The determinants of Employee Stock Ownership: French case

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Abstract

The present study scrutinizes the factors affecting the practice of employee stock ownership. This work sheds light on the role and contribution of this practice to enhance the corporate governance systems. Our study uses a sample of 216 listed French companies in 2010. The empirical approach is a linear regression used to examine the relation between the dependent variable and the independent variables. The results show that the large companies are the most likely to practice the ESO and this is developed by a reduction in debt, the dividend distribution, and the tax rate. The focal point of this work is to go beyond the simple scope of the existence of the employee stock ownership and is interested in the conditions of its development in the French companies.

Keywords: Agency Theory, Corporate Governance, Employee Stock Ownership


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1. INTRODUCTION

The employee stock ownership (ESO) has become a world phenomenon, which has witnessed unprecedented development in contemporary capitalism to the extent that it seems to be a prerequisite in the growth regimes of the main developed countries (Aglietta & Reberioux, 2005). As a matter of fact, 20% of American employees own shares in his/her own company (US General Social Survey, 2018). In France, more than 7 out of 10 companies have more than 50% of employee shareholders (FAS*, 2019). In literature, the ESO is a crucial mechanism in solving the interest conflicts that may arise between the shareholders, the managers, and even the employees. The practice of employee share ownership was the subject of a behavioral study of employee-shareholders. Aldatmaz, Ouimet, and Van Wesep (2018) show that this practice helps reduce turnover. Likewise, the results obtained by Gellatly and Hedberg (2016) show that ESO reduces absenteeism. More than that, many studies show that ESO has a positive impact on the creation of value and performance (Aubert, Chassagnon, & Hollandts, 2016). However, the practice of employee stock ownership is not only a financial investment but also a great concern in terms of power. Our study aims to go beyond the simple scope of the existence of the employee stock ownership and to focus on the conditions of its development. Hence, it will be relevant to identify the factors that have businesses use this practice. More broadly, this contribution to the search of the determinants of the presence and development of the employee stock ownership would rather highlight the role and contribution of such a practice in strengthening the governance systems of the French companies. Equally important, this research aims to assess the intensity of the disciplinary and motivational factors affecting this practice. The hypotheses are part of the agency theory in which the agents’ opportunism justifies the implementation of the disciplinary mechanisms; namely, the employee stock ownership.

What are the factors that encourage companies to use the practice of ESO? In this paper, we will
attempt to answer this question. Three sections are devoted to examining this problem. The first one is a theoretical study that explains the importance of using employee stock ownership and, with reference to the literature, we will present the determinants of the employee stock ownership and identify the research hypotheses. In the second part, we will define the sample, the retained variables as well as their measurements. We will also set the statistical methods out as well as the obtained results in order to conclude the validation of our research hypotheses. Initially, based on the test of Mann-Whitney, we will present the characteristics of the employee-owned companies. Thereafter, we will evaluate the intensity of the incentive factors affecting the practice of employee stock ownership in the French companies. Finally, through the use of the test of Granger, we will study the causal link between the different selected variables.

2. LITERATURE REVIEW

As a result of the several cases that disturbed the economic environment in most developed countries and because of the obvious malfunctions of the economic system, many debates have recently taken place concerning the takeovers, the remuneration of the leaders, the responsibilities of the executives as well as the directors, the composition and the role of the board of directors, information and the role of the shareholders, the bankruptcy regime. All these aspects question the distribution of power in the company or what is technically called “corporate governance”.

In this respect, the first major analysis of the company was carried out by Berle and Means (1932); it is actually the starting point of what has been called the “managerial revolution”. The main idea of both authors is to show that the development of the large joint-stock company and the dispersal of ownership among a large number of shareholders can lead to the separation of ownership as well as the control of the company. The decision-making power belongs to the managers and the property to the shareholders. This approach will later inspire the agency theory in its representation of the company. Currently, the contract theory is presented as the new orthodox approach involving the most influential theory: namely, the agency theory. Such a theory has witnessed, theoretically and empirically, the richest and the most recent developments. The key problem of the agency relationship is the alignment of interests between the superior and the inferior through a system of incentives and/or sanctions. This theory argues that the employee stock ownership is a privileged mechanism in solving the information asymmetry and in settling the interest conflicts between the team members. (Long, 1980; Dondi, 1993; Gamble, Culpepper, & Blubaugh, 2002).

Through various methodologies, most researches have come up with the fact that there is an influence on the direction of the financial decisions. Some of them give conflicting results. DeFusco, Zorn, and Johnson (1991), for example, notice that there is an increase in the debt ratio, while, at the same time, they note a relative decline in the investment in research and development. They also perceive a trend towards higher overheads, increasing current operating expenditures, and dividend distributions. On the other side of the coin, after granting the managers some options, other studies have found that there is a rise in the level of investment, whether they are global (Agrawal & Mandelker, 1987) or realized in the form of expenditure in research and development (Dechow, Hutton, & Sloan, 1996), and that there is an increase in their risk (DeFusco et al., 1991), which is likely in either case, to promote the value creation over a long time. Many studies have found a positive impact on value creation and financial performance at least in the short term (Guedri & Hollandts, 2008; Fauver & Fuerst, 2006).

2.1. Employee stock ownership and debt

Many studies consider that companies with high debt are less interested in practicing the ESO plan. These studies show that employee stock ownership is negatively associated with debt such as Litterer, Lambert, and Larcker (2003), Uchida (2006), Audard & Bachelard (2009). Recently, based on a sample of American companies, Aldatmaz et al. (2018) believe that employee stock ownership is associated with an increase in debt. Most of the studies show that employee-owned companies can better their equilibrium and limit their debt. According to these studies, we will verify the validity of the hypothesis:

\[ H1: \text{The ESO plan is negatively associated with debt.} \]

2.2. Employee stock ownership and the cash flow

The ESO does not require any down payment, in this perspective Core and Guay (2001) show that the ESO practice is positively related to the cash flow. Similarly, Nagaoka (2005) confirms this hypothesis. Several studies show that ESO practice has a negative relationship with cash flow (Bryan, Hwang, & Lilien, 2000; Uchida, 2006). In this research work, we can formulate the following hypothesis:

\[ H2: \text{There is a negative relationship between ESO and the cash flow.} \]

2.3. Employee stock ownership and the dividend

Lambert, Lanen, and Larcker (1989) and DeFusco et al. (1991), consider that the payment of dividend can reduce the value of options. Indeed, the managers should reduce the distribution of dividend in order to increase the value of their stock options. Poulain-Rehm (2003) investigated the link between ESO and dividend. The obtained results show that no conclusion can be found about the relationship between the ESO and dividend distribution rate. In fact, most researchers have found a negative relationship between the ESO and dividend; Lambert et al. (1989) conclude that the dividend distribution should decrease in order that the company practices ESO. Similarly, the study of Fenn and Liang (2001) leads to the same results. We can formulate the hypothesis according to these studies:

\[ H3: \text{There is a negative relationship between ESO and dividends.} \]
2.4. Employee stock ownership and performance

Large empirical studies have been done to test the relationship between ESO and performance; but the results appear to be mixed. Although, a certain number of researches have been liable to identify a positive relationship between the ESO and the corporate performance. The study of Aubert et al. (2016) was carried out on 900 subsidiaries of a French listed group (belonging to the CAC 40) during a period of five years. The results show that employee share ownership positively influences the economic performance of companies. While Whitfield, Pendleton, Sengupta, and Huxley (2017) are investigated the link between ESO and organizational performance. The obtained results show that substantial differences are found between 2004-2011: a positive relationship observed in 2004 between ESO and financial performance and productivity, is no longer present in 2011. The results show that the relationship between the ESO and the performance seems more complex. Based on these studies, we can develop the hypothesis below:

H4: ESO is positively associated with the corporate performance.

2.5. Employee stock ownership and tax rate

The fiscal and social savings was an incentive for the development of the ESO. However, several studies have shown that ESO is associated with a low tax rate on the company, this hypothesis has been confirmed by the study of Bryan et al. (2000) for a sample of American companies. Moreover, Uchida (2006) shows that ESO is negatively associated with the corporation tax. According to these studies, we develop the following hypothesis:

H5: ESO is negatively associated with the corporate tax rate.

2.6. Employee stock ownership and company size

Dondi (1994) considers that employee stock ownership practice is mainly developed in large companies in France. This study is confirmed by Ryan and Wiggins (2001). On the other hand, this result is inconsistent with those found by Cormier, Magnan, and Léna Fall (1999) who show that there is a negative relationship between the company-size and ESO, but Uchida (2006) rejects, in his study, this assumption. Moreover, Chourou, Abaoub, and Saadi (2008) confirm this positive relationship. We can formulate the hypothesis:

H6: ESO is positively associated with the company size.

3. METHODOLOGY

In a contract paradigm, this part sets the determinants of the employee ownership policy. This paradigm states that the divergence of interests between the different stakeholders justifies the creation of a government system which seeks to limit the agency problems. First, based on the test of Mann-Whitney, we will try to determine the characteristics of the employee-owned companies. Then, we will study the intensity of the incentive factors affecting the ESO practice in French companies. Finally, using the test of "Granger", we will study the causal link between the selected variables.

3.1. Sample definition

According to our research, we notice that ESO has been more developed in France than in other European countries. For this reason, our study is dependent on the companies listed in the stock exchange of France in 2010. The final sample consists of 216 French companies including 160 companies practice the ESO and 56 companies don't practice the ESO. The information is available in the "Thomson Reuters DataStream" database and the stock exchange site "boursorama.com". We have verified the information gathered in the annual reports of the companies. Employee stock ownership is successful in France. According to the French Federation of the Employee Shareholders and the Former Employees Associations (ESOF), France is the most dependent country on employee ownership in the company. In 2010, according to our study, we notice that companies in the telecommunications sector are the most likely to opt for the employee stock ownership plan (21.25%).

3.2. Definition of the study variables

This section consists in linking the theoretical concepts to data by translating the theoretical conceptual definition into one or more empirical elements illustrating this definition or dimension. The model is in "cross-section" and the general regression model is as follows:

\[ ESO_i = \beta_1 + \beta_1 LEV + \beta_2 CF + \beta_3 DIV + \beta ROE + \beta_5 TR + \beta_6 SIZE + \epsilon_i \]  

where:

- ESO - Employee stock ownership;  
- LEV - Debt variable;  
- CF - Cash flow;  
- DIV - Dividend;  
- ROE - Performance variable;  
- TR - Tax rate;  
- SIZE - Size;  
- \( \epsilon \) - Error term.

3.2.1. The dependent variable

As part of this research, the variable to be explained is employee stock ownership (ESO). There are various measurements of the employee stock ownership policy. The first can be the percentage of the capital held by the employees. The second measurement is to report the number of employee shareholders to the total workforce of the company (Poulain-Rehm, 2003; Ben Ahmed, 2020).

The employee stock ownership is retained regardless of the percentage of shares held by the
employees. This variable is measured by the percentage of shares held by the employees (Blair, Kruse, & Blasi, 2000) which is the ratio between the number of shares held by the employees and the total number of shares in circulation in 2010.

3.2.2. The independent variables

According to the assumptions already made, the explanatory variables in this work are performance, debt, cash flow, dividends, corporate taxes, and size as a control variable.

**Debt:** In the literature, debt can be measured by the following variable - it is the ratio between the financial debts and the total assets.

**Cash flow:** Based on the study of Brown, Liang, and Wiesbenner (2006) and Maalej and Triki (2008), the cash flow is measured by the ratio between the operating income and the total assets.

**The dividend:** La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) use the dividend yield (DIV) which corresponds to the ratio between the dividend per share and the share price at the end of the year.

**Performance:** Several indicators or ratios can be used to determine the performance of the company. The performance of a company can be measured either by using the accounting indicators or the mixed indicators integrating the stock market performance of the companies. On the other hand, the accounting indicators allow us to precisely measure cash flow which the company uses the capital available (Hollandts, 2007). As part of our empirical study, we will use the return on equity (ROE) as a performance measurement accounting indicator, which means the ratio of the net income to equity.

**The tax rate:** With reference to the study carried out by Uchida (2006) and Bryan et al. (2000), the tax rate on the corporation is the difference between the pre-tax income and the net income divided by the pre-tax income during the fiscal year.

**Size:** Besides the previously discussed variables, this variable is included in the model as a control variable. The literature shows that the variable “size” has been utilized in different ways. We identify three measurements: the number of employees, the sales volume, and the total assets. In our study, and as stated by Poulain-Rehm (2003) and Gharbi and Lepers (2008), we use the natural logarithm of total assets\(^3\) as a measurement of the “company size”.

4. RESULTS INTERPRETATION

This section allows us to synthetically present the statistical methods to test our hypotheses concerning the factors influencing the ESO practice in French companies. First, we use the “SPSS” software to determine the characteristics of the employee-owned companies by using the test of Mann-Whitney. Then, we use the “Eviews” software to test the relationship and the causal link between the variables.

4.1. The employee-owned company characteristics (Mann-Whitney test)

The table below presents a comparative analysis between the employee-owned companies and non-employee-owned companies. Based on the “SPSS” software and the “Mann-Whitney” test, we test the difference between the means of the explanatory variables of two independent samples.

**Table 1. Comparative analysis between the employee-owned companies and the non-employee-owned companies**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean of the employee-owned companies</th>
<th>Mean of the non-employee-owned companies</th>
<th>The Mann-Whitney test</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEV</td>
<td>22.35</td>
<td>23.37</td>
<td>0.03**</td>
</tr>
<tr>
<td>CF</td>
<td>8.03</td>
<td>8.38</td>
<td>0.166</td>
</tr>
<tr>
<td>DIV</td>
<td>3.05</td>
<td>2.50</td>
<td>0.01***</td>
</tr>
<tr>
<td>ROE</td>
<td>8.30</td>
<td>0.37</td>
<td>0.044**</td>
</tr>
<tr>
<td>TR</td>
<td>38.45</td>
<td>44.21</td>
<td>0.056**</td>
</tr>
<tr>
<td>SIZE</td>
<td>14.06</td>
<td>13.38</td>
<td>0.000***</td>
</tr>
<tr>
<td>N</td>
<td>160</td>
<td>56</td>
<td>216</td>
</tr>
</tbody>
</table>

**Note:** *, **, *** Signification respective at 10%, 5%, 1%.

The “Mann-Whitney” test shows a significant difference in debt, dividend, performance, taxation, and size between the two types of companies. It should be noted that large companies are the most likely to practice ESO. It is generally found that the employee-owned companies outperform the non-employee-owned ones and they have the lowest tax rates. Financially, the employee-owned companies are characterized by a lower level of debt as well as a higher dividend distribution.

4.2. The determinants of the employee ownership

Linear regression is used to examine whether the revealing factors of an employee stock ownership policy vary with the percentage of the shares held by the employees. The table below presents the obtained results:

**Table 2. Presentation of the obtained results**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Significant/Non-significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.20**</td>
<td>S</td>
</tr>
<tr>
<td>LEV</td>
<td>-0.015014**</td>
<td>(-1.928248)</td>
</tr>
<tr>
<td>CF</td>
<td>-0.002524**</td>
<td>(-0.124439)</td>
</tr>
<tr>
<td>DIV</td>
<td>-0.083710**</td>
<td>(-1.803537)</td>
</tr>
<tr>
<td>TR</td>
<td>-0.006995**</td>
<td>(-1.786941)</td>
</tr>
<tr>
<td>ROE</td>
<td>-0.030974**</td>
<td>(-0.660413)</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.143094**</td>
<td>(1.899513)</td>
</tr>
<tr>
<td>F-Statistic</td>
<td>2.195215**</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** *, **, *** Signification respective at 10%, 5%, 1%. (...) F-statistic.

The model is globally significant (F-Statistic equal to 2.195215 is significant at the threshold of 5%). Generally, the used variables account for a large proportion of the shares granted to the employees.
Financially, we note that the influence of debt is also negative, at a threshold of a statistical significance of 5%, (the coefficient = -0.015011). According to the obtained result, in particular, its character is statistically significant for the debt accounting ratio applied to listed companies although the adoption of the ESO plans is associated with a reduction in financing by debt. Indeed, it can be assumed that the implementation of the option plans would lead to the leaders’ activism which is guided by the desire to satisfy the shareholders in the short term: activism in their financial decisions, by the reduction of debt, is considered the principle of sound financial management. “Employee-owned companies have better control over their balance and are able to limit their debt” (Audard & Bachelard, 2009).

The dividend is negatively linked to the employee stock ownership and at a statistical significance rate of 5% (coefficient = -0.089710). This means that the allocation of shares to employees results in a decrease in the dividend distributions. In fact, the companies prefer to reduce the dividend distribution to satisfy their liquidity needs and to minimize the taxable surplus-value by practicing the employee stock ownership plan. As a result, the decrease in the distribution rate increases the value of options and reduces agency costs. Also, in the context of a given investment policy, the reduction of the dividend payment makes the internal financial flows sufficient to cover the investment needs and this allows the managers to satisfy the implementation of an investment policy.

In fact, the cash flow is negatively associated with the ESO. This result drives to the assumption that a company with low cash flows is more likely to practice the ESO policy instead of paying cash deposits. By allocating shares to the employees, the company can compensate its managers without paying any money. This means that the ESO is negatively related to the liquidity of the company, but this relationship is characterized by a very low statistical significance threshold.

We also think that there is a negative relationship between the employee stock ownership and the corporation tax which is significant at a rate of 10% (the coefficient = -0.006995). This means that the French companies decide to practice the employee stock ownership in terms of tax deduction.

The results show that size has a positive influence on the development of the ESO practice at a significance level of 1% (coefficient = 0.143094). The ESO phenomenon is more accentuated than the size of a large business.

Finally, we note that there is a non-significant relationship between the percentage of shares held by the employees and the performance measured by ROE. This means that ROE does not have any explanatory power in determining the ESO policy. Indeed, in France, the ESO is negatively associated with a performance which means that the employee-owned companies would be either destined to go bankrupt in the long term or to resume, in the short term, a conventional form of business (without ESO). Most studies admit that it is hard to answer this question. Indeed, even those who admit that there is a relationship between employee ownership and the performance of the firm, believe that this is certainly a little correlated. However, the results do not exclude the use of the employee stock ownership for its incentive attributes.

4.3. The causal link (Granger test)

At this stage of the study, it is a matter of empirically applying the Granger causality test to our various variables and analyzing the results. The test is carried out on all the variables that are taken into consideration; that is to say, the variables that have a significant relationship with the employee stock ownership such as the dividend, debt, the tax rate, and the size of the business. The variables that have not given significant results will not be discussed in this section.

Table 3. Summary table of the result of Granger’s causality link between the variables that have a significant relationship with the ESO

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>F-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIV cause AS</td>
<td>0.61378</td>
<td>0.54263</td>
</tr>
<tr>
<td>LEV cause AS</td>
<td>0.16606</td>
<td>0.84969</td>
</tr>
<tr>
<td>TR cause AS</td>
<td>0.43340</td>
<td>0.63632</td>
</tr>
<tr>
<td>SIZE cause AS</td>
<td>2.80775</td>
<td>0.6345</td>
</tr>
</tbody>
</table>

The table above summarizes the probabilities of causality between the variables that have a significant relationship with the percentage of shares held by the employees. Indeed, we note that the dividend, debt, the tax rate, and the size of the company lead to the practice of the employee stock ownership. Depending on the obtained results, debt leads the employee ownership to a significant probability (84.969%) and the same for the dividend, the size of the company, and the tax rate.

5. CONCLUSION

In recent years, the employee stock ownership plans have considerably grown in France. This study examines the determinants of the presence and development of employee stock ownership practices in French companies.

The theoretical contributions come out through the answers to the research questions. In this work, some of our assumptions agree with the literature and the results highlight the factors that make French companies resort to the practice of employee stock ownership. We also notice that the ESO practice is developed by a reduction in debt, the dividend distribution, and the tax rate. Besides these variables, the size of the company has a positive influence on the adoption of the ESO plan. These variables are essential for the practice of the employee stock ownership plan in French companies. According to the results and based on the test of Granger, we could explore the causal link between the variables that have a significant relationship with the employee stock ownership. We note that the debt, the dividend, the tax rate, and the size of the company cause employee ownership.

However, the results do not exclude the use of the employee stock ownership for its incentive attributes. It is an obligation mechanism and an incentive system. It, therefore, tends to reduce the first sources of the agency costs identified by Jensen and Meckling (1976). The employee stock ownership...
is, thus, an incentive mechanism to co-align the preferences of the shareholders and the employees.

About the limitations of this study, on the one hand, lack of information on the date of ESO practice and the life cycle of ESO. On the other hand, the lack of theoretical foundations in psychological literature and the absence of proxies that measure employee sentiment.

Finally, the introduction of the employee stock ownership schemes can also be used, as part of skill-management, to attract high-potential workers or groups of employees with strategic skills for business development, especially, in large businesses. These schemes can motivate the employees to be more involved in the development of the company, to invest in the human capital, and to reduce their turnover. Thus, the result will be improved productivity and compensation.

REFERENCES


