\}$. This implies that

$$\frac{p_T^{\frac{\beta+\sigma(1-\beta)}{\sigma(1-\beta)}}}{\theta_T^{\frac{\phi-1}{\sigma}}} = \frac{p_C^{\frac{\beta+\sigma(1-\beta)}{\sigma(1-\beta)}}}{\theta_C^{\frac{\phi-1}{\sigma}}} \equiv k. \tag{IA.2}$$

B. *The Reform*

Once the equilibrium conditions are written, we can investigate the effect of the reform. We first compute the differential increase in the number of entrepreneurs in industries T and C as a response to the reform. We model the reform as an increase in b. Differentiating (IA.1), we get

$$\Delta \log \theta_s = -\frac{1}{1-\beta}\Delta \log(p_s) - \frac{\frac{1-q}{q}}{1 + c_s b^{\frac{1-q}{q}}}\Delta \log(b),$$

and differentiating (IA.2), we get

$$\frac{\beta + \sigma(1-\beta)}{\sigma(1-\beta)}\Delta \log(p_s) - \frac{\phi - 1}{\sigma}\Delta \log(\theta_s) = \Delta \log(k).$$

It follows that

$$\Delta \log \theta_s = -\frac{\sigma}{\phi + (\sigma-1)(1-\beta)}\Delta \log(k) - \frac{1 + (\sigma-1)(1-\beta)}{\phi + (\sigma-1)(1-\beta)}\frac{\frac{1-q}{q}}{1 + c_s b^{\frac{1-q}{q}}}\Delta \log(b). \tag{IA.3}$$

We can write our second prediction as follows.

PROPOSITION IA.1: *Assume that the reform leads to a marginal increase in b by Δb. Then the difference-in-difference (DD) estimate of the increase*

in the number of entrepreneurs is given by

$$\Delta \log(N_T) - \Delta \log(N_C) = \frac{\phi + \phi(\sigma-1)(1-\beta)}{\phi + (\sigma-1)(1-\beta)} \frac{\frac{1-q}{q}(c_C - c_T) b^{\frac{1-q}{q}}}{(1 + c_T b^{\frac{1-q}{q}})(1 + c_C b^{\frac{1-q}{q}})} \Delta \log(b).$$

The log number of entrepreneurs in industry s is given by

$$\log(N_s) = \log(1 - F(\theta_s/A)) = \phi \log \theta_0 - \phi \log \theta_s + \phi \log A.$$

We use equation (IA.3) to calculate the DD.

Firm creation increases more in industry T than in industry C. When ϕ increases, the populations of entrepreneurs become more homogeneous. The differential effect increases, and eventually converges to $1+(\sigma-1)(1-\beta)$ as ϕ goes to infinity. If the experimentation view prevails (i.e., ex-post outcomes are the dominant source of heterogeneity and ϕ is very large), the effect of the reform is greater.

The second prediction relates to the average quality of entrepreneurs, which we define as

$$q_s \equiv E[\log(\theta) | A\theta \geq \theta_s] = \frac{1}{\phi} + \log \theta_s - \log A.$$

We directly combine this definition with equation (IA.3) to obtain our third proposition.

PROPOSITION IA.2: *Assume that the reform leads to a marginal increase in b by Δb. Then the DD estimate of the average quality of entrepreneurs is*

given by

$$\Delta q_T - \Delta q_C = -\frac{1+(\sigma-1)(1-\beta)}{\phi+(\sigma-1)(1-\beta)} \frac{\frac{1-q}{q}(c_C - c_T) b^{\frac{1-q}{q}}}{(1+c_T b^{\frac{1-q}{q}})(1+c_C b^{\frac{1-q}{q}})} \Delta \log b.$$

Quality decreases more in industry T than in industry C. This happens because there is more entry in industry T. However, when potential entrepreneurs are more similar, this effect vanishes (the quality threshold, θ_s, responds less in both industries). The difference goes to zero when $\phi \to +\infty$, that is, when ex-post outcomes are the dominant source of heterogeneity.

Finally, we compute the size of "incumbents." Employment in a firm of a given quality is proportional to $p_s^{\frac{1}{1-\beta}}$. So the change in employment in existing firms is

$$\begin{aligned}\Delta \log(L_s) &= \frac{1}{1-\beta}\Delta \log p_s + \Delta \log A \\ &= \frac{\sigma}{\phi+(\sigma-1)(1-\beta)}\Delta \log k - \frac{\phi-1}{\phi+(\sigma-1)(1-\beta)} \frac{\frac{1-q}{q}}{1+c_s b^{\frac{1-q}{q}}} \Delta \log b + \Delta \log A.\end{aligned}$$

This allows us to write down our fourth prediction.

PROPOSITION IA.3: *Assume that the reform leads to a marginal increase in b by Δb. Then the DD estimate of the average size of "incumbents" is given by*

$$\Delta \log(L_T) - \Delta \log(L_C) = -\frac{\phi-1}{\phi+(\sigma-1)(1-\beta)} \frac{\frac{1-q}{q}(c_C - c_T) b^{\frac{1-q}{q}}}{(1+c_T b^{\frac{1-q}{q}})(1+c_C b^{\frac{1-q}{q}})} \Delta \log(b).$$

Since there is more entry in industry T, competition is fiercer there. Marginal revenues decline and entrepreneurs hire less. When ϕ increases,

the effect of the reform is even larger, which reinforces the crowding-out effect.

II. Cost-Benefit Analysis of the Reform

In this section, the goal is to compare the direct costs and benefits triggered by the reform. Inevitably, such an analysis is somewhat tentative, so we focus on three main channels: job reallocation, unemployed entrepreneurs subsidies, and savings on unemployment benefits.

A. Job Reallocation

According to the first channel, the entry of new self-employed leads more productive jobs to replace less productive ones, which leads to an additional €350m of GDP per year. This, in our view, is the main aggregate benefit of the reform. To obtain this estimate, we start from the conservative assumption that the reform led to zero *net* new job creation.[2] In Section VI.B of the main article we showed that because new firms are more productive than incumbents, job reallocation creates additional value-added. Our most conservative estimation suggests that about 10,000 jobs are reallocated annually. Value-added per worker in these new jobs is about €7,000 higher (see Table X of the main article). Finally, we assume that, on average, these new firms survive five years.[3] With these assumptions, the overall value-added created by the reform in steady state is $7,000 \times 10,000 \times 5 =$ €350 million

[2]While the overall employment effect uncovered in column (6) of Table IX of the main article is positive, it is not significantly different from zero, so we use zero as a conservative estimate.

[3]This assumption is consistent with the fact that about 50% of the firms in our sample are active for more than five years, and with firms created through the reform not having a differential exit rate, as shown in Table VI of the main article.

each year. This calculation is a lower bound since in Section VI.A of the main article we estimate that the reform had a slightly positive effect on net new job creation. Also, our calculations rely only on the effect on Q4, thus leaving out half of the industries.

B. The Cost of Subsidizing Unemployed Entrepreneurs

Prior to the reform, an unemployed individual starting a business would give up all unemployment benefits. After the reform, all unemployed entrepreneurs (about 70,000 creations per year—see Figure 1 in the main article) can claim the difference between entrepreneurial income and the benefit to which they are entitled. To calculate the corresponding subsidy per entrepreneur, we collect data on unemployed individuals transitioning into entrepreneurship. We use the 2003 to 2006 waves of the French Labor Force Survey (equivalent to the CPS in the U.S.; see, for instance, Goux, Maurin, and Petrongolo (2014) for a description). [4] Since we also need to observe unemployment benefits and entrepreneurial income after starting a firm, the sample size drops to 38 individuals. For each of these unemployed

[4]The French Labor Force Survey is a quarterly panel with about 280,000 individuals, where households are followed over six consecutive quarters. In this sample, we can isolate 352 unemployed individuals who become entrepreneurs. Our selection criterion is conservative, as we exclude individuals that experience inactivity between unemployment and entrepreneurship. The quarterly frequency also results in our missing many employees that lose their job and start a business a few weeks later. In such cases, the Labor Force Survey observes a transition from employment into entrepreneurship.

entrepreneurs, we can compute

$$Sub_i = \min\{(36 - T_i) \times \max(0, UB_i - EI_i), (24 - T_i) \times UB_i\},$$

where T_i is the number of months between the beginning of the unemployment spell and the date of firm creation, UB_i is the unemployment benefits to which the entrepreneur is entitled, and EI_i is the reported entrepreneurial income. We observe these numbers for each of the 38 individuals in our sample. The above formula mimics the spirit of the reform: the entrepreneur receives the difference between the unemployment benefit and the entrepreneurial income (if this difference is positive) each month until one of two conditions is met: (1) three years have passed since the beginning of the unemployment spell, in which case the entrepreneur receives the subsidy for $36 - T_i$ months, or (2) the entrepreneur has exhausted her rights to two full years of benefits, in which case she receives a total subsidy of $(24 - T_i) \times UB_i$. On average, this subsidy is small and represents only some €2,000 annually. This number is small because about 70% of the unemployed generate more entrepreneurial income than their benefits. Overall, the cost of the reform for the UI fund is about $2,000 \times 70,000 = €140$ million annually.

C. Savings from Shortening Unemployment Spells

As some unemployed return to work more quickly, the unemployment agency saves on unemployment benefits. Our most conservative estimates suggest that about 12,000 *additional* firms are created each year thanks to the reform. We use the French Labor Force Survey to compute the corre-

sponding savings for the UI fund. For each unemployed individual transitioning to entrepreneurship, we calculate $UB_i \times ([1-p(X_i,T_i)]+[1-p(X_i,T_i)]^2+ ...+[1-p(X_i,T_i)]^{24-T_i})$, where T_i is the length (in months) of the unemployment spell before the unemployed is observed to start her business, $p(X_i,t_i)$ is the conditional probability that an unemployed finds a paying job during the coming quarter conditional on fixed observed characteristics X_i (age, education, gender, one-digit occupation classification), and t_i is the number of months since the unemployment spell started. We estimate $p(X_i,t_i)$ using a logit model based on the entire sample of unemployed from the Labor Force Survey (i.e., some 50,000 observations in total), and UB_i is the average unemployment benefit claimed by the unemployed before the observed transition to entrepreneurship. This formula computes the savings to the UI fund resulting from the reform as the sum of the benefits that would have been paid had the unemployed remained jobless. An obvious limitation of this approach is that unemployed entrepreneurs may have a higher probability of returning to the workforce for unobservable reasons. To the extent that this is the case, our savings estimation will be biased upward. Finally, we compute the average of this imputed saving across all 92 transitioning individuals for whom we have enough data to make this computation (out of the 352 transitions observed in the sample). The average total savings is equal to €3,600, which leads to aggregate savings of some $12,000 \times 3,600 \approx$ €45 million annually.

Overall, the reform costs between 6,000 and 95,000 euro per job created, depending on assumptions. The overall net cost to UI is estimated to be around $140 - 45 = 95$ million euro. Remember that gross job creation is

estimated to lie between 9,000 and 24,000 jobs, while crowding out among incumbents is around 8,000 jobs. Net creation therefore hovers between 1,000 jobs and 16,000 jobs depending on our assumptions. In the median scenario, about 8,500 jobs are created annually thanks to the reform, at a cost of $95/8.5 \approx 10,000$ euro per job.

III. Appendix Tables and Figures

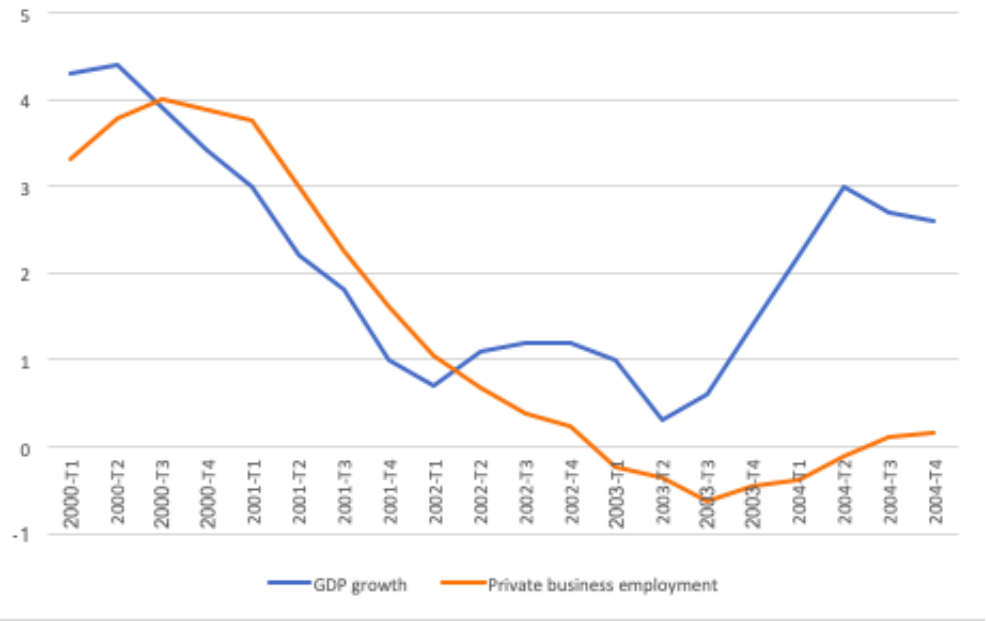

Figure IA.1. French economy in the early 2000s. This graph shows the year-over-year growth of GDP at the quarterly frequency. Source: INSEE (French Statistical office).

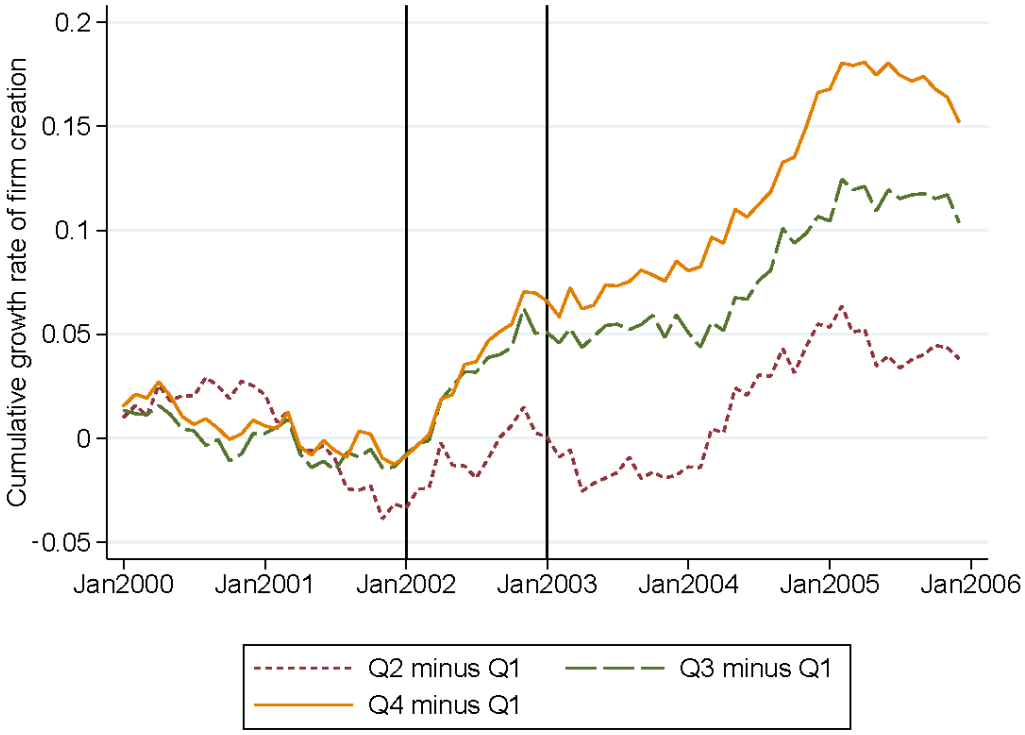

Figure IA.2. Creation rate by quartile of treatment, taking Q1 as the reference.

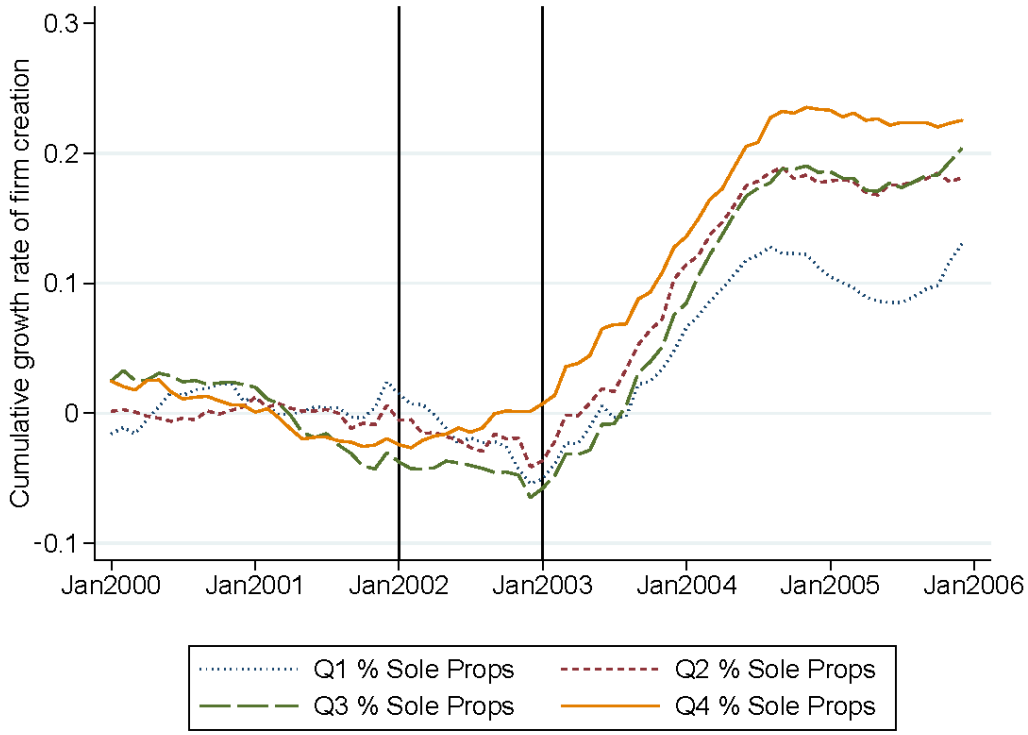

Figure IA.3. Growth rate in firm creation—Alternative treatment intensity variable. Qk% is the k$^{\text{th}}$ quartile of the alternative treatment intensity variable (the fraction of zero-employee firms among newly created firms in the industry, measured in the pre-reform period (1999 to 2001)). For each month t and for each quartile Q_k ($k = 1, 2, 3, 4$) of treatment intensity, we compute the average growth rate of the number of firms created in industries belonging to quartile Q_k from the beginning of the sample period (1999 to 2000) to month t:

$$g_t^k = \frac{1}{\#\text{industries in } Q_k} \sum_{s \in Q_k} \left(\log(\#\text{ firms created}_{st}) - \frac{1}{24} \sum_{\tau \in 1999,2000} \log(\#\text{ firms created}_{s\tau}) \right). \tag{IA.5}$$

The graph plots the 12-month moving average of g_t^k. Source: Firm registry from the French Statistical Office.

Table IA.I

Industries in Treatment and Control Industries

Industry name	% Sole Proprietorships	Treatment Quartile
Infrastructure development	1.3	Q1
Temporary work agencies	2.1	Q1
Holding companies	2.5	Q1
Residential real estate development	2.6	Q1
Property operators	2.9	Q1
Television film production	4.9	Q1
Periodical publishing	5.8	Q1
Television non-film production	5.8	Q1
Wholesale trade: Footwear	6.0	Q1
Wholesale trade: Apparel	6.0	Q1
Wholesale trade: Packaged frozen food	6.3	Q1
Motion picture production	6.3	Q1
Arrangement of transportation of freight and cargo	6.7	Q1
Department stores	7.5	Q1
Newspaper publishing	7.6	Q1
Secretaries and translators	83.1	Q4
Miscellaneous trade intermediaries	83.3	Q4
Other sport services	87.2	Q4
Other educational services	87.3	Q4
Fairground attractions	88.0	Q4
Other personal services	89.4	Q4
Taxis	92.0	Q4
Food non-store retailers	92.5	Q4
Independent artists	92.9	Q4
Veterinary offices	93.6	Q4
Dental offices	95.9	Q4
Non-food non-store retailers	96.2	Q4
Medical offices	96.5	Q4
Legal services	96.6	Q4
Medical aides	99.7	Q4

Table IA.II

20 Industries with Largest Post-Reform Surge in Aggregate Creation

In this table, we list the 20 four-digit industries that contribute most to the increase in average monthly firm creation between the pre-reform period (1999 to 2001) and the post-reform period (2002 to 2005). Column (1) gives the industry's name. Column (2) reports the contribution in percentage points to the aggregate surge in creation. For industry s, it is computed as $\frac{\Delta N_s}{\Delta N}$, where ΔN_s is the increase in the average monthly number of creations and $\Delta N = \sum_s \Delta N_s$. Column (3) reports the quartile of treatment (measured as the percent of sole proprietorships in industry creations, as in the main text). Overall, the 20 top contributors contribute to 58% of the total surge in business creation. The increase in masonry creation contributes to 4.4% of the total surge. Source: Firm registry data from French Statistical Office.

Industry name	% Share of Aggregate Increase in Creation	Quartile of Treatment
Business and management consulting services	7.7	Q3
Non-food non-store retail trade	6.8	Q4
Masonry contractors	4.4	Q4
Real estate agents	3.9	Q4
Electrical contractors	3.5	Q4
Miscellaneous trade intermediaries	3.3	Q4
Other miscellaneous store retailers	2.8	Q4
Beauty parlors	2.4	Q4
Other business services	2.4	Q3
Real estate brokers	2.4	Q1
Apparel retail trade	2.4	Q3
Painting contractors	2.4	Q4
Plumbing contractors	2.0	Q4
Full-service restaurants	1.9	Q3
Legal services	1.8	Q4
Hairdressers	1.7	Q4
Food non-store retail trade	1.7	Q4
Carpentry contractors	1.7	Q4
Engineering services	1.7	Q2
Computer maintenance services	1.7	Q3
Total	58	

Table IA.III

Entrepreneur's Education across Industries

The dependent variable is a dummy variable equal to one if the entrepreneur is a high school graduate (columns (1) and (2)) or a dummy variable equal to one if the entrepreneur is a college graduate (columns (3) and (4)). Columns (1) and (3) use the full sample. Columns (2) and (4) restrict the analysis to the sample of unemployed entrepreneurs. Qi% Sole Props is the i^{th} quartile of our treatment intensity variable (the fraction of sole proprietorships among newly created firms in the industry, measured in the pre-reform period). *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: 2002 SINE survey. Sample: 27,157 new firms created in 1998, 9,479 new firms created by unemployed entrepreneurs.

	High school graduate		College graduate	
	All entrepreneurs	Unemployed entrepreneurs	All entrepreneurs	Unemployed entrepreneurs
	(1)	(2)	(3)	(4)
Q2 % Sole Props	0.066	0.042	0.044	0.056
	(0.079)	(0.073)	(0.054)	(0.056)
Q3 % Sole Props	0.023	-0.0037	0.063	0.028
	(0.088)	(0.075)	(0.062)	(0.056)
Q4 % Sole Props	-0.053	-0.13**	0.0054	-0.029
	(0.079)	(0.058)	(0.042)	(0.028)
Constant	0.52***	0.53***	0.12***	0.1***
	(0.057)	(0.042)	(0.022)	(0.02)
Observations	27,157	9,479	27,157	9,479
R^2	0.0072	0.018	0.0056	0.011

Table IA.IV

Firm Creation: Treated versus Control, Excluding 2002

The dependent variable is the log of one plus the number of new firms created in an industry-month. POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2003 to 2005 period. Qi% Sole Props is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of sole proprietorships among newly created firms in the industry, measured in the pre-reform period). Treatment-specific trends are the interactions of Q2, Q3, and Q4 with linear time trends. Trend is a linear time trend. Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry and month-of-the-year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry from the French Statistical Office. Sample: 290 industries, 1999 to 2001 and 2003 to 2005, monthly observations.

	Number of firms created			
	(1)	(2)	(3)	(4)
POST	0.15***	0.086***	-0.065	-0.16
	(0.017)	(0.032)	(0.041)	(0.1)
Q2 % Sole Props × POST		0.025	0.07	0.064
		(0.05)	(0.057)	(0.057)
Q3 % Sole Props × POST		0.09**	0.17***	0.17***
		(0.045)	(0.05)	(0.05)
Q4 % Sole Props × POST		0.13***	0.22***	0.22***
		(0.045)	(0.049)	(0.048)
Industry capital intensity × POST				0.039
				(0.035)
Industry growth × POST				-0.024
				(0.042)
Industry capital intensity × Trend				-0.014
				(0.01)
Industry growth × Trend				0.011
				(0.014)
Constant	3.2***	3.2***	2.2***	2.2***
	(0.018)	(0.018)	(0.25)	(0.24)
Treatment-specific trend	No	No	Yes	Yes
Month-of-the-year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	20,880	20,880	20,880	20,880
R^2	0.92	0.92	0.92	0.92

Table IA.V

Firm Creation: Treated versus Control, Including 2002 in the Pre-Reform Window

The dependent variable is the log of one plus the number of new firms created in an industry-month. POST is a dummy equal to zero for observations in the 1999 to 2002 period and to one for the 2003 to 2005 period. Qi% Sole Props is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of sole proprietorships among newly created firms in the industry, measured in the pre-reform period). Treatment-specific trends are the interactions of Q2, Q3, and Q4 with linear time trends. Trend is a linear time trend. Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry and month-of-the-year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry from the French Statistical Office. Sample: 290 industries, 1999 to 2005, monthly observations.

	Number of firms created			
	(1)	(2)	(3)	(4)
POST	0.16***	0.099***	0.065**	0.086
	(0.016)	(0.029)	(0.025)	(0.063)
Q2 % Sole Props × POST		0.024	0.061*	0.058
		(0.046)	(0.036)	(0.036)
Q3 % Sole Props × POST		0.079*	0.096***	0.095***
		(0.041)	(0.033)	(0.033)
Q4 % Sole Props × POST		0.12***	0.13***	0.12***
		(0.041)	(0.03)	(0.029)
Industry capital intensity × POST				-0.0019
				(0.022)
Industry growth × POST				-0.031
				(0.026)
Industry capital intensity × Trend				-0.000017
				(0.000021)
Industry growth × Trend				0.000035
				(0.000029)
Constant	3.2***	3.2***	3***	3***
	(0.016)	(0.017)	(0.19)	(0.19)
Treatment-specific trend	No	No	Yes	Yes
Month-of-the-year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	24,360	24,360	24,360	24,360
R^2	0.92	0.92	0.92	0.92

Table IA.VI

Firm Creation: Treated versus Control, Excluding 2005

The dependent variable is the log of one plus the number of new firms created in an industry-month. POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2002 to 2004 period. Qi% Sole Props is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of sole proprietorships among newly created firms in the industry, measured in the pre-reform period). Treatment-specific trends are the interactions of Q2, Q3, and Q4 with linear time trends. Trend is a linear time trend. Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry and month-of-the-year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry from the French Statistical Office. Sample: 290 industries, 1999 to 2004, monthly observations.

	Number of firms created			
	(1)	(2)	(3)	(4)
POST	0.075***	0.025	-0.17***	-0.3***
	(0.012)	(0.026)	(0.033)	(0.078)
Q2 % Sole Props × POST		0.013	0.055	0.05
		(0.037)	(0.045)	(0.044)
Q3 % Sole Props × POST		0.072**	0.13***	0.13***
		(0.034)	(0.039)	(0.038)
Q4 % Sole Props × POST		0.11***	0.15***	0.16***
		(0.034)	(0.041)	(0.041)
Industry capital intensity × POST				0.047*
				(0.024)
Industry growth × POST				-0.0032
				(0.035)
Industry capital intensity × Trend				-0.017*
				(0.0089)
Industry growth × Trend				0.0069
				(0.014)
Constant	3.2***	3.2***	0.99***	0.99***
	(0.017)	(0.017)	(0.24)	(0.24)
Treatment-specific trend	No	No	Yes	Yes
Month-of-the-year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	20,880	20,880	20,880	20,880
R^2	0.92	0.92	0.92	0.92

Table IA.VII

Entrepreneurs' Relation with Former Employer across Industries

In columns (1) to (3), the dependent variable is a dummy variable equal to one if the entrepreneur reports being "a supplier or client of his former employer" (SINE 1998) or that "the firm was created in relation to your previous employer" (SINE 2006). In columns (4) to (6), the dependent variable is a dummy variable equal to one if the entrepreneur reports having one or two customers. In columns (7) to (9), the dependent variable is a dummy variable equal to one if the entrepreneur reports being "a supplier or client of his former employer" and having one or two customers. POST is a dummy equal to zero for observations from the 1998 wave of the survey and to one for observations from the 2006 wave of the survey. Qi% Sole Props is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of sole proprietorships among newly created firms in the industry, measured in the pre-reform period). Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: 1998 and 2006 SINE surveys. Sample: Random sample of of 47,088 new firms started in the first semester of 1998 and the first semester of 2006.

	Relation with former employer			one or two clients			Relation with former employer & One or two clients		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
POST	0.02***	0.01	0.054*	0.04***	0.039**	0.11***	0.008***	0.0029	0.036***
	(0.0058)	(0.017)	(0.029)	(0.0064)	(0.017)	(0.033)	(0.0019)	(0.0062)	(0.0083)
Q2 % Sole Props × POST		-0.015	-0.013		0.016	0.026		0.0014	0.0052
		(0.023)	(0.022)		(0.024)	(0.021)		(0.0098)	(0.0081)
Q3 % Sole Props × POST		-0.0017	-0.0017		0.0032	0.004		0.0068	0.0071
		(0.019)	(0.019)		(0.024)	(0.021)		(0.007)	(0.0054)
Q4 % Sole Props × POST		0.024	0.025		-0.0038	0.0031		0.0058	0.0085
		(0.019)	(0.018)		(0.018)	(0.017)		(0.0068)	(0.0056)
Industry capital intensity × POST			-0.017*			-0.033***			-0.015***
			(0.0096)			(0.012)			(0.0028)
Industry growth × POST			-0.0082			0.012			0.0029
			(0.012)			(0.012)			(0.0042)
Constant	0.088***	0.088***	0.088***	0.1***	0.1***	0.1***	0.015***	0.015***	0.015***
	(0.0036)	(0.0033)	(0.0033)	(0.0039)	(0.0038)	(0.0033)	(0.0012)	(0.0012)	(0.0011)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	47,038	47,038	47,038	47,038	47,038	47,038	47,038	47,038	47,038
R^2	0.032	0.032	0.032	0.11	0.11	0.11	0.031	0.031	0.032

Table IA.VIII

Debt Issuance by New Firms

In column (1) the dependent variable is firm-level bank debt divided by total assets; for firms that do not report to the tax files, we assume that bank debt is zero. In column (2) the dependent variable is firm-level log of bank debt; for firms that do not report to the tax files, we assume that bank debt is zero. In column (3) the dependent variable is firm-level bank debt divided by total assets. In column (4) the dependent variable is firm-level log of bank debt. All regressions include industry fixed effects and month-of-the-year fixed effects. Standard errors are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry and tax files from the French Statistical Office. Sample: All new firms started in the 1999 to 2005 period in columns (1) and (2); new firms started during 1999 to 2005 which are reported in the tax files in columns (3) and (4).

	All new firms		New firms in tax files	
	Bank debt/ Assets	Log of bank debt	Bank debt/ Assets	Log of bank debt
	(1)	(2)	(3)	(4)
Post	-0.0038	-0.082*	0.0078	-0.057
	(0.0071)	(0.047)	(0.0096)	(0.062)
Q2 % Sole Props × post	0.0027	0.00044	0.0082	0.032
	(0.0061)	(0.038)	(0.0085)	(0.052)
Q3 % Sole Props × post	0.0032	0.044	0.0038	0.064
	(0.006)	(0.037)	(0.0086)	(0.052)
Q4 % Sole Props × post	-0.0022	-0.005	0.0028	0.042
	(0.0059)	(0.035)	(0.0081)	(0.048)
Log(Employment)	0.0065	0.32***	-0.016***	0.28***
	(0.0052)	(0.051)	(0.0034)	(0.032)
Constant	0.052**	0.58***	0.044*	0.83***
	(0.02)	(0.15)	(0.025)	(0.16)
Treatment-specific trend	Yes	Yes	Yes	Yes
Month-of-the-year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	1,360,846	1,360,846	734,298	734,298
R-squared	0.12	0.17	0.13	0.16

Table IA.IX

Summary Statistics: Alternative Treatment Intensity Variable

Panels A and B report summary statistics on all new firms started during the pre-reform period (1999 to 2001). Statistics are computed at the four-digit industry level in Panel A and at the firm level in Panel B. Panel C reports summary statistics on entrepreneurs' education and ambition using the 1998 wave of the SINE survey. Panel D reports summary statistics on incumbent firms in the 1999 to 2001 period, where incumbents are defined as firms that have been in the tax files for the last four years; small incumbents are defined as incumbents with five or fewer employees and that are not reported to be part of a conglomerate; large incumbents are incumbents with more than five employees and those that belong to a conglomerate. The last four columns provide summary statistics by quartile of treatment intensity. Qi is the i^{th} quartile of our alternative treatment intensity variable (the fraction of zero-employee firms among newly created firms in the industry, measured in the pre-reform period (1999 to 2001)). Source: Firm registry and tax files from the French Statistical Office and 1998 SINE survey.

	N	Mean	SD	Mean by quartile % of New zero-employee new firms			
				Q1	Q2	Q3	Q4
Panel A: New firms, industry-level							
Avg # firms created (monthly)	290	43.62	84	12	35	59	69
Avg # jobs created after two years (monthly)	290	32.49	62	22	41	47	19
——— adding entrepreneurs' jobs (monthly)	290	69.30	123	33	71	95	77
Panel B: New firms, firm-level							
Employment at creation	381,683	0.49	1.9	1.18	0.82	0.47	0.19
Dummy at least 1 employee at creation	381,683	0.20	0.4	0.38	0.31	0.20	0.09
Employment two years after creation	381,683	0.87	2.5	2.03	1.29	0.91	0.36
Dummy at least 1 employee two years after creation	381,683	0.29	0.45	0.54	0.43	0.33	0.13
Hire during first two years	381,683	0.25	0.43	0.46	0.37	0.29	0.12
Exit during first two years	381,683	0.16	0.36	0.12	0.12	0.18	0.16
Panel C: New firms, survey, firm-level							
High school graduate	17,449	0.46		0.37	0.33	0.42	0.53
Plan to hire	17,449	0.23		0.35	0.29	0.26	0.15
Panel D: Incumbents, industry-level							
# small incumbents	290	2,779	5,289	1,961	2,798	4,167	2,180
# jobs in small incumbents	290	3,647	7,667	3,752	4,189	4,891	1,739
# large incumbents	290	804	1,243	1,005	891	1,010	305
# jobs in large incumbents	290	21,967	38,740	33,540	21,739	24,991	7,396

Table IA.X

Firm Creation: Alternative Treatment Intensity Variable

The dependent variable is the log of one plus the number of new firms created in an industry-month. POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2002 to 2005 period. Qi% zero employees is a dummy equal to one if the industry belongs to the i^{th} quartile of the alternative treatment intensity variable (the fraction of zero-employee firms among newly created firms in the industry, measured in the pre-reform period (1999 to 2001)). Treatment-specific trends are the interactions of Q2, Q3, and Q4 with linear time trends. Trend is a linear time trend. Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry and month-of-the-year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry from the French Statistical Office. Sample: 290 industries, 1999 to 2005, monthly observations.

	Number of firms created			
	(1)	(2)	(3)	(4)
POST	0.1***	0.059**	-0.13***	-0.2***
	(0.014)	(0.023)	(0.028)	(0.074)
Q2 % zero employees × POST		0.046	0.045	0.046
		(0.038)	(0.035)	(0.035)
Q3 % zero employees × POST		0.041	0.024	0.021
		(0.036)	(0.038)	(0.038)
Q4 % zero employees × POST		0.088**	0.1***	0.11***
		(0.04)	(0.04)	(0.039)
Industry capital intensity				0.033
× POST				(0.024)
Industry growth × POST				-0.051
				(0.037)
Industry capital intensity				-0.013
× Trend				(0.0083)
Industry growth × Trend				0.056***
				(0.017)
Constant	3.2***	3.2***	0.98***	0.98***
	(0.017)	(0.018)	(0.23)	(0.23)
Treatment-specific trend	No	No	Yes	Yes
Month-of-the-year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	24,360	24,360	24,360	24,360
R^2	0.92	0.92	0.92	0.92

Table IA.XI

Firm Quality: Ex-Post Measures. Alternative Treatment Intensity Variable

In columns (1) to (3) the dependent variable is a dummy equal to one if the firm's employment two years after creation is strictly greater than employment at creation. In columns (4) to (6) the dependent variable is defined for firms that do not exit during the first two years and is equal to the log of one plus employment two years after creation. In columns (7) to (9) the dependent variable is replaced by a dummy equal to one if the firm exits during the first two years. POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2002 to 2005 period. Qi% zero employees is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of zero-employee firms among newly created firms in the industry, measured in the pre-reform period (1999 to 2001)). Treatment-specific trends are the interactions of Q2, Q3, and Q4 with linear time trends. Trend is a linear time trend. Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry and month-of-the-year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry and tax files from the French Statistical Office. Sample: 1,034,674 new firms started in the 1999 to 2005 period.

	Hire			Log(employment)			Exit		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
POST	0.01***	0.0033	-0.013	0.0045	0.033***	0.033	0.011***	0.019***	0.037**
	(0.0038)	(0.0061)	(0.014)	(0.0054)	(0.012)	(0.026)	(0.0017)	(0.0051)	(0.017)
Q2 % zero employees × POST		0.0084	0.011		-0.004	-0.0038		-0.0047	-0.0072
		(0.0071)	(0.0072)		(0.014)	(0.014)		(0.0068)	(0.0072)
Q3 % zero employees × POST		0.0088	0.013*		-0.014	-0.011		-0.016***	-0.02***
		(0.0075)	(0.0069)		(0.014)	(0.014)		(0.0061)	(0.0068)
Q4 % zero employees × POST		-0.008	-0.0051		-0.043***	-0.042***		-0.034***	-0.037***
		(0.0067)	(0.0069)		(0.013)	(0.013)		(0.0072)	(0.0072)
Industry capital intensity			0.0069			0.001			-0.0072
× POST			(0.0044)			(0.0082)			(0.006)
Industry growth × POST			-0.0058			-0.0073			0.0038
			(0.0046)			(0.0067)			(0.0048)
Industry capital intensity			-0.0035*			-0.0035			0.0036**
× Trend			(0.0019)			(0.003)			(0.0018)
Industry growth × Trend			0.0073*			0.011*			0.00053
			(0.004)			(0.0057)			(0.0019)
Constant	0.26***	0.21***	0.21***	0.39***	0.47***	0.47***	0.17***	0.049*	0.049*
	(0.0043)	(0.048)	(0.048)	(0.0068)	(0.066)	(0.067)	(0.0028)	(0.029)	(0.028)
Treatment-specific trend	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Month-of-the-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,034,674	1,034,674	1,034,674	824,184	824,184	824,184	1,034,674	1,034,674	1,034,674
R^2	0.091	0.091	0.092	0.11	0.11	0.11	0.037	0.038	0.038

Table IA.XII

Firm Quality: Ex-Ante Measures. Alternative Treatment Intensity Variable

In columns (1) and (2), the dependent variable is a dummy variable equal to one if the entrepreneur has at least high school degree. In columns (3) and (4), the dependent variable is a dummy equal to one if the entrepreneur answers "yes" to the question "Do you plan to hire in the next twelve months?" POST is a dummy equal to zero for observations from the 1998 wave of the survey and to one for observations from the 2006 wave of the survey. Qi% zero employees is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of zero-employee firms among newly created firms in the industry, measured in the pre-reform period (1999 to 2001)). Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: 1998 and 2006 SINE surveys. Sample: Random sample of 47,088 new firms started in the first semester of 1998 and the first semester of 2006.

	High school		Plan to hire	
	(1)	(2)	(3)	(4)
POST	0.074***	0.021	0.0072	0.0067
	(0.021)	(0.04)	(0.019)	(0.039)
Q2 % zero employees × POST	-0.019	-0.011	0.016	0.016
	(0.025)	(0.025)	(0.022)	(0.022)
Q3 % zero employees × POST	0.005	0.021	-0.008	-0.0045
	(0.024)	(0.022)	(0.024)	(0.024)
Q4 % zero employees × POST	-0.013	-0.0012	-0.027	-0.024
	(0.024)	(0.023)	(0.021)	(0.021)
Industry capital intensity × POST		0.026**		0.0034
		(0.012)		(0.011)
Industry growth × POST		-0.041***		-0.02
		(0.015)		(0.015)
Constant	0.48***	0.48***	0.25***	0.25***
	(0.0044)	(0.0039)	(0.0041)	(0.004)
Industry FE	Yes	Yes	Yes	Yes
Observations	47,088	47,088	47,088	47,088
R^2	0.25	0.25	0.059	0.059

Table IA.XIII

Job Creation: Alternative Treatment Intensity Variable

In columns (1) and (2) the dependent variable is the log of one plus the number of employees in new firms two years after creation plus the number of surviving firms after two years (to account for the entrepreneurs' jobs). In columns (3) and (4) the dependent variable is replaced by the log of one plus the number of employees in new firms two years after creation. POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2002 to 2005 period. Qi% zero employees is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of zero-employee firms among newly created firms in the industry, measured in the pre-reform period (1999 to 2001)). Treatment-specific trends are the interactions of Q2, Q3, and Q4 with linear time trends. Trend is a linear time trend. Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry and month-of-the-year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry and tax files from the French Statistical Office. Sample: 290 industries, 1999 to 2005, monthly.

	Number of jobs created adding entrepreneurs' jobs		Number of jobs created	
	(1)	(2)	(3)	(4)
POST	-0.17***	-0.39***	-0.16***	-0.42***
	(0.046)	(0.099)	(0.048)	(0.1)
Q2 % zero employees × POST	0.058	0.067	0.071	0.082
	(0.057)	(0.058)	(0.062)	(0.062)
Q3 % zero employees × POST	0.041	0.041	0.034	0.041
	(0.059)	(0.057)	(0.064)	(0.062)
Q4 % zero employees × POST	0.12**	0.12**	0.12**	0.12*
	(0.059)	(0.057)	(0.063)	(0.062)
Industry capital intensity × POST		0.085**		0.09***
		(0.033)		(0.035)
Industry growth × POST		-0.025		0.056
		(0.044)		(0.057)
Industry capital intensity × Trend		-0.037***		-0.043***
		(0.012)		(0.013)
Industry growth × Trend		0.078***		0.12***
		(0.014)		(0.019)
Constant	0.85***	0.85***	0.4	0.4
	(0.27)	(0.25)	(0.3)	(0.27)
Treatment-specific trend	Yes	Yes	Yes	Yes
Month-of-the-year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	24,360	24,360	24,360	24,360
R^2	0.84	0.84	0.76	0.77

Table IA.XIV

Employment Growth per Category of Firm: Alternative Treatment Intensity Variable

In columns (1) and (2) the dependent variable is the growth rate of total employment in small incumbent firms (i.e., firms that have been in the tax files for the last four years, have five or fewer employees in year $t-1$, and are not reported to be part of a conglomerate in year $t-1$ or year t). In columns (3) and (4), the dependent variable is the growth rate of total employment in large incumbent firms (i.e., firms that have been in the tax files for the last four years and are not small according to the definition above). In columns (5) and (6), the dependent variable is the growth rate of total employment in small incumbents and new firms started over the last two years (i.e., firms started in years $t-2$, $t-1$, and t). POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2002 to 2005 period. Qi% zero employees is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of zero-employee firms among newly created firms in the industry, measured in the pre-reform period (1999 to 2001)). Treatment-specific trends are the interactions of Q2, Q3, and Q4 with linear time trends. Trend is a linear time trend. Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. All regressions include industry and month-of-the-year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry and tax files from the French Statistical Office. Sample: 290 industries, 1999 to 2007, monthly.

	Small incumbents		Large incumbents		Small incumbents + New firms	
	(1)	(2)	(3)	(4)	(5)	(6)
POST	-0.039***	-0.038	-0.053***	-0.091**	-0.012	-0.15
	(0.0088)	(0.04)	(0.011)	(0.04)	(0.023)	(0.13)
Q2 % zero employees × POST	-0.0064	-0.0063	0.017	0.018	0.032	0.038
	(0.01)	(0.011)	(0.015)	(0.015)	(0.026)	(0.027)
Q3 % zero employees × POST	-0.011	-0.011	0.023	0.021	0.00094	0.0021
	(0.012)	(0.012)	(0.016)	(0.017)	(0.028)	(0.026)
Q4 % zero employees × POST	-0.00025	-0.00035	0.004	0.0052	0.036	0.037
	(0.011)	(0.011)	(0.016)	(0.016)	(0.028)	(0.028)
Industry capital intensity × POST		-0.00049		0.017		0.051
		(0.014)		(0.012)		(0.042)
Industry growth × POST		0.002		-0.018		-0.0014
		(0.0096)		(0.023)		(0.036)
Industry capital intensity × Trend		-0.0013		-0.0062***		-0.019*
		(0.0024)		(0.0019)		(0.01)
Industry growth × Trend		0.00075		-0.002		0.0037
		(0.002)		(0.0036)		(0.0082)
Constant	-0.09	-0.09	-7.1***	-7.1***	1.9	1.9
	(1.4)	(1.4)	(2.1)	(2.1)	(4.2)	(3.9)
Treatment-specific trend	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,610	2,610	2,610	2,610	2,610	2,610
R^2	0.47	0.47	0.17	0.18	0.61	0.63

Table IA.XV

Comparison New Firms versus Shrinking Incumbents: Alternative Treatment Intensity Variable

Incumbent firms are defined as firms that have been in the tax files for the last four years. "Shrinking" incumbents are defined as incumbents whose employment decreases from year t to year $t+1$. For new firms, all dependent variables are computed two years after creation. In columns (1) and (2) the dependent variable is total wages divided by number of employees (requires that the firm has at least one employee). In columns (3) and (4), the dependent variable is value-added divided by one plus number of employees. In columns (5) and (6), the dependent variable is sales divided by one plus number of employees. New firm is a dummy variable equal to zero if the observation corresponds to a "shrinking" incumbent and one if it corresponds to a newly-created firm. POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2002 to 2005 period. Qi% zero employees is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of zero-employee firms among newly created firms in the industry, measured in the pre-reform period (1999 to 2001)). Quartile treatment × New firm are the interactions of Q2, Q3, and Q4 with the new firm dummy. All regressions include industry × year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry and tax files from the French Statistical Office. Sample: All new firms and small "shrinking" incumbents in the tax files, 1999 to 2005.

	Wage		Value-added per worker		Sales per worker	
	(1)	(2)	(3)	(4)	(5)	(6)
New firm	5.2***	4***	7***	6.6***	9.3***	9.2***
	(0.39)	(0.31)	(0.37)	(1)	(0.51)	(1.1)
New firm × POST	0.014	0.67	0.19	0.79*	0.23	1.1
	(0.18)	(0.53)	(0.15)	(0.45)	(0.29)	(0.69)
Q2 % zero employees × New firm × POST		-0.79		-0.75		-1
		(0.61)		(0.5)		(0.77)
Q3 % zero employees × New firm × POST		-1.1*		-1*		-1.4
		(0.58)		(0.53)		(0.89)
Q4 % zero employees × New firm × POST		-0.0032		0.1		-0.13
		(0.7)		(0.58)		(0.93)
Constant	22***	22***	26***	26***	43***	43***
	(0.11)	(0.12)	(0.61)	(0.61)	(0.86)	(0.86)
Industry × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Quartile treatment × New firm	No	Yes	No	Yes	No	Yes
Observations	265,586	265,586	1,269,812	1,269,812	1,258,595	1,258,595
R^2	0.16	0.16	0.12	0.12	0.2	0.2

Table IA.XVI

Firm Creation: Controlling for Industry-Level Exposure to the Cycle

The dependent variable is the log of one plus the number of new firms created in an industry-month. POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2002 to 2005 period. Qi% Sole Props is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of sole proprietorships among newly created firms in the industry, measured in the pre-reform period). Treatment-specific trends are the interactions of Q2, Q3, and Q4 with linear time trends. Trend is a linear time trend. Industry capital intensity is the average assets-to-labor ratio of firms in the industry from 1999 to 2001. Industry growth is the average growth rate of sales for firms in the industry from 1999 to 2001. Beta is computed for each industry by regressing, in the time series, the aggregate industry value-added on national GDP, using annual data. All regressions include industry and month-of-the-year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry and tax files from the French Statistical Office. Sample: 290 industries, 1999 to 2005, monthly.

	Number of firms created		
	(1)	(2)	(3)
POST	-0.28***	-0.28***	-0.29***
	(0.076)	(0.075)	(0.075)
Q2 % Sole Props × POST	0.03	0.031	0.031
	(0.044)	(0.044)	(0.044)
Q3 % Sole Props × POST	0.11***	0.11***	0.11***
	(0.036)	(0.036)	(0.036)
Q4 % Sole Props × POST	0.14***	0.14***	0.14***
	(0.039)	(0.038)	(0.038)
Industry capital intensity × POST	0.042*	0.042*	0.042*
	(0.025)	(0.025)	(0.025)
Industry growth × POST	-0.00018	0.00075	0.00075
	(0.036)	(0.035)	(0.035)
Industry capital intensity × Trend	-0.014*	-0.014*	-0.014*
	(0.0087)	(0.0086)	(0.0086)
Industry growth × Trend	0.006	0.0052	0.0052
	(0.014)	(0.014)	(0.014)
GDP growth	0.062***		0.063***
	(0.0087)		(0.0085)
Beta × GDP growth	-0.1		0.058
	(0.069)		(0.065)
Beta × POST		-0.14	-0.15
		(0.14)	(0.14)
Beta × Trend		0.12***	0.12***
		(0.042)	(0.044)
Constant	0.69***	0.98***	0.69***
	(0.25)	(0.23)	(0.25)
Treatment-specific trend	Yes	Yes	Yes
Month-of-the-year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	24,360	24,360	24,360
R^2	0.92	0.92	0.92

Table IA.XVII

Comparison New Firms versus Small Incumbents: Profitability

Incumbent firms are defined as firms that have been in the tax files for the last four years. For new firms, all dependent variables are computed two years after creation. In columns (1) and (2), the dependent variable is operating profit divided by sales. In columns (3) to (4), the dependent variable is operating profit divided by total assets. New firm is a dummy variable equal to zero if the observation corresponds to an incumbent and one if it corresponds to a newly-created firm. POST is a dummy equal to zero for observations in the 1999 to 2001 period and to one for the 2002 to 2005 period. Qi% Sole Props is a dummy equal to one if the industry belongs to the i^{th} quartile of our treatment intensity variable (the fraction of sole proprietorships among newly created firms in the industry, measured in the pre-reform period). Quartile treatment × New firm are the interactions of Q2, Q3, and Q4 with the new firm dummy. All regressions include industry × year fixed effects. Standard errors (in parentheses) are clustered at the industry level. *, **, and *** denote statistically significant at the 10%, 5%, and 1% level, respectively. Source: Firm registry and tax files from the French Statistical Office. Sample: All new firms and small incumbents in the tax files, 1999 to 2005.

	Operating profit/Sales		Operating profit/Total assets	
	(1)	(2)	(3)	(4)
New firm	-0.017***	-0.029***	0.034***	-0.0073
	(0.004)	(0.0095)	(0.0042)	(0.02)
New firm × POST	0.00067	-0.0076	0.0061**	0.023***
	(0.0019)	(0.011)	(0.0027)	(0.0048)
Q2 % Sole Props × New firm × POST		0.016		-0.0032
		(0.012)		(0.0069)
Q3 % Sole Props × New firm × POST		0.0074		-0.021***
		(0.012)		(0.0075)
Q4 % Sole Props × New firm × POST		0.009		-0.024***
		(0.012)		(0.0057)
Constant	0.24***	0.24***	0.19***	0.19***
	(0.0087)	(0.0086)	(0.0043)	(0.0045)
Industry × Year FE	Yes	Yes	Yes	Yes
Quartile treatment × New firm	No	Yes	No	Yes
Observations	1,319,246	1,319,246	1,223,497	1,223,497
R^2	0.19	0.19	0.12	0.12

REFERENCES

Goux, Dominique, Eric Maurin, and Barbara Petrongolo, 2014, Worktime regulations and spousal labor supply, *American Economic Review* 104, 252–276.