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# Performance and Behavior of Family Firms : Evidence from the French Stock Market*

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# Performance and Behavior of Family Firms: Evidence From the French Stock Market*

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**Abstract**

We look at the corporate performance of family firms listed on the French stock exchange between 1994 and 2000. On the French stock market, approximately one third of the firms are widely held, another third are founder controlled and the remaining third are heir controlled family firms. We find that family firms largely outperform widely held corporations. This result holds for founder controlled firms, but more surprisingly also for heir managed firms. To explain this, we provide evidence consistent with the fact that, because of their different time horizons, heir managed corporations have a comparative advantage at enforcing implicit insurance contracts with their labor force. More specifically, we find that: (1) employment in heir managed firms is less sensitive to industry shocks and (2) heirs pay lower wages. Finally, we discuss issues related to the endogeneity of performance/family regressions looking both at delisting and transitions from family to non-family status. We conclude that these issues may lead us to overestimate the performance of heirs compared to professionally managed firms, but to *under*estimate the performance of heirs when compared to widely held firms.

**Keywords**: Family Firms, Corporate Performance and Firm Behavior
**JEL Number**: G30

**Résumé**

Cette article s'intéresse à la performance opérationnelle des entreprises familiales cotées à la Bourse de Paris entre 1994 et 2000. Ces entreprises représentent environ les deux tiers des entreprises cotés en France sur cette période. Nous trouvons qu'en moyenne les entreprises familiales sur-performent largement les entreprises dont l'actionnariat est dispersé. De façon surprenante, les entreprises familiales dirigées par des héritiers sont aussi performantes que les entreprises dirigées par leur fondateur. Ce résultat peut être la conséquence d'un avantage comparatif des dynasties à mettre en place des contrats d'assurance implicites de long terme avec les employés : les données semblent soutenir cette hypothèse. Plus précisément, nous trouvons que dans les entreprises familiales dirigées par des héritiers : (1) l'emploi est moins sensible aux chocs sectoriels et (2) les salaires sont moins élevés. Enfin, nous discutons quelques problèmes liés à l'endogénéité du statut familial de l'entreprise, en examinant les performances des entreprises qui sortent de la cote ou dont le statut familial évolue. Ces biais d'endogénéité peuvent nous conduire à sous-estimer la performance des entreprises familiales dirigées par des professionnels relativement aux entreprises dirigées par des héritiers ; en revanche, il semble que nous sur-estimions la performance des entreprises à actionnariat dispersé relativement à celle des entreprises dirigées par des héritiers.

**Mots Clés** : Entreprises Familiales, Performance et Gestion de l'Entreprise
**Classification JEL** : G30

# 1 Introduction

While in the US most of the academic research on corporate finance has focused on large, listed and widely held corporations, it turns out that most firms around the world have a dominant owner and that this owner is very often the founding family. In addition, the founding family is often directly involved in the actual management of the firm. Hence, the premices of the Berles and Means model of the corporation where (1) the CEO is not an owner and (2) owners are passive, does not really apply to most firms in the world. For example, Laporta, Lopez de Silanes and Shleifer [1998] tracked ultimate ownership of a sample of firms listed in 27 rich countries with more than 500m$ market capitalisation. They found that 50% of all firms in their global sample were family controlled, while only 40% of them were widely held or controlled by widely held entities.[1] In fact, widely held corporations are prevalent in the US, the UK and Japan, while families predominate in most continental European countries. Focusing on these countries, Faccio and Lang [2000] find that more than 60% of all listed firms in France, Italy and Germany are family firms.

The relevant view on world capitalism is thus that the typical large listed firm is controlled by a family, not by a salaried CEO. This new perspective calls forth a research agenda on the specific features of dynastic management. Do family firms maximize profit ? Are they used to build a family's empire at the expense of minority shareholders ? Are they too prudent, slow reacting ? On the contrary, are they good at keeping a cold mind and avoiding fads ? More generally, do they behave any differently from the widely held corporations that we academics know so well ?

To fill this gap, this paper provides evidence on the performance and behaviour of family firms in France. We believe the French example is of interest for three reasons. First, given the very high level of cash flow right concentration among family firms in our data[2], it turns out that, a part from a few exceptions, French family firms under study do not suffer too much from separation of ownership rights and voting rights - as emphasized for example by Faccio and Lang [2000]. What we observe here is really more evidence of family-specific behavior, rather than outright expropriation through ownership pyramids, dual voting class shares etc... Secondly, France is a continental european country, and as consequence its financial institutions and history differ markedly from English speaking countries, where most systematic studies on family firms have been conducted so far. In particular, family firms are much more prevalent even among the largest firms in the country and therefore much more representative of the economy than, say, in the US. Last, since the French state has disposed of most of its assets through large IPOs during the 1980s and the 1990s, widely held firms are relatively numerous on the French stock market when compared to other continental european countries. This gives us access to a large enough control group to compare family firms to.

To do this, we use panel data on some 750 corporations listed on the French stock market over the 1994 – 2000 period. We look at three types of questions. First, we

[1] The remaining 10% were controlled by the state.

[2] In our sample, for the year 1999, the median cash flow right of a family firm was 54%, with a mean of 52%.

provide cross-sectional evidence on the relative performance of family firms. Looking at profitability, we find that family firms significantly outperform non family firms. Consistently with the existing literature on founder managers, we find evidence that founder managed firms are very profitable. Much more surprisingly, heir managed firms, and professionally managed firms to a lesser extent, also do very well compared to widely held firms. This difference is strong, robust and economically large.

Second, we seek to explain this difference. We find that family firms pay significantly lower average wages, but do not have a lower labor productivity. Hence, either family firms hire lower skilled workers from the market and make them be more productive, or they hire the same workers as other firms, but pay them less. An explanation for this puzzle is found when we look at the employment response of family firms to industry shocks. In heir controlled firms, but not in professionally managed family firms, labor demand is less sensitive to industry shocks than in widely held firms. This is consistent with the fact that dynastic managers, because of their reputation and longer horizon, can commit to honor implicit labor contracts with their workers. In exchange for insurance, they are allowed to pay lower wages.

Last, we look at plausible endogeneity biases that could affect our cross-sectional evidence. Two types of biases, a simultaneity bias and a sampling selection bias, might overestimate the family effect on performance. While a rigourous fixed effect / instrumental variable approach is not really feasible here, we look at CEO transitions to account for the simultaneity bias and at firm delisting to account for the sample selection bias. First, we find that firms transmitted to heirs do *not* outperform those transmitted to professionals ex ante. Hence, it does not seem to be the case that good firms go to heirs more than to pros. Again, we cannot test this statistically because, given the small number of transitions, any test is going to lack power. Second, we find that heir controlled firms who delist - most of the time because they are bought out by a widely held group - do not perform less well than other firms. Hence, the selection bias does not seem to be of much importance here neither, although a rigourous test would require a much longer time frame.

A small literature on family firms in North America has recently emerged (Anderson and Reeb [2003], Perez Gonzalez [1999] for the US, and Morck, Stangeland and Yeung [2002] for Canada). For the moment, it has mainly focused on profitability; results are still mixed and difficult to reconcile with each other. In a cross section of large firms, family firms, in particular those where the family is directly involved in management, strongly outperform widely held firms in the US (Anderson and Reeb [2003]). Part of it is due to the "founder" effect, but surprisingly, *heirs* do very well too. Their good performance may, however, be overstated if successful firms are more easily transmitted to heirs than to professional managers. Perez Gonzales [1999] looks at performance changes around the succession and finds that the performance of firms passed to heirs becomes worse. He concludes that heirs are worse managers than professional CEOs. The problem is that, in Perez-Gonzalez's sample, firms handed to heirs are no better performer *ex ante*. So his evidence is difficult to reconcile with the cross-sectional evidence of Anderson and Reeb. It is much more compatible with results from Morck et alii [1998], who find that in their sample of Canadian firms, family firms are consistently outperformed by widely held ones.

This paper is structured as follows. Section 2 presents the data contruction and de-

scribes its content. Section 3 provides more systematic evidence on corporate performance and behaviour of family firms. Section 4 looks deeper into endogeneity issues. Section 5 concludes.

# 2 A Preliminary Look at the Data

## 2.1 Data Sources

The initial sample is drawn from the DAFSA yearbook of all firms listed on the French stockmarkets[3] over the 1994-2000 period.[4] There are on average some 700 such firms each year. This yearbook mostly collects data from annual reports and therefore provides us with the firm's consolidated accounts (balance sheet and profit accounts) as well as more "organizational information" such as: total employment, major shareholders, all board members and part of the top management - including the CEO. Firm's age and industry are also provided, although the industry classification only has 13 different names.[5]

Taking all firms listed on the stock exchange in 1999, we then determine whether these firms are "family firms" or not. To do so, we looked at the firm's main shareholders. When it was obvious that a single family (shareholders with the same last name) controlled at least 20% of the shares, we labelled the firm as "family firm". Following Anderson et al. [2002], we then broke this category down into three sub categories. First, the firm is said to be "founder controlled" when the founder of the firm still holds the family block and is CEO. Second, the firm is said to be "heir managed" when the founder no longer holds control over the firm - most of the time because he retired or died - but when heirs of the founder collectively control the company votes, an heir - direct or indirect - of the founder actually is the CEO of the company. Third, a firm is said to be family owned, but professionally managed, when the family (founder or heirs) still holds the controlling block, but the CEO position is held by an outsider.

In addition to the basic DAFSA information, the information on heirs, the founder's identity and the recent history of each company was collected from three main sources. First, we directly looked into the annual company reports obtained mainly through the Internet. As it turned out, in many cases, the ownership structure provided in the annual reports remained somewhat opaque, especially since in many circumstances French families tend to hold control through pyramids of holding corporations (see Faccio and Lang [2002]). To get at the identity of the ultimate controlling owner, we then used information collected since 1997 by the *Conseil des Marchés Financiers* (CMF). This administrative body is an outlet of the Treasury; an act passed in 1997 made it mandatory to individuals or firms who cross various thresholds in a listed firm's capital

[3]Until 1997, France had no less than 7 stock exchanges (Bordeaux, Marseilles, Nancy, Nantes, Lille, Lyons and Paris), where most firms (70%) were listed in Paris. All exchanges were merged in 1997.

[4]The DAFSA yearbooks in fact collected firm level information since at least the mid 1960s, but they have been computerized only since 1994.

[5]Another, finer and more standard, classification was also provided, but it turns out that under this classification more than a third of all firms simply appears as "holdings", with no further information on the group's activity. This is why we chose to focus on the data-specific, unconventional, industry classification.

to declare it to the CMF.[6] In turn, the CMF has to make it public, and, in order to improve the transparency of the French financial system, the CMF publication provides us with the ultimate owners of the holdings generally responsible for the transactions. Last, we complemented these two sources of information with the use of various French business newspaper websites (L'Expansion, Le Nouvel Economiste).

Finally, we tracked these firms between 1994 and 2000, and going back in years, we added firms who exited the sample before 1999 and hand collected their family status the year they exited. In many instances we could find their family status. All in all, out of 731 non financial/non real estate firms at some point listed on the French stock exchange between 1994 and 2000, we could determine the family status for 595 of them. The evolution of the number of the different categories is drawn in figure 1. Somewhat reassuringly, the number of founder managed firms increases dramatically, which is consistent with improving macreconomic and financial conditions over the period - the economy picks up markedly from 1997 onwards. The number of widely held firms decreases, which we interpret as evidence of restructuring during the low activity years of 1994-1996. Including all years, summary statistics on corporate performance, firm size and ownership concentration are provided in table 3.

This approach leaves open the question of firms changing family status. To track them, we identified all CEO changes between 1994 and 2000. For every change, we have tried to ask whether the nature of the firm (widely held, founder controlled, heir controlled or professionally managed) was affected. Overall, we found 161 CEO changes, but only 52 of them inducing a change of family statuses (for more details, see table 9 in section 4 of this paper). Given the small size of the French stock market and the short time frame that we have, the data are unlikely to provide us with enough longitudinal variation of the "family status". Hence, the real source of identification is going to be cross-sectional and we will only report plain OLS regressions - no fixed effects.

Longitudinal variation would have been helpful because cross-sectional studies on family firms exhibit obvious endogeneity biases. Take the example of profitability. If good performers tend to be those firms that are more easily passed on to heirs, this will generate a mechanistically positive correlation between performance and family status, and bias our estimates of the causal impact of family ownership upward. The only study that partially deals with this issue is Perez-Gonzales [1999], who shows that (1) family firms perform less well as soon as they are passed on to the founder's heir and (2) family firms passed on to heirs as opposed as firms passed on to professionals exhibit a very similar performance level *ex ante*. Hence, Perez-Gonzales's results go *against* finding a positive correlation between family ownership and good performance. First, passed-on firms are not particularly good initially and, secondly, their performance becomes worse once they are passed on. If we believe his US results also apply in France, existing biases on the family/performance correlation are negative, not positive.

Since we cannot content ourselves with this, we will raise the issue of selection in more details in the last section of this paper. For the moment, suffice it to say that the good side of our cross-sectional investigation is that our results are going to be comparable with most of the existing literature on family firms (Morck, Strangeland

[6] These thresholds are 5, 10, 20, 33 and 50% of all votes.

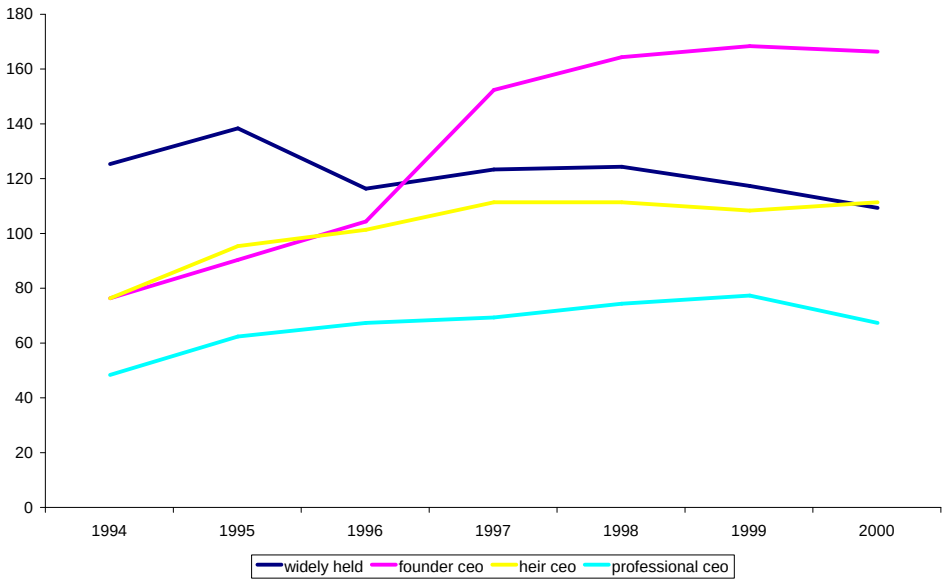


Figure 1: Number of Family Firms listed on the French Stock Market: 1994-2000

Table 1: Prevalence of Family Firms in 1999

| Firm Type | No Weight | Labor Weighted | Sales Weighted | Total |
|---|---|---|---|---|
| Widely Held | 25 | 55 | 57 | 117 |
| Founder CEO | 36 | 12 | 8 | 168 |
| Heir CEO | 23 | 10 | 10 | 108 |
| Professional CEO | 16 | 23 | 26 | 77 |
| Total | 100 | 100 | 100 | 470 |

Source: 2000 Dafsa Yearbook of non financial, non real estate firms who were known to be listed on the French Stockmarket in 1999. There were intially 549 such firms. After removing firms for which we could not track the identity of the ultimate owner, we ended up with a sample of 470 firms only, for which we knew whether the firm was widely held (or a listed subsidiary thereof), controlled by the founder, controlled by an heir of the founder or controlled by a family, but managed by a non family member.

and Yeung [1998], Anderson and Reeb [2003]).

## 2.2 Description of the Data

Although we will use panel data in the regression analysis, we present, in this section, a thorough description of the 1999 cross-section. Overall, there are 682 firms listed on the French stockmarket in 1999, and 549 for which we have value added figures - therefore excluding mostly financial firms. Also the number of these firms is tiny when compared to the overall population (some 2 millions of firms exist in France, among which some 700,000 corporations), these firms tend to be heads of groups, and thus to control a large number of other firms. Most of the time, these subsidiaries are legally different firms, but effectively mere ”divisions” of the group. Less frequently, these firms really are separate entities that are controlled by the listed holding, but with other shareholders. This is why it is critical here to use *consolidated accounts*; without them, our information on employment, assets, sales and costs would be almost meaningless (a holding company has no sales and just checks in dividends, for example). Given that listed firms tend to be large and group leaders, it turns out that they represent a large share of aggregate activity. Total sales generated by these firms represent some 900 bn euros, or 66% of French GDP. For those 549 firms for which we have value added figures in 1999, the sample we have represents 14% of total GDP. Total employment amounts to some 6 million jobs (a third of private sector employment), although many of them abroad - in particular in very large groups. Last, total market capitalisation of firms listed on the French stock exchange amounts to 119% of GDP.

As we already mentionned, we were able to track the family status for 595 firms out of a total sample (i.e. including all years) of 731 non financial / non real-estate firms : for 1999, we tracked 470 family status among the 549 non financial / non real-estate firms. In some instances, the labeling process raised some difficulties. For example, families tend to control firms through a cascade of holding companies that

gives them voting rights in excess of cash flow rights. In some cases, we were able to track the ultimate owner using annual reports, newspaper websites and CMF data on block purchases and threshold crossing. In some cases, we were simply unable to do that: this is why we lost some information. Second, in several instances, we stumbled on raiders, that is individuals who started with a very tiny firm - sometimes a family firm - and became progressively major players through a series of successful market operations and acquisitions - see for example François Pinault, or Vincent Bolloré. We coded these firms as "founder controlled" - even though both Pinault and Bolloré inherited tiny private family firms at the beginning of their career.

As shown in the first column of table 1, 75% of all firms present in the sample are family firms. This is a very large number, compared to what previous studies found for English speaking countries. Looking at US listed firms from the S&P500, Anderson and Reeb [2003] found 35% of them were family controlled, although they use a slightly different classification. Looking at the largest 500 listed canadian firms, Morck, Strangeland and Yeung [1998] found a share of 50% of family firms. Our sample is more consistent with the investigations of Faccio and Lang [2002], who look at the ultimate ownership of listed firms in continental european countries: using various data sources, they have in 1997, for France, 64% of family firms. Hence, family ownership in France, is much more pervasive than in English speaking countries, even Canada. The surprising fact is, however, that the bulk of these family firms is still "founder controlled", since these account for 36% of the total. In contrast to this, Canada only has 18% of all firms investigated by Morck et al. that are managed by the initial entrepreneur. It seems that the French stockmarket may exhibit more mobility than the sheer fraction of family firms might suggest. But the family status is also very persistent: heir managed firms account for a large share of the total (23%) in the same proportion as widely held firms. Last, less than a fourth of all family firms are managed by a professional CEO: hence, even after the founder retires, the norm seems to be that an heir takes over control. Of course, the real importance of family firms is overstated by these figures. Columns 2 and 3 of table 1 highlight the relative small size of family firms. In weighted terms, widely held firms account for a little more than 50% of all firms. Founder controlled are especially small, given that they only account for 12% of total employment.

These insights are confirmed by a close examination of table 2, which looks at the relative size and age of family firms. Founder controlled firms are particularly tiny, as they have a third of the average firm's assets and employment. Heir controlled firms appear also surprisingly small: if their total sale is around the average firm's total sale, their total employment is strinkingly low (about five time less than the average widely held firm). professionaly managed family firms are on the contrary above the average firm, either for sales or employment, but still much smaller than widely held corporations: overall, widely held firms appear both larger and more capital intensive than family firms. It is important to stress that this descriptive result does not seem to be due to age differences: although founder controlled firms are - obviously - younger than average, heir controlled tend to be somewhat older than widely held corporations. Part of the reason for this is that some of the widely held corporations are in fact recent subsidiaries of old widely held corporations that were floated on the market. But even looking at directly widely held corporations, the age difference with family

Table 2: Size and Age of Family Firms in 1999

| Firm Type | Age | ln(Total Asset) | Employment |
|---|---|---|---|
| Widely Held | 62 | 15.5 | 26,957 |
| | (4) | (0.2) | (4,640) |
| Founder CEO | 26 | 13.1 | 4,213 |
| | (2) | (0.1) | (1,799) |
| Heir CEO | 79 | 14.1 | 5,387 |
| | (5) | (0.2) | (1,651) |
| Professional CEO | 67 | 14.7 | 17,111 |
| | (5) | (0.3) | (4,985) |
| Total | 54 | 14.1 | 12,244 |
| | (2) | (0.1) | (1,653) |

Source: 1999 Consolidated accounts of 470 listed French firms who were known to be family or non family controlled in 1999. Age is in years. Employment is total number of employees. Reading: Average age of widely held corporations is 62 years, estimated with a 4 years standard error.

firms remains slim.[7]

## 2.3 Descriptive Statistics

Before turning to the multivariate analysis of the performance of family firms, we first look at the difference in profitability between family and non family firms, using the 1999 cross-section to clarify exposition. Cross tabulations using family status and various indices of profitability in 1999 are thus provided in table 4. In 1999, the average return on equity, as computed by the ratio of earnings to own funds (assets minus liabilities) is 23%, but this conceals substantial variations across family statuses. Founder controlled firms are the top performer, and substantially outperform the average firm in the sample by 6 percentage points. Heir controlled firms perform a little less well than the average firm with earnings amounting to 20% of total own funds, while professionally managed firms have a ROE of 28%, well above average. These results are consistent with the existing litterature on US and Canada, as well as the extensive litterature on the so called "Founder effect" (see, for a recent contribution, Adams, Almeida and Ferreira [2003]). In a cross section, founders tend to run firms with outstanding performance, the question being whether they are inherently good managers, or whether those founders who manage to keep control are only those who perform well. Using various instruments, Adams et al. suggest that selection issues are minor, and that almost all of the founder effect may be interpreted in a causal way. Using US data, they find a founder effect on ROA of around 3 percentage points in OLS regressions and some 2 points using their instruments. Our cross tabulation suggests it

[7]For a subsample of 69 genuinely widely held corporations - those who are not controlled by another widely held firm, we found that the average age was 78 years, still less than for heir managed firms.

Table 3: Summary Statistics

| Variable | Mean | Std. Dev. | Min. | Max. | N |
|---|---|---|---|---|---|
| Age (years) | 62 | 49 | 1 | 324 | 3,273 |
| Total Asset (MFF) | 13,034 | 47,963 | 0.02 | 988,776 | 3,308 |
| Total Sales (MFF) | 10,981 | 34,292 | 0.11 | 751,444 | 3,283 |
| Employment | 10,264 | 28,799 | 1 | 330,247 | 3,121 |
| Pct Cash Flow Right | 0.48 | 0.24 | 0.01 | 0.99 | 2,783 |
| Return on Equity | 0.19 | 0.23 | -0.86 | 1.00 | 3,133 |
| Return on Asset | 0.08 | 0.07 | -0.14 | 0.28 | 3282 |
| Sales Growth | 0.09 | 0.24 | -1.24 | 1.49 | 2,517 |
| Ln(VA/Employment) | 5.9 | 0.6 | 4.1 | 8.2 | 2,881 |
| Leverage | 0.37 | 0.21 | 0.00 | 0.90 | 3,084 |
| Tobin's Q | 1.62 | 1.46 | 0.27 | 8.96 | 3,057 |

Source: Consolidated accounts of 470 listed French firms who were known to be family or non family controlled in 1999, followed over the 1993 - 2001 period. The number of observations varies from variable to variable because of non reports.

Table 4: Profitability of Family Firms in 1999

| Firm Type | ROA | ROE | Sales Growth | Emp. Growth |
|---|---|---|---|---|
| widely held | 0.07 | 0.17 | 0.20 | 0.08 |
| | (0.01) | (0.02) | (0.03) | (0.03) |
| founder ceo | 0.10 | 0.29 | 0.17 | 0.16 |
| | (0.01) | (0.02) | (0.03) | (0.03) |
| heir ceo | 0.08 | 0.20 | 0.14 | 0.06 |
| | (0.01) | (0.02) | (0.02) | (0.03) |
| professional ceo | 0.08 | 0.28 | 0.12 | 0.13 |
| | (0.01) | (0.02) | (0.03) | (0.04) |
| Total | 0.09 | 0.23 | 0.16 | 0.11 |
| | (0.00) | (0.01) | (0.01) | (0.02) |

Source: 1999 Consolidated accounts of 470 listed French firms who were known to be family or non family controlled in 1999. Note: Return on Assets is the ratio of net operating income to net assets. Return on Equity is the ratio of earnings to assets minus liabilities. Standard errors of mean estimates are given between parentheses. Reading: The average ROA of widely held firms is 7%, estimated with a standard error of 1%.

might be even larger in the French context, although we need to run regressions to be more definitive. The preliminary results from table 4 are also consistent with available evidence that heirs tend to do less well than *founders* (Perez Gonzales [1999], Morck, Strangeland and Yeung [1998]). This should not be surprising, given that founders seem better managers than everyone: heirs are thus less likely to be as good as the founder, and will underperform the market (what Holtz-Eakin et alii [1993] call the "Carnegie Conjecture"). In our sample, heirs' profitabilities are lower than founder's by 9 percentage points. This is very large, since the sample standard deviation of ROE is 23 percentage points. Also, in apparence consistently with Perez-Gonzales, heirs are outperformed by 8 percentage points by professional managers. Hence, from these simple cross sectionnal tabulation, the Carnegie conjecture seems fairly sensible.

But the striking result from table 4 is that "widely held" firms largely underperform the average firms, since their return on equity is only 17%, against 20% for heirs and 28% for professional managers. The difference is both economically large and statistically significant. Using widely held firms as a benchmark, it seems that family firms are more efficient, even heir controlled ones. This ranking is not affected when we replace ROE by Return on Assets, computed as the ratio of net income to total assets. Again, widely held firms are outperformed by heir controlled ones (by 1 percentage points), by professionally managed family firms (by 1 percentage points) and by founder controlled firms (by 3 points).

The obvious problem with this approach, however, is that family status in cross tabulations may be a proxy for other variables, notably age and size. As we saw, founder

Table 5: In Which Industries Do We find Family Firms ?

| Industry | Wid.Held | Founder | Heir | Professional | Total |
|---|---|---|---|---|---|
| Food Products | 9 | 8 | 18 | 7 | 42 |
| Manufacturing | 8 | 21 | 17 | 13 | 59 |
| Construction | 3 | 0 | 3 | 1 | 7 |
| Chemicals | 6 | 10 | 5 | 4 | 25 |
| Media, Telecoms | 6 | 10 | 5 | 4 | 32 |
| Retail Trade | 6 | 23 | 9 | 11 | 49 |
| Utilities | 13 | 4 | 2 | 1 | 20 |
| High Technology | 14 | 25 | 3 | 2 | 44 |
| Diversified Holdings | 4 | 9 | 8 | 8 | 29 |
| Mining | 5 | 3 | 2 | 1 | 11 |
| Other Manufacturing | 24 | 29 | 30 | 18 | 101 |
| Services | 12 | 14 | 4 | 2 | 32 |
| Transportation | 7 | 6 | 4 | 2 | 19 |
| Total | 117 | 168 | 108 | 77 | 470 |

Source: 1999 Consolidated accounts of 470 listed French firms who were known to be family or non family controlled in 1999.

controlled firms tend to be younger, and are therefore expected to grow faster (this is indeed confirmed by table 4, columns 3 and 4). Heir managed and professionally managed firms tend to be smaller than widely held firms, and the underperformance of widely held firms may be purely due to the fact that widely held firms have grown larger, and therefore less efficient. The other variable our family status could be proxying for is industry. As we learned from table 3, widely held firms seem to be much more capital intensive than family firms, in particular compared to heir controlled and professionally managed family firms.

An obvious reason for this is that widely held firms could be prevalent in industries were capital needs are large (say, utilities, or transportation), while family firms could be prevalent where costs are more variable. This is, for example, the view taken by Chandler [1991] to explain the rise of the modern, widely held corporation, in the United States over the past century. This chandlerian view is only partly confirmed when we examine the details of table 5, which provides the breakdown of industry composition by family status. Family firms represent almost 90% of all listed firms in the retail trade industry, 80% of all firms in food products, and less than 40% in utilities. So for these industries, the Chandler theory seems to work. For other industries, the share of family firms seems pretty constant, hovering around 60-70% depending on the industry. Manufacturing industries have no less family firms than, say, services.

# 3 Multivariate Evidence

Given that family firms tend to be in (slightly) different industries, have a different age and size than widely held firms, it seems worthwhile conducting a multivariate analysis. Another concern with results from table 4 is that they use 1999 profitability as sole measure of accounting performance. To account for these concerns, we use the available 1994-2000 accounting information for each of the 470 firms in our sample. This gives us a sample of some 2,950 observations.

## 3.1 Empirical Strategy

We use this sample to estimate the following equation, for firm $i$ at date $t$:

$$y_{it} = \alpha + \beta_1 . F_{1i} + \beta_2 . F_{2i} + \beta_3 . F_{3i} + \gamma X_{it} + \varepsilon_{it} \quad (1)$$

where the $y_{it}$'s are the firm caracteristics that we are going to look at (profitability, wage, employment etc.). $F_i = (F_{i1}, F_{i2}, F_{i3})$ is our family status variable, broken down into three dummy variables representing "founder controlled" ($F_1$), "heir controlled" ($F_2$) and "professionally managed" ($F_3$), the "widely held" firm being our reference. $F_i$ varies little with time, so we cannot identify fixed effects with this equation. As argued above, this is a major concern if we want to interpret our results in a causal way; we will therefore try to avoid it, and will postpone the discussion on endogeneity and selection to section 5. Given the absence of firm fixed effects, the best we could do was to allow for flexible correlation across residuals $\varepsilon_{it}$ of a given firm, using White's [1980] method.

The $X_{it}$'s are various possibly time varying controls, which we include sequentially to check the robustness of our results. $X_{it}$ include year dummies, 13 industry dummies, the firm's log assets, the firm's log age. We also added the percentage of cash flows held by the largest shareholder. This was usually measured as the share ownership of the largest owner, but when the owner was a family, and that control was ascertained through a multi-layer pyramid, we tried to compute effective cash flow rights with the conventional method.[8] The logic behind putting cash flow rights is to try to explain the pure effect of family ownership and to remove performance effects of ownership concentration.

In regressions that are not reported here, we also added firm leverage as a control; one reason for this is that Jensen [1988]'s theory of free cash flows generates a positive correlation between leverage and performance, as debt is used as a disciplining device. On the contrary, high debt can be the result of bad performance. In most performance regressions, leverage came out significantly negative which lends credence to the second mechanism. It did not, however, affect the other results - leverage turns out to be uncorrelated with family status. Given this, our taste for parcimony and the fact that we were unconfortable with presenting regressions using such obviously endogenous controls, we decided not to report any regression including leverage. As further robustness checks, we also added a dummy equal to 1 when the firm was *formerly* state owned. As

[8] When family A holds 50% of a holding B that has 50% of firm C, we say that the cash flow rights of family A on firm V are 50x50%=25%.

it turns out, a lot of now "widely held" firms used to be government enterprises (that were nationalized in 1945 and in 1981). These firms then experienced a large wave of privatisations when the right came back to power in 1986-1988, and after 1993, under both left wing and right wing governments. Many of these privatizations took place through IPOs on the stockmarket, in order to ensure political support from the population and to boost the French stockmarket, made tiny by the 1981 privatisations. All in all, some 27% of all "widely held" firms are former state owned entreprises. To make sure that overperformance of family firms does not mean underperformance of former SOEs, we also tried to control for this in the regressions. Once again, results (not reported here) were mostly unaffected. Last, we also ran regression including the variance of past stock returns as an additional control. In doing this, we meant to control for firm specific risk: families could for example simply be more profitable because they undertake riskier projects. While this result would be interesting in itself, we found that the inclusion of this control did not quantitatively nor statistically affect our main conclusions (as it turns out, stock returns volatility in family firms is similar to that of widely held ones).

## 3.2 Family Firms Outperform Widely Held Firms

Our first dependent variables are four performance measures. Two of them are accounting profitability measures: the return on assets (ROA) and the return on equity (ROE). We then looked at sales growth, and finally at the evaluation of assets by the market through Market to Book ratio (which, hereafter, we will abusively refer to as Tobin's Q). Q was measured as the sum of market capitalisation and book financial debt divided through assets minus account payables. Q is therefore a mesure of the value of assets, though the lower quality of consolidated accounts do not allow us to obtain as clean a measure as in US studies using Compustat.

Regression results using specification (1) are reported in table 6. Columns 1 and 2 use the ROA and ROE respectively, and draw a somewhat similar picture. As in the cross tabulation in table 4, founders do very well, even including the controls: using pure industry and year controls, founders still outperform widely held companies by 2 percentage points of ROA and 9 percentage points of ROE, which is consistent with the so-called "founder effect". Surprisingly, heir CEOs do as well as founders, and much better than professional CEOs as far as ROA is concerned. In general, family firms all outperform non family firms in terms of ROE by 7 percentage points and in term of ROA by 2 percentage points. This is highly significant and large in economic terms, as the sample standard deviation on ROE is 23 percentage points and 7 percentage points on ROA.

It is important to note that our results are strinkingly consistent with what Anderson and Reeb [2003] found in the US using a very similar methodology. Looking at ROA, they find that founder controlled firms outperform widely held firms by 3.5 percentage points - compared to 2 in our sample. Secondly, in their study, heir controlled firms outperform widely held corporations by 2 percentage points, exactly like in ours. Last, and still in line with our results, professionally run firms only outperform the control group by 1 point of ROA. Hence, Anderson and Reeb find that in the US, heirs do less well than founders, while professional managers do, in a cross section of firms, even worse.

Table 6: Performance of Family Firms

| | ROA | ROE | Δln(Sales) | Q |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Founder CEO | .02 | .09 | .06 | .52 |
| | (.008)*** | (.02)*** | (.02)*** | (.16)*** |
| Heir CEO | .02 | .08 | .02 | .13 |
| | (.007)*** | (.02)*** | (.01) | (.13) |
| Professional CEO | .01 | .07 | .02 | .25 |
| | (.007) | (.02)*** | (.02) | (.17) |
| Ln(Total Asset) | .0009 | .02 | .01 | .04 |
| | (.001) | (.005)*** | (.004)*** | (.03) |
| Ln(Firm Age) | 0 | -.03 | -.02 | -.24 |
| | (.003)*** | (.009)*** | (.008)*** | (.06)*** |
| Cash Flow right | .02 | .07 | -.02 | -.55 |
| | (.02) | (.06) | (.05) | (.41) |
| $\frac{1}{2}$(Cash Flow right)$^2$ | -.03 | -.08 | .09 | 1.31 |
| | (.04) | (.12) | (.12) | (1.06) |
| Obs. | 2205 | 2134 | 1645 | 2133 |
| $R^2$ | .12 | .1 | .07 | .21 |

Source: Consolidated accounts of listed French firms who were known to be family or non family controlled, followed over the 1994 - 2000 period. Note: Dependant variable are (1) Return on assets, (2) return on equity, (3) sales growth, measured as the change in log sales and (4) Tobin's Q, as measured by (financial debt + market capitalisation) over (total assets minus short term debt). Given the absence of fixed effects, all regressions include 13 industry dummies, year dummies and control for residual correlation within firm, across time.

Part of it might be consistent with Perez Gonzales [2003] 's finding that firms passed on to heirs (from heirs or founders) have a deteriorating performance. It is, however, more difficult to reconcile with his other finding that firms passed on to professional managers (the firm remaining family owned) tend to do better (in particular since both firms passed to heir or to professionals have ex ante near identical performance). There, we must add that, even if our results are strongly consistent with Anderson and Reeb's, they do differ in one point: in our study, heirs do as well as founders, other things equal. In fact, it seems that the age variable explains all the initial difference between founders and other family firms. Founders obviously run younger firms while heirs and professional managers older ones; in addition old firms perform less well - as in Anderson and Reeb. Last reference to the literature, our results are completely at odds with Morck, Strangeland and Yeung [1998]'s evidence from Canadian firms although they too, adopt a similar sample construction. Morck et al find that heirs are the worst of all firms, family or widely held. Moreover, founders are outperformed by widely held corporations.

We then ask how, in the French context, the stock market prices the outperformance of family firms. As it turns out, not much (see table 6, column 4): Founder managed firms have Q higher by 0.5 than widely held firms. This is, again, both statistically significant and economically large since the standard deviation of Q in the sample is 1.5. This is also unsurprising given that, as we have seen, founders run more profitable firms. As shown in column 3, they also run significantly faster growing firms, since their rate of sales growth exceeds that of widely held firms by 6 percentage points, *controlling for age effects*. The most surprising results come from the valuation of non founder controlled family firms: both heir controlled and professionally managed family firms tend to have a *larger* q than widely held corporations, but the difference is statistically insignificant. It is a priori surprising given that these firms' capital is more profitable (columns (1) and (2)). In addition, they tend to grow slightly faster, as column 3 attests. A potential reason for this insignificant difference may be that these family firms tend to pay less dividends. We thus ran similar regressions using the ratio of dividend to earnings as a dependant variable, and did not find that heirs or hired managers pay significantly less dividends. It may also be that our coefficients are not very precisely estimated for heir controlled firms because of sample limitations. The French stock market is smaller and many firms listed on the *second marché* (the market for less liquid shares) are infrequently traded. Stock prices for these firms are therefore likely to be more volatile. This may make $\varepsilon$'s variance too large for us to statistically discriminate between the market valuation of widely held firms and that of family firms. A last, more daring, explanation for this discrepancy between profitability and stockmarket valuation could be that the market has been mistakingly punishing family firms over the period. This would be consistent with stock market returns evidence by Van Der Heyden [2004] on the largest listed firms: he finds excess returns for a buy-and-hold portfolio of family stocks as large as 10% over the 1994-2000 period. So either the market has misunderstood the potential held by family firms at the time, or it overestimated future returns of non family firms, many of them recently privatized by the government. Given that Van der Heyden does not use the same breakdown as we use, nor the same sample, this remains, however, a conjecture. In future work we plan to assess the abnormal stock returns of family firms, breaking

down between founders, heirs and professionnal managers (while Van Der Heyden et alii [2004] have only one "family" category). Such an analysis would, however, be beyond the main point of this paper, as stock returns mostly reflect changes in market perception of a company's real performance, rather than its absolute level.

### 3.3 Explaining Family Firms Performance

In this section, we now try to decompose the profitability index into productivity, capital intensity and wages as a first step to find out why family firms perform so well. Our approach is based on the following accounting decomposition of return on assets:

$$ROA = \frac{L}{A} \cdot \left( \frac{Y}{L} - w \right)$$

where $L/A$ measures capital intensity through the ratio of employment to assets. $Y/L$ stands for labor productivity and $w$ for the average wage paid to employees. Unsurprisingly, the return of assets improves when, other things equal, (1) the production process uses less capital, (2) labor productivity improves and (3) wages are lower. Of course, all these variables are jointly determined: capital intensity depends on the relative price of labor and capital, labor productivity depends on organisation, on the amount of capital per workers, and on the skill composition of the workforce. Finally, $w$ is the outcome of a bargaining process involving both capitalists and workers, both of them considering their outside options on the capital and labor markets respectively. Therefore, we are not attempting here to perform a structural estimation of the behaviour of family firms, but simply taking a first step in understanding the causes of family firms' greater profitability.

Hence, we regress on our family status variable, the log of value added over employment, the average wage paid and the log ratio of fixed assets to employment. Table 7 presents the three regressions results using specification (1) and all the controls used for performance regressions. As it turns out, labor productivity tends to be lower among all types of family firms. Founders and heir controlled firms tend to have a productivity of labor lower by 3 and 6% respectively than in regular widely held firms, but the difference is not significant. The difference is larger and more significant between professionally managed family firms and widely held corporation, with family firms underperforming by almost 25% ! Part of the reason for this lower productivity can be found in columns 2 and 3. First, we see from column 3 that family firms, and especially professionally managed family firms, tend to make less use of capital and have more labour intensive technologies. This could be explained by differences in industry composition, like in the Chandler thesis. We do control for industry, but we only have 13 industry dummies, so we may still miss the bulk of inter-industry variability. Another reason for the lower productivity could be found in column 2 of table 7. As it turns out, heir or manager controlled family firms tend to pay lower wages than founders (insignificant) and widely held firms (highly significant). So if these firms pay lower wages, it might well be the case that they substitute capital for labor in their production process. As a result they use more labor intensive production technologies; the apparent productivity of labor looks lower but this improves profitability.

Table 7: Breaking Down the Performance of Family Firms

| | Ln(VA/L) | Ln(w) | Ln(K/L) |
|---|---|---|---|
| | (1) | (2) | (3) |
| Founder CEO | -.03 | -.04 | -.08 |
| | (.07) | (.04) | (.13) |
| Heir CEO | -.06 | -.12 | -.07 |
| | (.07) | (.04)*** | (.12) |
| Professional CEO | -.23 | -.12 | -.31 |
| | (.07)*** | (.04)*** | (.11)*** |
| Ln(Total Asset) | .03 | .005 | .22 |
| | (.01)** | (.008) | (.02)*** |
| Ln(Firm Age) | -.009 | .005 | -.06 |
| | (.03) | (.02) | (.06) |
| Cash Flow right | .02 | -.17 | -.36 |
| | (.19) | (.12) | (.32) |
| $\frac{1}{2}$(Cash Flow right)$^2$ | -.03 | .3 | .66 |
| | (.4) | (.25) | (.69) |
| Obs. | 1958 | 2045 | 2097 |
| $R^2$ | .16 | .23 | .33 |

Note: Consolidated accounts of listed French firms who were known to be family or non family controlled, followed over the 1994 - 2000 period. Note: Dependant variable are (1) labor productivity measured as the log of value added divided through employment, (2) log average wage, measured as the log of wage bill divided through employment and (3) capital intensity, measured as the log of fixed assets to employment. Given the absence of firm fixed effects, all regressions include 13 industry dummies, year dummies and control for residual correlation within firm, across time.

Hence, the evidence from table 7 is consistent with two not mutually inconsistent hypotheses: either (1) our industry controls do not capture enough heterogeneity and family firms tend to predominate in industries with low human capital (therefore lower wages) and high labor intensity. This makes sense since capital and skill tend to complement in the production process. The retail trade industry immediately jumps to mind, although our control can deal with this level of aggregation.[9] Or (2) family firms are somehow able to pay lower wages than other firms. As a result, they willingly choose production processes that are more labor intensive and improve profitability. The question immediately raised by these interpretation of the evidence is: Why ?

One simple reason could be that families are more agressive bargainers when it comes to setting wages. There is no obvious reason for which families would have better outside options in the bargaining process, because their commitment to invest in the firm is *a priori* higher - their stake is so big that it is less liquid. A clearer explanation could be that family firms are more careful about the return to capital than managers of widely held firms. As a result, they are less likely to be willing to exchange social peace for higher wages, as in the model by Pagano and Volpin, consistently with results from Bertrand and Mullaintahan [1999].[10] Thus, lower wages in family firms could just be evidence of good corporate governance. While this does not entirely rule out the explanation, remember that we do, however, control for ownership concentration. A related explanation could be that family tend to operate more often outside of the Paris area, where labor markets could be less tight. We have added the firm's location as a further control in our wage regression and found no difference.

We explore here a second lead inspired by Shleifer and Summers [1988], namely that dynastic ownership endows the family with enough credibility to enforce implicit contracts. Implicit contract makes the capitalist - the firm - an insurer for those holding a job. In bad times, the firm is going to keep the worker, even though it would be optimal for her to fire him. In exchange for this insurance, the worker accepts a lower wage. The problem with this theory is that usually, firms are not credible when making such promises. Their incentive to renegociate ex post is too strong: the contract is infeasible, and the insurance value created by such contracts is lost. Families might have an advantage in enforcing this type of contract. First, they have a longer horizon than salaried managers: dynastic management can therefore create value that would be destroyed - both ex ante and ex post - by delegated management. Second, provided the family is involved in management, a culture irrationally tying top management to employees might prevent job losses in bad time, even if they were dynamically optimal. While this destroys ex post profit, it creates value ex ante. This second explanation, resting on management's irrationally has been put forward by Kreps [1991] 's analysis of corporate culture.

We test this by looking at the sensitivity for firm employment to industry shocks

[9] To further investigate this issue, we have matched this dataset with fiscal information about the skill and wages of all employees (the DADS dataset; see Abowd, Kramarz and Margolis [1999]). This allowed us to check that (1) indeed family firms' employees are on average less skilled but (2) even accounting for this, family firms' employees are less well paid. The wage discount for working in a family firm, industry, age and occupation equal was, on average, some 10% in our regressions. Due to space constraint, we decided not to report these results in this paper. They are available from the authors upon request.

[10] There is a large literature on ownership changes, documenting how wages decrease after a swift change and concentration of ownership, like an LBO for example. The decrease mostly impacts white collars.

to sales (for the use of a similar methodology in another context, see Bertrand and Mullainathan [2000]. The hypothesis is that family firms, given their strong commitment capacity, should exhibit a lower sensitivity of employment to industry sales. We therefore estimate the following model:

$$\begin{aligned} \log emp_{it} &= \alpha_i + \gamma X_{it} + \beta_0 . \log sales_{st} \\ &\quad + \beta_1 . F_{1i} . \log sales_{st} + \beta_2 . F_{2i} . \log sales_{st} + \beta_3 . F_{3i} . \log sales_{st} + \varepsilon_{it} \end{aligned} \tag{2}$$

where $\log emp_{it}$ is the log of firm $i$ employment at date $t$. $X_{it}$ $\log sales_{st}$ is the log of total sales of the industry the firm $i$ is in. To determine industry, we still use the 13-industry breakdown that has served us so far. To remove any source of spurious correlation, we excluded firm $i$'s sales from $sales_{st}$ and restricted ourselves to industry-years with more than three observations. $F_i = (F_{i1}, F_{i2}, F_{i3})$ is, again, our family status variable. The equation (2) now includes firm fixed effect, which means that the $\beta$'s are going to be identified on the correlation between *changes* in $\log sales_{st}$ and *changes* in $\log emp_{it}$. We choose not to run directly a difference on difference equation because the fixed effect specification allows us to be much more agnostic on the timing of response of employment growth to sales growth. Assume for example that our model is slightly misspecified in the following way: employment does not react to contemporary sales, but to sales lagged by one year. In this case, the fixed effect estimate is going to capture most of the effect by comparing the firm's average employment before and after the sales shock. In contrast to this, the difference estimate is not going to see any correlation given that in the very year sales change, employment remains fixed. Hence, while we prefer the fixed effect estimate of equation (2), it must be clear that what we have in mind is the response of employment *changes* to industry shocks. In this context, $\beta_0$ can be interpreted as the elasticity of employment to industry sales for widely held firms, $\beta_0 + \beta_1$ as the elasticity for founder controlled firms etc.

We estimate equation (2) on our sample of firms whose family status has been defined in 1999, followed over 1993-2000. We use both $\log emp_{it}$ and $\log sales_{it}$ as right hand side variables. Although our ultimate goal is to study employment dynamics, we are using the sales regression as a consistency check to convince the reader that the elasticities measured by (2) indeed reflect response of the firm's activity to industry shocks. Results are shown in table 8. The first column estimates the employment model assuming $\beta_1 = \beta_2 = \beta_3 = 0$. For the average firm in our sample a 10% increase in industry sales translates into a 0.1% increase in the firms' employment. This estimated elasticity is small and insignificant. Part of the reason for this is that there are other determinants to the dynamics of a firm's employment than market expansion or contraction that our model is simply not capturing. But even assuming this, the very small size of the coefficient is still puzzling. Another potentially important reason is that our industry classification might be much too crude to account for the relevant market of the firm we are considering. Under this interpretation, our estimates of $\beta$ have a downward bias, much akin to a measurement error bias. This is confirmed by looking at column 3, which runs the same regression using instead $\log sales_{it}$ as a dependant variable. As it turns out, the elasticity of own sales to industry sales - remember, excluding own sales - is a weak 0.04, i.e. an increase in sales by 10% is correlated with a firm increase by 0.4%. This estimate is now strongly statistically significant but still very small: when it

Table 8: Do Family Firms Smooth Employment Shocks ?

| | Ln(Emp.) | Ln(Emp.) | Ln(Sales) | Ln(Sales) |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Industry Sales | .007 | .04 | .04 | .04 |
| | (.02) | (.03) | (.01)*** | (.02) |
| Founder*Industry Sales | | .009 | | .06 |
| | | (.03) | | (.03)** |
| Heir*Industry Sales | | -.15 | | -.09 |
| | | (.04)*** | | (.03)*** |
| Professional*Industry Sales | | .04 | | .003 |
| | | (.06) | | (.05) |
| Obs. | 2326 | 2326 | 2464 | 2464 |
| $R^2$ | .98 | .98 | .98 | .98 |

Note: Consolidated accounts of listed French firms who were known to be family or non family controlled, followed over the 1994 - 2000 period. Note: In the first two columns, the dependent variable is log employment and in the last two columns, the dependent variable is log sales. All regressions include firm fixed effects and year fixed effects. Columns 1 and 3 use the log of industry sales as the sole extra control variable. Columns 2 and 4 include all interactions between family status and the log of contemporaneous industry sales.

comes to firm sales, industry shocks have at least a little explanatory power. Although there are other determinants of firm activity than the evolution of its industry, the very small size of this coefficient confirms that we may be facing a measurement error bias due to the crudeness of our industry classification.

Column 2 of table 8 has the most important result, since it computes a different elasticity for each family status. Founder controlled firms seem to be more sensitive to industry shocks than widely held corporations, though not significantly so. We might be capturing here the fact that founders are relatively young and may simply be ”catching up” with the rest of the industry. This interpretation that seems confirmed by the sales regressions displayed in column 4, where the elasticity of sales of founder controlled firms is larger by 0.06 than widely held corporations. The coefficient is both large - compared to the average 0.04 - and statistically significant. Back to employment equation (column 3), the interesting result is that heir managed family firms have a significantly lower elasticity than widely held corporations (by a very large 0.15) and all other family corporations. As it turns out, employment in heir managed firms is much less sensitive to industry shocks than in other firms, in line with our ”implicit” contract interpretation. This is partly reflected in differential in sales reaction: heir managed firms' sales are also less sensitive to industry shocks, significantly but less spectacularly so. Heir managers seems to smooth activity across industry fluctuations, ensuring a more stable workforce. Last, professionally managed family firms seem to behave much like widely held firms. Hence, in terms of smoothing, what seems to matter is whether the family actually *manages* the firm's operation. This is very consistent with our initial view that the sheer *horizon* of the top decision maker matters to enforce

the implicit labor contract.

# 4 Selection Issues

## 4.1 Two Biases

In the previous sections, we have found a very consistent cross section correlation between profitability and family status. In particular, the very surprising feature was that heir managed firms do as well as firms run by founders or professional managers, and significantly better than widely held corporations or subsidiaries thereof. As in many instances, however, correlation is not causality, and this for at least two different reasons. The first bias comes from the fact that family status depends on performance. The performance of professionally managed firms - be they widely held or family controlled - is underestimated in a cross section because it is easier to transfer firm control to an heir when it performs well. This creates a simultaneity bias. To understand this, assume that there are two types of firms: good firms, which perform well, even when run by incompetent, and bad firms, which perform less well on average and require skilled management. Assume now that the founder of a firm retire, and that he derives private benefits from giving control to an heir. In this case, heir controlled firms will on average outperform professionally managed family firms, or widely held companies.

The second bias comes from endogenous sample selection. Assume for example that heir controlled firms who do badly have a higher tendency to go bankrupt because they have, say, less access to internal capital markets to be bailed out. In this case, the only heir managed firms who survive are those who do relatively well, which leads to overestimate their performance. Bankruptcies are rare in our sample, but delisting is much more common. Assume now poorly performing family firms have a higher chance to be bought out by a large group - remember, they are smaller. In this case, they delist and disappear from our sample. Hence, the remaining pool of heir managed firms that we look at are those that perform, on average, better.

## 4.2 Simultaneity Bias

How can we address these two potential pitfalls ? The first endogeneity bias comes from the fact that performance partly determines whether a firm remains family controlled or not. Ideally, we would need an instrument - a variable affecting family status without affecting performance, like the number of children of the founder, for example. The second best approach consist in assuming that the endogeneity bias comes from a fixed unobserved caracteristic of the firm (as in the good/bad theoretical example above). In this case, a fixed effect version of equation (1) would deal with the problem of endogeneity. To identify such a model, we need enough transitions between family statuses, i.e. firms going from founder to heir, from heir to professional manager, from heir to widely held etc. The only paper taking this approach is Perez-Gonzales [1999], who looks at 200 such transitions for COMPUSTAT firms.

In this section we try to deal with two related issue. First, from an ex ante point of view, are firms transfered to heir any better than firms transfered to professional

Table 9: Transition Matrix Between Family Statuses after a CEO change

| "After" Family Status | "Before" Family Status | | | |
|---|---|---|---|---|
| | Widely Held | Founder | Heir | CEO hire |
| Widely Held | 67 | 2 | 0 | 1 |
| Founder | 0 | - | 0 | 2 |
| Heir | 1 | 12 | 18 | 9 |
| CEO Hire | 0 | 10 | 17 | 24 |

Source: DAFSA yearbook of all non financial, non real estate firms listed on the French stock market over the 1994-2000 period, for which family status could be collected. Note: this table displays frequencies for firms changing of CEO, whether this change affect the family status or not. Reading: in the overall sample, there were 12 occurences of ceo changes inducing a founder controlled firms to become heir controlled and 18 heirs were appointed CEO in heir controlled firms.

managers ? Second, do professional CEO perform better than heir CEO once they are hired ?

To address these two questions within the context of our sample, we hand collected the family status of all listed French firms over the 1994-2000 period. We then look for changes of CEO in family firms, whether they imply a transition in family status or not - in the language of equation (1), changes in $F_i$. As we hinted before, we found overall 161 such changes, with 52 of them implying transitions to a different family status. Table 9 depicts the frequencies of those changes. As it turns out, almost all transitions occur to states "heir managed" or "professionally managed", while only 3 firms move from family controlled to widely held. In fact, this figure underestimates the number of firms who actually went to be widely held, because many family firms who delist are in fact purchased by widely held groups and delisted as a result. To compare widely held firms and heirs, we thus will need to look at delistings too.

Before doing that, though, let's try to answer both question. The first issue here is that it might be easier to transfer a well performing family firm to heirs; hence the question we can ask is whether ex ante performance differs in family firms that are subsequently transfered to heirs from family firms who decide to hire a professional manager. This comparison is done in table 10, using all transitions from founder or heir managed firms to heir or professionaly managed family firms[11]. As it turns out, on the year before the transition, firms who will be transfered to heirs tend to slightly outperform those that will be subsequently managed by a professional. The difference in performance before transition is about some 3 percentage points of ROA and ROE: though, both differences are not statistically different from zero. Given the small number of observations (47), however, our statistical test may simply lack the power to reject an hypothesis that may be false. However, the sheer size of the difference lends some credence to the intuition that since it is easier to transfer good firms to heirs, our

[11] overall, those transitions amount to 57, but only 52 may be properly used (changes occurring in 2000 or in 1994 are excluded from this sample)

Table 10: Performance of Firms One Year Before They Change Management

| Performance 1 year before | To Heir | To CEO hire | Difference | Prob |
|---|---|---|---|---|
| ROA | .07 | .04 | .03 | .14 |
| Ind. adj. ROA | -.00 | -0.03 | .03 | .15 |
| ROE | .15 | .12 | .02 | .65 |
| Ind. adj. ROE | -.02 | -.05 | .03 | .53 |

Source: DAFSA yearbook of all non financial, non real estate firms listed on the French stock market over the 1994-2000 period, for which family status could be collected. Note: Industry adjusted ROA and ROE are computed using the 13 industry classification. Reading: The year before changing CEO, family firms that will be managed by an heir outperform those who will be managed by a professional by 3 percentage point of ROA. The t-test rejects the hypothesis that this difference is statistically different from 0 at the 14% level of significance.

estimates of performance for this category compared to professionals may be upward biased.

The second issue is the relative performance of heir manager versus professional manager once we take into account the difference of performance before transition. This question is addressed in table 11, where we reported the mean performance of family firms two years before and after a change of CEO[12]. As one can see, the first column is consistent with table 10, as we observe a pre-change difference of 3 percentage point of industry-adjusted ROA and ROE. After the change, both heirs and professional CEOs tend to decrease the firm's ROA on the same scale: the difference in difference estimator is thus very near from zero, and highly insignificant. While the small size of our sample prevents us from interpreting this result, one can note that the positive sign of the estimator is consistant with our cross-section result that heirs do exhibit higher ROA than professional CEOs. On the contrary, it seems that professionals do a better job at enhancing ROE compare to heir managers: the difference in difference estimator is about -3 percentage point of industry-adjusted ROE. This may suggest that we underestimate the ROE of professionally-managed family firms in our cross-section regression, as we there found that heir and professional CEOs exhibited about the same ROE. Yet, it is still important to stress the insignificance of this result.

## 4.3 Sample Selection Bias

The second endogeneity bias arises through sample selection: are heir controlled firms who perform badly more likely to exit the sample ? This could arise either because of the bankruptcy mentionned above, or because badly performing heir controlled firms are more likely to delist - because they are sold. A way to check the issue of sample

[12] once again, changes used for this table are transition from founder or heir manager to heir or professional CEO (51 changes overall)

Table 11: Evolution of the adjusted Return on Asset of family firms two years before and two years after a CEO change

| | Successor | Before (I) | After (II) | Diff. (II vs I) | "Diff in Diff" |
|---|---|---|---|---|---|
| | Heir | -.000 | -.01 | -.009 | |
| Ind.-adjusted | | | | (-.61) | 0.002 |
| ROA | CEO Hire | -0.027 | -0.378 | -.011 | (.05) |
| | | | | (-.44) | |
| | Heir | -.027 | -.060 | -.033 | |
| Ind.-adjusted | | | | (-.76) | -.032 |
| ROE | CEO Hire | -.024 | -.025 | -.001 | (-.39) |
| | | | | (-.43) | |

Source: DAFSA yearbook of all non financial, non real estate firms listed on the French stock market over the 1994-2000 period, for which family status could be collected. Note: this table displays the evolution of the industry-adjusted ROA of family managed firms (whether founder or heir managed firms) transiting to heir or professionally managed firms. Reading: family firms transiting to heir experience a decrease of their industry-adjusted ROA of about 0.9 point. This decrease is inferior to the decrease experienced by family firms transiting to CEO hire by 0.2 points

selection is to compare depending on the firm's family status, the performance of firms who stay and who exit the stock market.

From 1994 to 1999, we observe 198 delistings in our data, 142 of which we were able to track firm family status. Almost 50% (69) happened to widely held corporations; in the dozen instances that we hand checked from the CMF website, we found many cases of firms that had been purchased by a widely held group - in general from another one, with the new acquirer deciding to take the whole subsidiary private. Aside from that, 25 founder controlled, 26 heir controlled and 22 professionally managed family firms delisted over the period. Hence, there is a surprisingly high level of turnover in the sample and selection might be an issue.

In table 12, we compare the average return on assets of firms who go private and firms who remain listed.[13] Prior to delisting, exiting firms have in general a level of profitability very similar to that of remaining firms. The only sizeable difference comes from heirs: staying heirs *under*perform those who go private by 3 percentage of industry adjusted ROA. This is economically significant and almost statistically so and suggests that our estimates of performance for heir controlled firms are *underestimated*, rather than overestimated. It is likely to be both underestimated in the absolute and compared to the other categories, for which differences are very close to zero. Again, the small number of observations do not endow our tests with enough power to discriminate between exiters and stayers, but the small size of the differences, and the

[13]We made similar tables for absolute adjusted return on assets and return on equity. The results were qualitatively similar to table 10.

Table 12: Comparing Performance of Firms Who Go Private and Firms Who Remain Listed

| Ind. Adj. ROA | Stays | Delists | Difference | Prob |
|---|---|---|---|---|
| Widely Held | -0.02 | -0.02 | 0.00 | 0.82 |
| Founder | 0.04 | 0.03 | -0.01 | 0.75 |
| Heir | 0.00 | 0.03 | 0.03 | 0.10* |
| Professional CEO | 0.01 | 0.01 | -0.00 | 0.91 |

Source: DAFSA yearbook of all non financial, non real estate firms listed on the French stock market over the 1994-2000 period, for which family status could be collected. Note: Industry adjusted ROA is computed using the 13 industry classification. Reading: heir-managed family firms that stay listed the following year do as well as their industry ROA ; those who will exit the market the following year outperform their industry ROA by 3%. The difference is 3% and is statistically different from 0 at the 10% confidence level.

fact that staying heirs tend to underperform exiting heirs is conforting.

A similar bias could be that the exchange authorities require a better performance - or a more transparent governance, say - from family firms when they want to go public. Hence, entry in our sample would induce an upward selection bias: only the best family firms are listed. We looked - in non reported tables - at the first-year-of-listing profitability of heir managed firms, compared to an industry benchmark. It was not any different from the first performance of other categories.

# 5 Conclusion

The present paper has shown that in a cross section of French firms, family firms, and surprisingly heir managed firms do outperform widely held corporations. As far as we can tell by looking at exits and transitions, this result does not seem to be driven by simultaneity nor selection biases. This paper has focused on *real* effects of family management. In future work, we plan to look at stock returns over the 1990s.

We also have evidence consistent with more efficient human resource management by heir controlled firms. The long horizon given by dynastic management seem to allow heir managers to enforce implicit contracts with the workforce: labor demand is more stable and, as a result, wages are significantly lower. Further research using more disaggregated data is needed to test this hypothesis more thoroughfully. This, too, is on our research agenda.

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