

Web appendix to the paper: The Deep-Pocket Effect of Internal Capital Markets

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This appendix contains supplementary material to the article “The Deep-Pocket Effect of Internal Capital Markets”, *Journal of Financial Economics*.

Tables A.1–A.7 contain results not reported, but mentioned and commented upon, in the published version of the article, to which we refer the interested reader. Tables A.8–A.9 display additional descriptive statistics. In what follows we describe in detail the additional evidence provided in Table A.4, and comment on the content of Tables A.8–A.9.

Shocks to Group Cash

While theory suggests that product market competition is affected by the overall depth of group pockets (which include both the stock of net liquid assets held at a given time and current cash flows), it might be argued that changes in net liquid assets reflect a group’s liquidity policy, which in turn may incorporate strategic considerations of entry deterrence. For this reason, we also study how entry in a market reacts to changes in group cash flows which are arguably less subject to manipulation. In doing this, we allow negative and positive shocks to affect asymmetrically an incumbent’s competitive strength (and thus entry into its market). Table A.4 reports results from the estimation of Eq. (1), where group liquidity is now replaced by two dummies, $Shock_{i,t}^-$ and $Shock_{i,t}^+$, capturing non-negligible year to year changes in group cash flows. $Shock_{i,t}^-$ indicates a negative shock to group cash flows in year t (for groups affiliated with incumbents in market i), and takes the value one if there is a fall in group cash flows of more than 10% in year t relative to the previous year, and zero otherwise. $Shock_{i,t}^+$ is analogous

to $Shock_{i,t}^-$ and takes the value one if there is an increase in group cash flows of more than 10% in year t relative to the previous year, and zero otherwise.¹

Column 1 indicates that when incumbent affiliated groups experience a year to year fall in cash flows larger than 10%, market entry increases by 2.3 percentage points. In contrast, market entry does not seem to respond to positive shocks to group cash flows (see column 2). Interestingly, this asymmetric result carries over to unreported estimates, where we use alternative measures of shocks to group cash. A potential explanation for the strong pro-entry effect of negative shocks to group cash is that groups that are hit by a substantial reduction in cash flows may switch from a regime where they provide liquidity to affiliated firms even when these are faced with more intense competition, to a regime where they exit markets challenged by new entrants. As a consequence, a “Matsusaka and Nanda (2002) effect” may invite entry in those groups’ markets. This change of regime would not occur for long-pursed groups experiencing a positive shock to their cash flows, which can explain why entry reacts mildly to such shocks.

Group loans actually received

In Section 4 we have explored the hypothesis that incumbents “backed” by cash rich groups are perceived as stronger competitors by potential entrants, as they are expected to face less stringent financial constraints. To this purpose, in our estimated equations we have controlled for the cash holdings of incumbent affiliated groups, a measure of the resources available for redistribution in favor of the incumbents. Alternatively, potential rivals may give up entering a market because, at the time the entry decision is made, they observe that incumbents have actually received resources from the rest of the group.² We proxy such cash injection with the loans received by incumbents from the rest of the group, *Inc Loans from BG*, and we introduce this as an additional control in our basic entry equation. Column 3 in Table A.4 shows that the magnitude and the precision of the coefficient of group cash is unaffected by the inclusion of intra-group loans received by incumbents: entrants are put off by incumbents’ easy access to a source of internal finance (the group’s cash reserves). Conversely, group loans do not have a significant impact on entry into product markets. Hence, we find no evidence that entry is being deterred by actual (strategic) liquidity injections in favor of incumbent firms.

Additional Descriptive Statistics

Table A.8, Panel A (Panel B), displays, for each year, the average entry rate in all four-digit sectors in boom (in bust) that year, within the two-digit aggregation indicated at the beginning of the row. The last column displays the average entry rate in all four-digit sectors in boom (in bust) over the whole sample period, within the two-digit aggregation indicated at the beginning of the row.

Booms and busts are identified from the fluctuations of real sectoral sales, where nominal sales are deflated by industry-specific price deflators, following the Braun and Larrain (2005) peak-to-trough criterion. Troughs occur when (the log of) real sales are below their trend

¹The year to year change represents a rough yet immediate measure of shocks to cash flows (see Bertrand and Mullainathan, 2001; Gopalan, Nanda, and Seru, 2007, for similar shock measures). The results are robust to different values of the threshold (5% and 20%). In additional unreported estimates, available upon request, we focus on changes in cash flows held by units operating in distant markets, i.e., in markets outside the incumbent’s *2SIC* market. We also experiment with an alternative measure of shocks to group liquidity defined as the residual of a regression of group cash flows on sector and year effects. The results are similar in both cases.

²From a theoretical standpoint, both actual and expected cash injections, provided they are ex post optimal from the group perspective, have the potential to help market incumbents discourage entry. Of course, in a well functioning internal capital market, cash injections that are not ex post optimal for the group suffer from a commitment problem and are thus unlikely to have any strategic effect.

(computed using a Hodrick–Prescott filter with a smoothing parameter of 100) by more than one standard deviation. For each trough, we go back in time until we find a local peak, which is defined as the closest preceding year for which (detrended) real sales are higher than in the previous and posterior year. A bust goes from the year after the local peak to the year of the trough. The same procedure is used to identify sectoral booms. A peak occurs when current real sales are more than one standard deviation above their trend. Once a peak is identified, we go back in time until we find a local trough, i.e., the closest preceding year for which (detrended) real sales are lower than in the previous and posterior year. The years falling between a local trough and a peak are labelled as a boom.

Table A.8 shows that entry rates vary considerably across four-digit sectors experiencing a boom (or a bust). In booms, entry rates range from 5.4% in the manufacture of clocks and watches (two-digit code 33) in 1999, to 53% in electricity distribution and control apparatus (two-digit code 31) in 2004. Similarly, in sectors experiencing a bust, entry rates range from tiny values, such as 0.1% in the production of lead, zinc and tin (two-digit code 27) in 2003, to 30% in computer media (two-digit code 22) in 2002. Such a variability is not surprising if one takes into account that we identify booms and busts as deviations from each four-digit sector's own trend. Table A.9 shows that booms and busts occur in different years and different sectors. This confirms that our identification of booms and busts captures sector-specific cycles and not (only) aggregate shocks.

References

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- [2] Braun, M., Larrain, B., 2005. Finance and the business cycle: international, inter-industry evidence. *Journal of Finance* 60, 1097–1128.
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Table A.1: Characteristics of Top 10 and Bottom 10 Entry Sectors

	Entry rate	Number of entrants	Number of entrants > 1%	% of affiliated entrants	Affiliated entrants' share of entry rate	Number of incumbents	Number of incumbents > 1%	% of affiliated incumbents
Top 10	0.298 (0.247)	21.90 (7.32)	3.133	0.308	0.540	52.80	9.61	0.307
Bottom 10	0.034 (0.045)	4.59 (2.03)	0.722	0.367	0.499	23.94	8.26	0.507
Top decile	0.251 (0.213)	24.67 (8.02)	2.76	0.348	0.645	69	9.63	0.366
Bottom decile	0.056 (0.061)	12.86 (4.48)	1.02	0.343	0.53	72.89	11.4	0.475
	Affiliated incumbents' market share	Age	Growth of patents	Capital Intensity	HHI	Financial Dependence	Incumbent BG cash	Entrant BG Cash
Top 10	0.50	15.6	0.840	0.672	0.284	0.179	2542375	1854603
Bottom 10	0.81	23.6	0.283	1.410	0.432	0.147	1836353	937535
Top decile	0.569	16.4	1.209	0.683	0.246	0.279	2561101	1721116
Bottom decile	0.786	21.7	0.329	1.029	0.304	0.193	2145231	1467390

Note: Rows 1 and 3 display the average value over the sample period of the variables indicated at the head of the columns for the top ten and bottom ten sectors. The picture emerging is confirmed once we describe industries in the top and bottom decile of the entry rate (rows 2 and 4). We define as *Entrants* in market i at time t all firms that appear at time t and were not active at time $t - 1$. *Entry Rates* in sector i year t is the ratio of sales of entrant firms to total sales in sector i year t . We define as incumbents in market i at time t all the firms that are active at time t and were active at time $t - 1$. *Age* of industry i in year t is measured as the average age of the firms that operate in that industry. *Patent Growth* in market i at time t measures the average growth of patents awarded by the European Patent Office to the firms active in that market over the period 1995-2003. *Capital Intensity* in industry i in year t is measured as the ratio of fixed assets to output. *HHI* in market i at time t is the value of the Herfindahl index. *Financial dependence* is the share of capital expenditures not financed with cash flow from operations. This is computed for US publicly listed companies in the period 1986-1995 and then aggregated over time and across companies in a given industry (using the industry median). For affiliated incumbents and affiliated entrants in market i at time t , *BG Cash* measures the average total cash held by the firm affiliated groups. This is computed by adding all the group subsidiaries' Total Cash excluding the cash held by the firm (incumbent or entrant). Firms' total cash measures the sum of firms' Net Liquid Assets and Operating Cash Flow. Nominal variables expressed in thousands of Euros have been deflated using sectoral price indexes.

Table A.2: Business Groups: Portfolio of Industries

PANEL A: Long-run growth							
All groups	<i>Mean</i>	<i>p5</i>	<i>p25</i>	<i>p50</i>	<i>p75</i>	<i>p95</i>	<i>N</i>
<i>Within manufacturing:</i>							
Concentration within long-run growth decile (HHI)	0.892	0.44	1	1	1	1	69617
% of firms in sectors belonging to the same long-run growth decile	76.2	16.7	50	100	100	100	91360
% of group cash from firms in sectors belonging to the same long-run growth decile	76.1	0	54	100	100	100	91308
Entrant groups							
<i>Within manufacturing:</i>							
% of firms in sectors belonging to the same long-run growth decile as the entrant	73.5	14.3	50	100	100	100	18931
% of group cash from firms in sectors belonging to the same long-run growth decile as the entrant	68.1	-13.3	19.7	100	100	100	18907
PANEL B: Innovation intensity							
All groups	<i>Mean</i>	<i>p5</i>	<i>p25</i>	<i>p50</i>	<i>p75</i>	<i>p95</i>	<i>N</i>
<i>Within manufacturing:</i>							
Concentration within patent growth decile (HHI)	0.908	0.5	1	1	1	1	69617
% of firms in sectors belonging to the same patent growth decile	78.9	16.7	50	100	100	100	88179
% of group cash from firms in sectors belonging to the same patent growth decile	78.9	0	70.4	100	100	100	88165
Entrant groups							
<i>Within manufacturing:</i>							
% of firms in sectors belonging to the same patent growth decile as the entrant	77	15.4	50	100	100	100	18575
% of group cash from firms belonging to the same patent growth decile as the entrant	70.4	-10.1	40.1	100	100	100	18566

Note: The table displays selected characteristics of all groups in the sample and of all entrant groups. For each group in any given year, Panel A computes concentration as the sum of the squared values of the shares of manufacturing units active in sectors belonging to each long-run growth decile. For each group in any given year, Panel B computes concentration as the sum of the squared values of the shares of manufacturing units active in sectors belonging to each patent growth decile. *Group Cash* measures the total cash held by the firm affiliated group. This is computed by adding all the group subsidiaries' *Total Cash*. Firms' total cash measures the sum of firms' Net Liquid Assets and Operating Cash Flow. Some of the units in a group may have negative cash-holdings. This explains why the ratio between the group cash in a given subset of sectors and the group total cash may turn out to be either negative or larger than one. Nominal variables expressed in thousands of Euros have been deflated using sectoral prices indexes.

Table A.3: **Business Group Liquidity and Entry: Employment-weighted Entry Rates**

	(1)	(2)	(3)	(4)
Size	-0.225*** (0.026)	-0.199*** (0.026)	-0.191*** (0.026)	-0.190*** (0.026)
Δ Size	-0.032** (0.013)	-0.048*** (0.015)	-0.050*** (0.015)	-0.049*** (0.015)
ROA	0.109*** (0.039)	0.119*** (0.040)	0.112*** (0.035)	0.111*** (0.037)
Capital Intensity	-0.016 (0.011)	-0.010 (0.013)	-0.016 (0.015)	-0.017 (0.014)
HHI	0.168* (0.086)	0.182** (0.082)	0.202** (0.084)	0.198** (0.084)
Tangibility	0.018 (0.066)	0.009 (0.074)	-0.007 (0.077)	-0.016 (0.078)
Average Efficiency	-0.009 (0.026)	-0.015 (0.026)	-0.014 (0.025)	0.052 (0.034)
Relative Efficiency	-0.054 (0.059)	-0.045 (0.060)	-0.041 (0.061)	-0.044 (0.056)
BG Affiliation	-0.020* (0.011)	-0.026** (0.012)	-0.026** (0.012)	-0.024** (0.012)
Inc. Total Cash		-0.017*** (0.006)	-0.014** (0.007)	-0.014** (0.007)
BG Total Cash			-0.010*** (0.003)	-0.011*** (0.003)
BG Total Cash \times Average Efficiency				-0.004* (0.002)
Market & Year FE	YES	YES	YES	YES
R-squared	0.431	0.442	0.449	0.450
N	2239	2100	2050	2050

Note: Sectoral-level data between 1995 and 2004. Entry in sector i year t is the ratio of employment of entrant firms to total employment in sector i year t . *Average Efficiency* is normalized to have zero mean. This allows interpreting the coefficient of *BG Total Cash* in column 4 as the effect on the entry rate when *Average Efficiency* is at its mean value. Robust standard errors clustered at the 3SIC sector level in parentheses. One star denotes significance at the 10% level, two stars denote significance at the 5% level, and three stars denote significance at the 1% level.

Table A.4: **Business Group Liquidity and Entry: Additional Evidence**

	(1)	(2)	(3)
Size	-0.268*** (0.026)	-0.270*** (0.026)	-0.255*** (0.024)
Δ Size	-0.039** (0.015)	-0.044*** (0.015)	-0.054*** (0.014)
ROA	0.076* (0.041)	0.077* (0.041)	0.086** (0.037)
Capital Intensity	-0.010 (0.010)	-0.011 (0.011)	-0.008 (0.012)
HHI	0.134* (0.073)	0.142* (0.074)	0.172** (0.076)
Tangibility	0.039 (0.070)	0.035 (0.071)	0.019 (0.066)
Average Efficiency	0.007 (0.025)	0.009 (0.025)	0.006 (0.025)
Relative Efficiency	-0.013 (0.048)	-0.016 (0.049)	-0.012 (0.050)
BG Affiliation	-0.030*** (0.008)	-0.030*** (0.008)	-0.026*** (0.008)
Incumbent Total Cash	-0.006 (0.004)	-0.007* (0.004)	-0.005 (0.003)
BG Cash $Shock_{i,t}^-$	0.023*** (0.008)		
BG Cash $Shock_{i,t}^+$		-0.006 (0.006)	
BG Total Cash			-0.007** (0.003)
Incumbent Loans from BG			-0.005 (0.034)
Market & Year FE	YES	YES	YES
R-squared	0.612	0.610	0.600
N	1957	1957	2050

Note: $Shock_{i,t}^-$ indicates a negative shock to group liquidity in year t and takes the value one if there is a fall in group cash flows of more than 10% year t relative to the previous year, and zero otherwise. $Shock_{i,t}^+$ indicates a positive shock and takes the value one if there is an increase in group cash flows of more than 10% in year t relative to the previous year and zero otherwise. *Incumbent Loans from BG* measures loans granted to incumbents by other members of the affiliated group, divided by incumbents' total assets in the market. Robust standard errors clustered at the 3SIC sector level in parentheses. One star denotes significance at the 10% level, two stars denote significance at the 5% level, and three stars denote significance at the 1% level.

Table A.5: BG Liquidity and Entry: Age of the industry and sectoral trends

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Size	-0.276*** (0.024)	-0.260*** (0.022)	-0.254*** (0.023)	-0.255*** (0.023)	-0.041*** (0.008)	-0.095*** (0.012)	-0.089*** (0.012)	-0.087*** (0.012)
Δ Size	-0.039*** (0.012)	-0.053*** (0.015)	-0.054*** (0.014)	-0.053*** (0.014)	-0.037*** (0.006)	-0.015** (0.006)	0.013** (0.006)	-0.014** (0.006)
ROA	0.084*** (0.031)	0.095*** (0.033)	0.087** (0.036)	0.087** (0.037)	0.004 (0.054)	0.048 (0.057)	0.030 (0.061)	0.031 (0.061)
Capital Intensity	-0.009 (0.010)	-0.006 (0.010)	-0.008 (0.012)	-0.009 (0.012)	-0.020 (0.015)	-0.017 (0.015)	-0.023 (0.016)	-0.024 (0.016)
HHI	0.124* (0.074)	0.151** (0.074)	0.174** (0.075)	0.171** (0.075)	-0.295* (0.151)	-0.408** (0.158)	-0.394** (0.160)	-0.392** (0.160)
Tangibility	0.017 (0.061)	0.013 (0.063)	0.018 (0.066)	0.011 (0.066)	0.489*** (0.118)	0.519*** (0.118)	0.510*** (0.117)	0.500*** (0.117)
Average efficiency	0.011 (0.023)	0.007 (0.023)	0.007 (0.023)	0.102 (0.064)	-0.027 (0.035)	-0.055* (0.032)	-0.051 (0.032)	0.050 (0.051)
Relative efficiency	-0.039 (0.052)	0.018 (0.054)	-0.017 (0.054)	-0.016 (0.053)	0.107* (0.057)	0.091 (0.055)	0.095* (0.055)	0.086 (0.054)
Age	0.002 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)				
BG Affiliation	-0.019** (0.008)	-0.025*** (0.008)	-0.026*** (0.008)	-0.025*** (0.008)	-0.013 (0.015)	-0.020 (0.014)	-0.022 (0.015)	-0.022 (0.015)
Inc. Total Cash		-0.009*** (0.003)	-0.005 (0.004)	-0.005 (0.003)				
BG Total Cash			-0.007** (0.003)	-0.008*** (0.003)				
BG Total Cash \times Average Efficiency								
Market & Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Sectoral trend	NO	NO	NO	NO	YES	YES	YES	YES
R-squared	0.584	0.599	0.602	0.602	0.417	0.457	0.467	0.468
N	2238	2099	2049	2049	2238	2099	2049	2049

Note: *Age* is the average age of all the firms active in market i at year t . *Average Efficiency* is normalized to have zero mean. Robust standard errors clustered at the 3SIC sector level in parentheses. One star denotes significance at the 10% level, two stars denote significance at the 5% level, and three stars denote significance at the 1% level.

Table A.6: **Business Group Liquidity and Entry: Alternative entry definitions**

	Entrants = New firms + firms at second year of activity		Entrants = New firms + firms at second and third year of activity	
	(1)	(2)	(3)	(4)
Size	-0.395*** (0.036)	-0.396*** (0.035)	-0.195*** (0.028)	-0.197*** (0.029)
Δ Size	0.194*** (0.020)	0.197*** (0.020)	0.098*** (0.018)	0.101*** (0.018)
ROA	0.094** (0.044)	0.102** (0.044)	0.100** (0.042)	0.111*** (0.042)
Capital Intensity	-0.013 (0.018)	-0.013 (0.018)	0.017 (0.015)	0.017 (0.014)
HHI	0.043 (0.082)	0.036 (0.083)	0.267*** (0.097)	0.259*** (0.097)
Tangibility	-0.056 (0.072)	-0.070 (0.075)	-0.049 (0.082)	-0.074 (0.083)
Average Efficiency	-0.027 (0.017)	0.044 (0.034)	0.002 (0.016)	-0.110** (0.037)
Relative Efficiency	-0.003 (0.071)	0.003 (0.071)	-0.012 (0.078)	-0.005 (0.079)
BG Affiliation	-0.125*** (0.046)	-0.123*** (0.045)	-0.408*** (0.050)	-0.403*** (0.049)
Inc. Total Cash	-0.002 (0.005)	-0.002 (0.005)	-0.029*** (0.008)	-0.028*** (0.008)
BG Total Cash	-0.008** (0.003)	-0.009*** (0.003)	-0.011*** (0.003)	-0.012*** (0.003)
BG Total Cash \times Average Efficiency		-0.005*** (0.002)		-0.007*** (0.002)
Market & Year FE	YES	YES	YES	YES
R-squared	0.515	0.518	0.397	0.404
N	2004	2004	1992	1992

Note: This table re-estimates our basic entry equation using different definitions of entrants. In columns 1 and 2, entrants are defined as firms that appear at time t plus all firms that appeared at time $t-1$ and that are active at time t . In columns 3 and 4 we define as entrants also firms that appeared at time $t-2$ and are active at time t . Incumbent firms are re-defined accordingly. Based on the new definitions of entrants and incumbents we have re-computed entry rates and the variables *BG Affiliation*, *Average Efficiency*, *Relative Efficiency*, *Incumbent Total Cash*, *BG Total Cash*. In the estimations displayed in this table we use the same observations that were used for the baseline specification of Table 6. The results are qualitatively the same when we estimate our entry equation without imposing such a restriction. *Average Efficiency* is normalized to have zero mean. Robust standard errors clustered at the 3SIC sector level in parentheses. One star denotes significance at the 10% level, two stars denote significance at the 5% level, and three stars denote significance at the 1% level.

Table A.7: BG Affiliated vs. Stand-alone Entry: Booms and busts and Patent Growth

	Booms and busts						Patent Growth					
	Busts		Booms		Low Growth		High Growth		Low Growth		High Growth	
	$Entry_{i,t}^{BG}$ (1)	$Entry_{i,t}^{SA}$ (2)	$Entry_{i,t}$ (3)	$Entry_{i,t}^{BG}$ (4)	$Entry_{i,t}^{SA}$ (5)	$Entry_{i,t}^{BG}$ (6)	$Entry_{i,t}^{SA}$ (7)	$Entry_{i,t}$ (8)	$Entry_{i,t}^{BG}$ (9)	$Entry_{i,t}^{SA}$ (10)	$Entry_{i,t}$ (11)	$Entry_{i,t}$ (12)
Size	-0.200*** (0.033)	0.003 (0.012)	-0.198*** (0.030)	-0.227*** (0.034)	-0.050*** (0.010)	-0.276*** (0.034)	-0.258*** (0.026)	-0.026*** (0.008)	-0.284*** (0.026)	-0.203*** (0.019)	-0.023*** (0.006)	-0.226*** (0.018)
Δ Size	0.128*** (0.029)	-0.036*** (0.011)	0.093*** (0.027)	-0.072** (0.031)	-0.001 (0.009)	-0.073** (0.030)	-0.119*** (0.022)	0.002 (0.007)	-0.117*** (0.022)	-0.057*** (0.014)	0.002 (0.005)	-0.055*** (0.013)
ROA	0.007 (0.051)	0.005 (0.019)	0.012 (0.046)	0.208*** (0.056)	-0.005 (0.016)	0.202*** (0.054)	0.164*** (0.040)	-0.002 (0.012)	0.162*** (0.040)	0.136*** (0.048)	0.007 (0.016)	0.143*** (0.047)
Capital Intensity	-0.088* (0.045)	-0.016 (0.017)	-0.105** (0.042)	-0.077* (0.045)	-0.029** (0.013)	-0.106** (0.044)	-0.009 (0.024)	0.005 (0.007)	-0.005 (0.024)	-0.043** (0.020)	-0.008 (0.007)	-0.051** (0.019)
HHI	-0.257* (0.140)	-0.031 (0.053)	-0.288** (0.129)	-0.547*** (0.156)	0.152*** (0.043)	-0.395*** (0.152)	0.126 (0.098)	0.043 (0.030)	0.169* (0.099)	-0.082 (0.069)	0.052** (0.023)	-0.030 (0.068)
Tangibility	-0.376*** (0.135)	-0.127** (0.051)	-0.504*** (0.124)	0.013 (0.106)	-0.082*** (0.029)	-0.070 (0.103)	0.015 (0.081)	-0.030 (0.025)	-0.015 (0.082)	0.149** (0.069)	-0.055** (0.023)	0.094 (0.067)
Average efficiency	-0.067** (0.029)	-0.030*** (0.011)	-0.097*** (0.027)	-0.113*** (0.041)	-0.021* (0.011)	-0.134*** (0.040)	0.007 (0.028)	-0.019** (0.009)	-0.012 (0.028)	-0.053** (0.021)	-0.002 (0.007)	-0.055** (0.021)
Relative efficiency	0.230*** (0.062)	0.106*** (0.023)	0.336*** (0.057)	0.190*** (0.074)	0.033 (0.021)	0.223*** (0.072)	0.116* (0.069)	0.057*** (0.021)	0.173** (0.070)	0.071 (0.049)	0.011 (0.016)	0.082* (0.048)
BG Affiliation	0.007 (0.017)	-0.004 (0.007)	0.003 (0.016)	-0.002 (0.016)	-0.010** (0.004)	-0.012 (0.015)	-0.015 (0.014)	0.003 (0.004)	-0.011 (0.014)	-0.029** (0.012)	-0.003 (0.004)	-0.032*** (0.012)
Inc. Total Cash	-0.013** (0.006)	-0.002 (0.002)	-0.015** (0.006)	0.005 (0.005)	-0.003* (0.002)	0.002 (0.005)	-0.008* (0.005)	-0.000 (0.001)	-0.009* (0.005)	-0.008 (0.005)	0.001 (0.002)	-0.007 (0.005)
(Inc.) BG Total Cash	-0.009** (0.004)	-0.003* (0.002)	-0.012*** (0.004)	0.001 (0.004)	0.001 (0.001)	0.003 (0.004)	0.004 (0.003)	-0.001 (0.001)	0.003 (0.003)	-0.014*** (0.003)	-0.003** (0.001)	-0.017*** (0.003)
Entrant BG Total Cash	0.009*** (0.002)	0.009*** (0.002)	0.009*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.003* (0.002)	0.003* (0.002)	0.003* (0.002)	0.006*** (0.001)	0.006*** (0.001)	0.006*** (0.001)
Inc. BG Eff./Entr. BG Eff.	-0.021*** (0.002)	-0.021*** (0.002)	-0.021*** (0.002)	-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.005** (0.003)	-0.005** (0.003)	-0.005** (0.003)
(Inc.) BG TC \times Entr. BG TC	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Market and Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
R-squared	0.754	0.857	0.812	0.850	0.882	0.847	0.737	0.710	0.719	0.803	0.702	0.802
N	358		454		649		734					

Note: We identify booms and busts from the fluctuations of real sectoral sales, where nominal sales are deflated by industry price deflators. Columns 7 to 12 classify sectors based on the number of patents awarded by the European Patent Office to French firms over the period 1995–2003, at the (four-digit) sectoral level. *High growth* industries are those where the growth of awarded patents is above the median. (Inc.) *BG Total Cash* and *Entrant BG Total Cash* are normalized to have zero mean. Robust standard errors clustered at the 35IC sector level in parentheses. One star denotes significance at the 10% level, two stars denote significance at the 5% level, and three stars denote significance at the 1% level. The p -values on the difference between the coefficients of *Entrants' BG Total Cash* being different from zero are 0.13 and 0.09. The p -values on the difference between the coefficients of *Incumbents' BG Total Cash* are 0.04 and 0.0001 for group affiliated entrants, and 0.04 and 0.08 for stand-alone entrants.

Table A.8: Entry rates in four-digit sectors experiencing booms and busts

PANEL A: BOOMS										
Two-digit code	Name	Average entry rate in four-digit sectors in boom								
		1997	1998	1999	2000	2001	2002	2003	2004	Over time
15	Food	0.202	0.232	0.181	0.163	0.151	0.377	0.176	0.321	0.236
17	Textile	0.158	0.116	0.075	0.089	0.194	0.247			0.135
18	Apparel	0.341	0.203	0.120	0.200	0.171	0.184		0.332	0.194
19	Leather and leather products	0.081	0.077	0.073	0.111	0.063	0.125			0.091
20	Wood and lumber	0.141	0.085	0.095	0.064		0.371			0.136
21	Paper and allied products	0.096	0.112	0.058	0.064	0.309	0.240			0.112
22	Printing and publishing	0.157	0.327	0.162	0.171	0.168	0.296	0.048		0.208
24	Chemicals and allied products	0.199	0.175	0.114	0.093	0.216	0.472	0.147	0.224	0.202
25	Rubber and plastics	0.174	0.151	0.138	0.435		0.165			0.184
26	Stone, clay, glass (and other nonmetallic mineral products)	0.150	0.208	0.199	0.241	0.172	0.186			0.197
27	Primary metal industries	0.062	0.134	0.269	0.174	0.293	0.754			0.248
28	Fabricated metal products	0.177	0.127	0.133	0.182	0.026	0.204		0.079	0.152
29	Machinery and equipment (industrial and household)	0.132	0.250	0.207	0.156	0.148	0.217	0.176	0.230	0.194
30	Computer and office equipment	0.354			0.288					0.321
31	Electrical equipments and supplies	0.052	0.133	0.124	0.117		0.337		0.530	0.166
32	Radio, TV and communications equipments	0.211	0.187	0.195	0.106					0.165
33	Instruments and related products	0.130		0.054	0.153		0.348	0.115		0.211
34	Motor vehicles	0.133	0.126	0.225	0.224					0.177
35	Other transportation equipment	0.110	0.128	0.079	0.059	0.039	0.369			0.115
36	Furniture and miscellaneous industries (e.g. jewelry, musical instruments, toys and sporting goods)	0.187	0.142	0.108	0.145	0.161	0.142			0.144
37	Recycling				0.168				0.140	0.154

PANEL B: BUSTS										
Two-digit code	Name	Average entry rate in four-digit sectors in bust								
		1997	1998	1999	2000	2001	2002	2003	2004	Over time
15	Food	0.108	0.072	0.110	0.107	0.118	0.195	0.124	0.137	0.115
17	Textile	0.266	0.062	0.114	0.041	0.098	0.205	0.107	0.157	0.132
18	Apparel	0.168	0.163	0.115	0.108	0.137	0.176	0.075		0.138
19	Leather and leather products	0.066	0.086	0.123	0.100	0.088	0.125	0.087	0.082	0.092
20	Wood and lumber	0.101	0.137		0.119	0.146	0.108	0.063	0.100	0.108
21	Paper and allied products	0.054	0.022	0.035	0.196	0.166	0.054		0.074	0.113
22	Printing and publishing	0.211	0.022	0.086	0.158	0.168	0.303	0.116	0.103	0.157
24	Chemicals and allied products		0.260	0.057	0.087	0.156			0.017	0.122
25	Rubber and plastics	0.131		0.003	0.124	0.181		0.100	0.075	0.124
26	Stone, clay, glass (and other nonmetallic mineral products)	0.236		0.058	0.054	0.102		0.065	0.009	0.089
27	Primary metal industries		0.030	0.060	0.054	0.162	0.102	0.001		0.107
28	Fabricated metal products	0.191	0.141	0.144	0.048	0.112	0.000	0.046	0.081	0.082
29	Machinery and equipment (industrial and household)	0.170	0.132	0.070	0.111	0.133	0.048	0.078	0.089	0.117
30	Computer and office equipment				0.023	0.275		0.054		0.118
31	Electric equipments and supplies	0.205	0.012	0.451	0.119	0.256				0.233
32	Radio, TV and communications equipments				0.058	0.230	0.276	0.081		0.205
33	Instruments and related products			0.055	0.199	0.199	0.103			0.172
34	Motor vehicles		0.014		0.049	0.081	0.143	0.148	0.126	0.086
35	Other transportation equipment	0.082	0.121	0.162	0.268	0.176	0.089	0.030		0.155
36	Furniture and miscellaneous industries (e.g. jewelry, musical instruments, toys and sporting goods)	0.110	0.100	0.075	0.068	0.143	0.087	0.087	0.087	0.096
37	Recycling		0.127	0.149		0.169				0.148

Note: Panel A (Panel B) displays for each year, the average entry rate in all four-digit sectors in boom (in bust) that year, within the two-digit aggregation indicated at the beginning of the row. The last column displays the average entry rate in all four-digit sectors in boom (in bust) over the sample period, within the two-digit aggregation indicated at the beginning of the row. Sectoral booms and busts are identified from the fluctuations of real sectoral sales (where nominal sales are deflated by industry price deflators) using a peak-to-trough criterion. The regression sample starts from 1997 because the right hand side variables in our entry equation are one-period lagged. Furthermore, we estimate firms' TFP using the Olley and Pakes (1996) methodology, which requires knowing the lagged values of inputs.

Table A.9: Four-digit sectors experiencing booms and busts

PANEL A: BOOMS												
Two-digit code	Name	Number of four-digit sectors in boom							Total	Number of different four-digit sectors in boom	Number of years a four-digit sector is in boom	
		1997	1998	1999	2000	2001	2002	2003				2004
15	Food (46)	6	7	11	6	1	8	2	4	45	26	1.7
17	Textile (24)	9	12	10	5	5	5	0	0	46	19	2.4
18	Apparel (8)	1	4	4	2	1	1	0	1	14	7	2
19	Leather and leather products (3)	1	1	1	2	1	1	0	0	7	2	3.5
20	Wood and lumber (7)	3	4	5	1	0	2	0	0	15	7	2.1
21	Paper and allied products (9)	1	3	4	2	1	1	0	0	12	5	2.4
22	Printing and publishing (13)	3	5	5	4	2	2	1	0	22	8	2.7
24	Chemicals and allied products (22)	5	5	5	2	1	3	1	2	24	9	2.6
25	Rubber and plastics (9)	3	5	6	2	0	2	0	0	18	7	2.5
26	Stone, clay, glass (28) (and other nonmetallic mineral products)	6	8	5	5	1	1	0	0	26	12	2.2
27	Primary metal industries (20)	3	7	4	5	3	3	0	0	25	12	2
28	Fabricated metal products (29)	13	14	13	13	1	2	0	1	57	21	2.7
29	Machinery and equipment (42) (industrial and household)	7	16	15	13	6	3	1	2	63	27	2.3
30	Computer and office equipment (2)	1	0	0	1	0	0	0	0	2	1	2
31	Electrical equipments and supplies (13)	3	3	4	2	0	2	0	1	15	6	2.5
32	Radio, TV and communications equipments (7)	3	3	3	5	0	0	0	0	14	5	2.8
33	Instruments and related products (8)	1	0	1	2	0	4	2	0	10	6	1.6
34	Motor vehicles (4)	1	2	2	1	0	0	0	0	6	2	3
35	Other transportation equipment (12)	1	1	2	2	1	1	0	0	8	3	2.6
36	Furniture and miscellaneous industries (16) (e.g. jewelry, musical instruments, toys and sporting goods)	5	9	8	9	5	2	0	0	38	12	3.2
37	Recycling (2)	0	0	0	1	0	0	0	1	2	2	1
Total		76	109	108	85	29	43	7	12	469	199	2.4

PANEL B: BUSTS												
Two-digit code	Name	Number of four-digit sectors in bust							Total	Number of different four-digit sectors in bust	Number of years a four-digit sector is in bust	
		1997	1998	1999	2000	2001	2002	2003				2004
15	Food (46)	1	1	10	21	34	1	6	2	76	39	1.9
17	Textile (24)	4	3	5	5	7	7	8	5	44	21	2.1
18	Apparel (8)	4	2	1	2	6	3	3	0	21	8	2.6
19	Leather and leather products (3)	1	1	1	1	2	1	2	2	11	3	3.6
20	Wood and lumber (7)	1	1	0	4	5	2	5	4	22	7	3.1
21	Paper and allied products (9)	1	2	2	4	3	1	0	1	14	7	2
22	Printing and publishing (13)	4	2	2	3	5	3	3	3	25	12	2.1
24	Chemicals and allied products (22)	0	1	2	10	16	0	0	2	31	18	1.7
25	Rubber and plastics (9)	1	0	1	4	5	0	1	3	15	7	2.1
26	Stone, clay, glass (28) (and other nonmetallic mineral products)	3	0	2	9	15	0	1	3	33	21	1.6
27	Primary metal industries (20)	0	1	2	5	10	2	1	0	21	13	1.6
28	Fabricated metal products (29)	1	1	1	5	11	3	4	6	32	19	1.7
29	Machinery and equipment (42) (industrial and household)	10	2	2	3	12	6	4	2	41	23	1.8
30	Computer and office equipment (2)	0	0	0	1	1	0	1	0	3	2	1.5
31	Electric equipments and supplies (13)	1	1	3	6	12	0	0	0	23	12	1.9
32	Radio, TV and communications equipments (7)	0	0	0	1	5	2	1	0	9	5	1.8
33	Instruments and related products (8)	0	0	2	3	8	1	0	0	14	8	1.7
34	Motor vehicles (4)	0	1	0	2	2	1	1	1	8	4	2
35	Other transportation equipment (12)	2	2	1	3	3	1	1	0	13	9	1.4
36	Furniture and miscellaneous industries (16) (e.g. jewelry, musical instruments, toys and sporting goods)	5	2	4	5	5	2	4	4	31	13	2.4
37	Recycling (2)	0	1	1	0	1	0	0	0	3	2	1.5
Total		39	24	42	97	168	36	46	38	490	253	1.9

PANEL C											
Total number of four-digit sectors neither in boom nor in bust		214	196	179	147	132	250	276	279		

Note: For each year, indicated at the head of the columns, Panel A (Panel B) displays the number of four-digit sectors in boom (in bust) that year, within the two-digit aggregation indicated at the beginning of the row. The second column reports in parentheses the total number of four-digit sectors within the two-digit aggregation indicated at the beginning of the row. Sectoral booms and busts are identified from the fluctuations of real sectoral sales (where nominal sales are deflated by industry price deflators) using a peak-to-trough criterion. The regression sample starts from 1997 because the right hand side variables in our entry equation are one-period lagged. Further, we estimate firms' TFP using the Olley and Pakes (1996) methodology, which requires knowing the lagged values of inputs.