Managerial Investment And Firm Value: Statistical Investigation Of Their Relationship

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ABSTRACT

In the modern neoclassical microeconomic theory, as it is build on Walrasian, Hicksian, and partly- and eclectically- on Marshallian lines, the firm does not exist but as a necessary entity in the framework of the prices formation. No evidence and explanation is given on the creation and functioning of the firm and the changes in the firm structure. In this study we shall try to outline the way that the prevailing microeconomic theory faces the firm. Then we shall present some alternative/complementary considerations on the nature of the management of the firm, pertaining to the ownership and control relations in the firm, namely in what measure the managers in the modern large corporation act for themselves and not to the interest of the shareholders. A statistical investigation follows, referring to the measure in which these alternative theories are supported by available statistical evidence.

THE FIRM IN THE MARGINALIST-NEOCLASSICAL FRAMEWORK

For the theory of the general equilibrium, that is the prevailing stream of the neoclassical school in the after War period, the firm is only a theoretical construction, a necessary step for the formation of a price theory. An excellent, comprehensive and representative exposition of this approach to the firm as price-and-quantity determination agent can be found in Henderson and Quandt (1958/1971), Allen (1956) and Kogiku (1971). In these approaches the firm is supposed to exist in fully competitive environment, while any discrepancies between supply and demand for the firm's product are closed in zero-real time. Even where oligopolistic or monopolistic situations appear, the firm- equipped with all necessary information- can calculate the price and product quantity, which renders the firm's profits to maximum, i.e. the firm can find always its equilibrium. This equilibrium takes place in all markets and in this way the whole economic system is in general equilibrium. But the notions of supply pre-suppose the existence of some subjects making decisions on the quantity and the price of the product, which is offered and demanded. Two are the subjects, which, according to the general equilibrium theory, are behind the demand and supply: The households, which apply the demand for the firm's products (and offers the factors of production) and the firms, which supply goods and services (and apply the demand for factors of production). The interaction between firms and households determines the produced quantities and the selling prices. It is clear that since the theory is interesting only in the (equilibrium) price formation, these subjects, the households and the firms are conceived as homogeneous units, with identical behavior: The households (consumers) are interested in the utility's maximization, while the firm's goal is the profit maximization. Hence, the households and the firms are mere theoretical constructions to facilitate the formation of the price theory. They do not exist for their own sake. This picture of the firm in the partial and general equilibrium theory is described in the literature as "black-box", i.e. an entity, which transforms inputs to outputs without knowing anything about its internal functioning, how it appears and how it changes. The firm is absolutely identified with the entrepreneur. The latter is considered at the same time as owner and manager of the firm, he buys (the firm) the factors of production and sells the products that he (the firm) produces. But his "decisions" on the produced quantity and the selling price are not arbitrary or a matter of "trial and error" procedure. It is the structure of his "production function" and his "cost function", which impose to the entrepreneur the quantity, which must be produced and the price, at which the quantity must be sold, so that he maximizes his profit. Of course doing so the entrepreneur is supposed to have a perfect knowledge of all markets, of

their past and future- and the acquisition of the information is at zero cost, and that he acts always rationally. This is the picture of the firm in the neoclassical theory: An all-knowing entity, the entrepreneur, who seeks to maximize its profit in a perfectly competitive environment- and who actually achieves this maximization (according to his demand, cost and production function)- and who finally appropriates the profit. The neoclassical theory explicit excludes the interior of the firm from its field of interest considering it rather as a matter of sociological than of economic investigation. The firm exists only in the measure that a calculation-machine subject is needed for the achievement of general equilibrium in all markets and the determination of the prices at which this equilibrium is attained.

ALTERNATIVE THEORETICAL AND ECONOMETRIC APPROACHES OF THE RELATION BETWEEN FIRM'S OWNERSHIP AND CONTROL.

But if the real situation is as described by the neoclassical theory, then a series of questions cannot be answered: Why do firms really exist in the real world? And since they do exist, what is happening in the interior of the firm? Who decides to establish a firm, who owns it, who makes the decisions about type of products, quantities and selling prices? Who makes the strategic decisions in the firm? Finally, the question must be answered, under what criteria and goals the firm operates. For the answer of the above questions several theories have been advanced. These theories, which are described with the general term "managerial theories", have as common characteristic the rejection of the notion of the firm as a "black box" and the adoption of the hypothesis that the in the modern big firm, the corporation, the managers are not under the shareholders' control and they, hence, are in a position to pursuit other targets than that of the profit maximization.

In the frame of this problematic Coase (1937) in his article "the nature of the firm" suggests that the orthodox neoclassical theory of his time does not offer any convincing definition of the firm. He conceives the firm as a system of relationships, which appears when the coordination of the factors of production is submitted under and depends on a businessman. To explain the creation of the firm he introduces the notion of the "transaction cost". He argues that this is the cost that a factor of production has to pay if he is not under the umbrella of a firm. This transaction cost consists of three components: a/ the cost to know the prices in the market b/ the cost to negotiate alone in the market and c/ the cost to close and maintain long-term contracts in the market. Besides, according to his opinion, the striking characteristic of the corporation is that it operates in a non-competitive environment, which itself is the product of the existence of corporations.

More relevant for our study is the theory of Berle and Means (1932). They investigate the separation between control and ownership in the large modern corporation. Their fundamental argument is that the appearance of the corporation has already from the late nineteenth century motivated two parallel procedures. The first of them was the tendency to increase the corporation's size and the second, which in a great measure resulted from the first, was the tendency of the percentage of the equity owned by the individual shareholder to decline. These two tendencies have reduced both the efficiency and the motivation of the shareholders to exercise control on the management of the corporation. Hence, the real decision makers in the corporation, the managers, are in a position to run the business in ways beyond the control and the interests of the shareholders. Instead, they act for the maximization of their own interest. So, if there remains something in the modern large corporation to be maximized, it is not the wealth for the corporation but the profit that the managers enjoy from the management of the corporation. Besides, seen from macroeconomic view, this behavior of the managers is not only unfavorable for the shareholders, but for the whole economy as well, since the profits in the economy- and hence the general welfare- are not maximized. And the general conclusion of the authors is that the modern large corporation characterizes the sovereignty of the "power" over the "efficiency".

Critique of the above theory of Berle and Means has been applied from the side of the followers of the concept of the firm as a complex of contracts: If the owners of factors of production agree to participate to an organization as the corporation aiming to maximize the value of their ownership, then it must be true for the owners of the factors of production "capital" and "managerial capabilities". Hence, the fact that the corporation as a contracts complex continues to exist cannot mean anything else, but that all the owners of factors of production in the corporation achieve an optimum result, i.e. the global economic efficiency in the corporation is guaranteed. So, in

contrast to the views of Berle and Means, the approach of the corporation as a complex of contracts leads to the understanding of the corporation as an organization in which the "efficiency" dominates.

Jensen and Meckling (1976) also investigate the relationship between ownership and control in the corporation. The authors approach the problem in terms of the "principal-agent relation". They begin the analysis with the case in which the manager of a firm is at the same time the unique owner and investigate the factors that determine the net value of the firm. The absolute identification of the properties of being manager and owner means that the utility function of this individual includes the whole result from the operation of the firm. In other words every aspect of the firm's operation affects the profit that enjoys the unique owner. The profits can be consumed either within the firm, by purchasing luxurious furniture of by appointing nice people (for him) in key-positions, but who are incompetent, or outside of the firm. If he plans to consume his profits outside the firm, then he has a motive to run his firm in a way that maximizes its profits. But if he plans to consume part or all of his profits within the firm, then he is spending his profits inefficiently: He spends money for his firm without increasing its efficiency. A problem rises here if the owner-manager decides to sell a portion of his firm but retaining his position as the firm's manager: what is now the value of the sold part of the firm. Jensen and Meckling argue that the value of the selling portion of the firm can be determined accurately, at least theoretically, under two conditions: a/ that the financial market, i.e. the stock exchange functions as a perfect market, which can reveal the real behavior of the firm's managers and b/ that the agents of the transactions in the stock exchange can form " rational expectations" regarding the real value of the firms, in the sense that they do not commit systematic errors in their forecasting. Returning to our analysis, since, by assumption, the buyer is an external investor- i.e. he is not involved in the running of the firm- the old owner has the possibility to keep "consuming" in the firm, as he did when he was the owner of the firm. On the other side, the investor can foresee that that the old owner will keep behaving as before, and we would demand that the consumption's value be substructed from the selling value. In other words both seller and buyer are acting rationally, in the sense of rationality as conceived by the neoclassical theory of the firm. A second possibility exists also that the buyer decides to pay the cost of surveillance on the manager. As a rational agent the buyer would be ready to pay for surveillance up to the point in which the surveillance cost start exceeding the profit from the reduction of the managers consumption. So, from the side of the buyer, in the first case he pays less to acquire his portion of the firm but this portion is exposed to the consumption of the manager. In the second case he pays more initially, but he has then the possibility to control the consumption of his manager. From the side of the manager the reckoning is exactly symmetrical. According to Jensen and Meckling the money difference between the value of the firm between the first and the second possibility consist the "agency cost", that is the cost that must be paid for ensuring that the "agent"- the manager- will behave in a way compatible to the wish of the "principal"-the shareholder- regarding the maximization of the firm's profits. The conclusions of Jensen and Meckling are that the "principal-agent relation", as it takes place in the cases of shareholders and managers in the modern corporation has a cost. But given that both sides are ready to pay this cost in their effort to increase the firm's resources and that the bargaining between them tends to decrease the amount of this cost, the relationship between principal-agent must be considered as an optimal relation- in the Pareto sense, that is no part can be better without deteriorating the position of the other part- and it ensures the most efficient use of the available resources. So, according Jensen and Meckling the separation between ownership and control in the frame of the modern corporation is an organizational reality, which, nevertheless, does not imply that the control of the corporation is not affected by the ownership as anticipated by Berle and Means.

The impact of the Jensen and Meckling's model was tremendous in the recent financial literature. However it was exposed to critiques from the side of the Berle and Means followers. According to them, it is a model, which makes abstract from the main characteristic feature of the modern corporation, namely the great number of the shareholders. The model begins with the assumption that the owner and the manager of the firm is the same person and then it investigates the changes that take place when this person sells a portion of the firm, keeping his position as manager. It is obvious that in order for the model to reflect with some accuracy the real world it has to face the case that the sold portion is an infinitesimal of the firm and/or the case that the manager is not owner any more of any portion of the firm. A second characteristic of the modern corporation is that the managers are rarely owners of an important potion of the corporation's shares. So, in contrast to the Jensen and Meckling's model, the choice of the manager is not between the increase of the firm's value and the consumption of firm's resources but the choice between the consumption of firm's resources and his salary. Even assuming that his salary is depending on the profitability of the firm, the real choice of the manager does not change, given that the greater the size of the

corporation, the greater his possibilities to "consume" within the corporation. It is obvious that these two characteristics of the corporation, large number of shareholders and small portion of the shares held by the managers give new importance to the views of Berle and Means as exposed above. On the one hand, the large number of the shareholders cannot but imply the decrease of the motivation to control the managers. On the other hand, it is a fact that the manager's salaries are independent from the value of the corporation. The latter smoothes the manager's motivation to act in such a way as to maximizes the corporation's value.

Demsetz (1983) suggests that the great dispersion of the shares and the release of the managers from the burden of their portion of the firm reveal the importance of the "cost of surveillance" as the element that determines the extent to which the firms are administrated according to the interests of the shareholders or those of the managers. The shares dispersion means increase of the surveillance cost. This increase results, in its tern, to the possibility of the managers to act more for their benefit than for that of the shareholders. According to Demsetz the solution of the problem of separation between ownership and control is laying in the organizational regulations caused by the functioning of the market. The market can regulate the total remuneration of the managers: the greater the consumption possibilities of the managers within the firm, the lesser their salaries. In this way the market establishes the equilibrium between the salaries and the surveillance cost.

Another answer is given by Fama (1980), who claims that the question who ones the modern large corporation is a sterile problem He argues that according to the concept of the firm as a complex of contracts the shareholders are owners of some factors of production, which are necessary for the functioning of the firm as the factor of production "administrative capabilities". So, according to Fama, shareholders and managers are two discrete types of factors of production among the plenty ones, which operate in the frame of contracts, which form the modern firm. This argument is based on the portfolio theory: given that the shareholders have the possibility to distribute their ownership in shares of several firms, they are in position to achieve an optimal splitting of the risk. In this sense, they are always subjects operating in a risk environment, but splitting the risk they can avoid the big risk implied by the investment of their total ownership in one specific firm. So, under the condition that the all financial markets are perfectly competitive the particularity of the relation ownership/management has no ground, since the theory of portfolio claims that acting rationally the shareholder does not enter in any particular relationship with the firm to which he participates. Besides, Fama argues, the carrier of the managers is tied to the firm's future and in this sense they share with the shareholders the same risks and benefits. They can, like the shareholders, leave the firm if they feel that the firm is not promising. So, it is the market, which ensures the identity of shareholders and managers interest. In this framework all owners of factors of production maximize the value of their property, regardless to the specific form of the factors: capital, administrative capabilities or anything else. Based on his analysis of the relationship ownership/management Fama proposes an arrangement for the regulation of this relationship: given the optimal participation of the factors of production to the complex of contracts which consist the firm- optimal in the sense that there is no possibility for one factor to appropriate the product of another factor- the board of the firm must consist of the managers. The supporting argument for this proposal is that the managers, due to their position and function in the firm they know better than anybody else the real situation and the perspectives of the firm, while at the same time they are both under the critique and the control of the lower levels of the administrative hierarchy and under the pattern of behavior which is imposed by the market. He admits the possibility, of course, that the managers, as members of the board, can to take advantage of their position and try to appropriate part of the firm's wealth. But he claims that this possibility can be minimized by appointment in the board of managers from other firms. Here again the market ensures that the external managers will play fairly their role as arbitrators.

The resent investigation of the ownership/control problem is largely on statistical and econometric techniques. Cho (1998) examines the relation among ownership structure, investment and corporate value, focusing on the possible role of ownership structure as a determinant of investment and suggests that ownership structure affects investment and, therefore, corporate value. Himmelberg, Hubbard and Palia (1999) investigate the hypothesis managerial ownership and performance are endogenously determined by exogenous changes in the firm's contracting environment and suggest that firms are governed by a network of relations representing contracts for financing, capital structure, and managerial ownership and compensation, among others. However, the authors also suggest that it is difficult to identify the correspondence between the contractual choice and firm performance, as measured by accounting rates of return or by Tobin's Q, because contractual choices and performance outcomes are endogenously

determined by exogenous and only partly observed features of the firm's contractive environment. McConnell and Servaes (1990) advance the hypothesis that corporate value is a function of the structure of equity ownership. To test this hypothesis the authors apply non-linear regression techniques using a sample of 1173 firms for 1976 and 1093 firms for 1986 and they suggest that on the results of the analysis do not reject the hypothesis.

STATISTICAL INVESTIGATION

This chapter includes the main task of our study, namely the econometric investigation of variables pertaining to the management participation to firm's value. As guideline for the theorization of the regression model(s), the definition of the variables, the data organization, the sampling interval, and the treatment of outliers we have followed as close as possible the work of Brailsford, Faff and Oliver (1997). For the robustness of the beta coefficient over time we took advice from the articles of Brooks, Faff and Lee (1992) and Collins, Ledolter and Rayburn (1987). We have abstained of considering omitted variables, as indicated by the aforementioned authors, for two reasons: Firstly, to search through effects of omitted variables would charge unevenly the statistical approach of the study without adding to the model much additional information and predicting power and, secondly, the inclusion in the model of variables such as size, type of ownership etc. would require use of dummy variables, which would transform our problem into a problem of analysis of variance and analysis of covariance, which is far beyond the scope and the limits of our study.

Based on data acquired from fifty corporations we shall try to investigate the eventual existence of systematic relationship between the managers ownership with some important parameters of the firm as Tobin's Q, the liquidity index, the volatility, the management shareholdings, the shareholders' stake, the profit standard deviation, the replacement cost, the capital expenditure, the R&D expenditures, the leverage and the market value of the firm's equity. The data are exhibited in the table with the heading TAB0- initial data. The table includes all above information plus columns including codes for the classification of each corporation according to the branch in which it belongs (columns 19-28). Finally in the table are included the variables MH1, MH2 and MH3 used for the codification of the variable Management Shareholdings percentage according to the critical values 0.00-0.05, 0.05-0.25 and 0.25-1.00 (columns 29-31).

The statistical treatment of the data consists of three stages:

- The correlation analysis for the key-variables
- Regressions between some important variables
- For a comprehensive analysis of the correlations of the variables and the profiles of the corporations we apply the Principal Components Analysis

For practical reasons the tables and the graphics are shown in the end of the text, with the exception of the table "Table of Adjusted R^2 and Parameters Significance", which is embodied in the text. For the names of the firms we have used abbreviations.

All calculations, tables and graphics are produced with the help of STATISTICA module.

The Correlation Analysis For The Key-Variables

The correlations are shown in the table TAB1- Correlation Matrix. The table is completed with the table "correlations", which indicates the statistical significance of the coefficients of correlation. We comment the correlations as follows:

The **98 Tobin's Q** (=Market value of the firm/Replacement Cost) is strongly, positively correlated with the indices 98 Tobin's Q Book Value (0.97) and 97 Tobin's Q Book Value (0.67). These strong correlations were expected, since the definition of the indices is based on (almost) proportional data. Further the index is strongly positively correlated with the share's volatility (0.69). -The index **98 Tobin's Q Book Value** is strongly positively correlated with the index 97 Tobin's Q Book Value (0.72) and the share's volatility (0.72).

The index **97 Tobin's Q Book Value** is slightly, positively correlated with the share's volatility (0.45).

The **Liquidity** index exhibits an interesting strong, positive correlation with the variable Capital Expenditure/Replacement cost (0.62). This correlation is interesting to be investigated from the point of view of the causality direction between investments and liquidity.

The **Standard Deviation of Profit** (during the last three years) is strongly, positively correlated with the Replacement Cost (0.82). We could interpret this high correlation as effort from the side of the firms to define the replacement cost in a way to reflect the variations of the profit level.

The **Block-holders Stake** is strongly, positively correlated with the Major Bloch-holders Stake (0.62). This suggests the idea that the portion of the Major Block-holders Stake in the set of Bloch-holders Stake is more or less constant, regardless the type and size of the firm.

The rest of the correlations, either positive or negative, are poor. It is interesting to notice that the key-variable in our study, the Management Shareholdings, is not correlated strongly with any of the rest of the variables and that this variable is negatively correlated with almost all variables. Obviously the managers, when investing in the firm do not take into consideration any of the important parameters of the firm.

Additional, detailed analysis of the correlations is given in point c/ where the variables and their profiles are analyzed with the method of Principal Components.

Regressions Between Some Important Variables

We investigate here the existence of functional relationships between some key-variables in our study. We analyze the variables in pairs using the method of Ordinary Least Squares. Especially for the investigation of the functional relationship between the Tobin's Q and the Management Shareholdings we apply the piecewise regression.

For easy reference we first show the table of the regressions adjusted R^2 and significance of the regression parameters.

Table of the regressions adjusted R^2 and significance of the regression parameter

Dependent Variable	Independent Variable	Adjusted R^2	Parameter "a" Significant	Parameter "b" Significant
Tobin's Q	Capital Expenditure	-0.01	Yes	No
Management Shareholdings	Capital Expenditure	0.02	Yes	No
Management Shareholdings	Tobin's Q	-0.01	Yes	No
Block-holders Stake	Capital Expenditure	-0.02	Yes	No
Block-holders Stake	Tobin's Q	-0.01	Yes	No
Management Shareholdings	Market Value of Equity	-0.05	Yes	No
Block-holders Stake	Market Value of Equity	0.17	Yes	Yes

Referring to Table 1 and Graphs 1 to 8, we comment on the relationships as follows:

Tobin's Q/Capital Expenditure (Graph 1): strong positive slope of the line. However, it is only a few outliers (Lynx, JJB, Gregs), which contribute to the positive slope of the line. The adjusted R^2 (adjusted coefficient of determination) of the regression is very poor.

Management Shareholdings/Capital Expenditure (Graph 2): poor positive slope. Without the contribution of the outlier Nort the b parameter would be at the level of zero. The adjusted coefficient of determination R^2 is very poor.

Tobin's Q/Management Shareholdings (Graph 3): strong negative slope of the regression line. But the existence of outliers (Nort, Blums, Gregs) makes the negativity suspicious. Besides this slope is found to be statistically insignificant. Poor adjusted R^2 as well.

Block-holders' Stake/ capital Expenditure (Graph 4):   zero slope of the regression line. The parameter b is statistically zero. Poor adjusted R^2. It is worth noticing that the pairs of values exhibit great dispersion of almost the same density. It is clear that from the statistical point of view the two variables are independent each other.

Block-holders' Stake/ Tobin's Q (Graph 5): zero slope of the regression line. The parameter b is statistically zero. Poor adjusted R^2.

Management Shareholdings/Market Value of Equity (Graph 6): zero slope of the regression line. The parameter b is statistically zero. Poor adjusted R^2.

Block-holders' Stake/Market Value of Equity (Graph 7): A few points here demand special attention: although the regression line seems to have a steep downward slope, it is only an illusionary picture, due to the scaling of the two axes. This kind of illusionary graphics are very common in cases where the scaling of the axes is quite uneven. The value of b parameter is practically zero. However, quite paradoxically the adjusted coefficient of determination R^2 is the greatest found in all regressions (0.17). Moreover the b parameter of the regression is found to be statistically significant (non-zero). We believe that we should be suspicious with respect to the acceptance of a negative relation between Block-holders' Stake and Market Value of Equity.

Piecewise Regression of Tobin's Q on Management Shareholdings (Graph 8): the application to these two variables of the Ordinary Least Squares method exhibited a relationship of the form y=3.37-2.796*x. But since the adjusted coefficient of determination was found to be –0.004 (that is zero) and the parameter's b value not significant and since special analysis of this relationship is required, we applied the method of the piecewise regression. The values of the independent variable Management Shareholdings percentage was classified into three groups of size with cut-off values 0.05 and 0.25. The full regression model loaded in the program is shown in the top line of the graphic. In the line below are shown the estimated parameters of the model, automatically produced by the program.

In the graphic we see that the great majority of the management shareholdings are concentrated in the region 0.00 to 0.05 and nearer to zero than to any other value. This is absolutely relevant to our discussion on the ownership of the managers in the firm. The distribution of the managers' shareholdings are very near to zero, which give evidence to the hypothesis that the managers do not tie their interests to those of the shareholders. Moreover the form of the points cloud in this area gave a negative slope of the first segment of the line. Further the position of a few firms in the region immediately after the cut-off value 0.05 gave to the line segment a strongly positive slope. Then, for values of the Management Shareholdings percentage greater than 0.05^+ the slope of the line becomes negative. So, there is evidence that the relationship between the Tobin's Q and the Management Shareholdings is slightly negative.

Principal Components Analysis

This method can be very useful in the case that the data are numerous and in matrix form. Using this method the investigator looses some of the information, which is included in the data but on the other side he wins vision of the data structure. We have submitted to that analysis the variables shown in the correlation matrix of tale TAB1. The

results of the analysis are shown in the Graph9. The variance explained by the first two factorial axes is 26.33% + 16,61 % = 42.94 % of the total variance. This percentage is satisfactory given the number of the analyzed variables (14). The first factorial axis clearly exhibits two opposing groups (in the sense that they are negatively correlated. The variables belonging in the same group are positively correlated: The first group includes the variables TQBV98, TQRC98, TABV97, and VOLATILITY. The opposing group consists of the variables STD of PROFIT and REPLACEMENT COST. The second factorial axis exhibits opposition of the groups MAJOR BLOC-HOLDING STAKES, BLOC-HOLDING STAKES and the rest of the variables. It is not clear the position of the LIQUIDITY variable. In order to avoid misinterpretation of the results one should check the squared cosines of the projection angle of the variables-vectors onto the factorial plane.

In the Graph10 are exhibited the factor scores (the profiles of the firms, in the language of the multidimensional techniques). Two firms that are close each other have similar (proportional) profiles. The firms close to the origin of the factorial axes have profile proportional to the mean profile. Hence the graphic gives to the investigator information about the structure of the data. JJB and Lynx, for example, have profiles, which are not similar to the profile of any other firm. A glance in the data can verify this. By construction of the method, the percentage of the total variance explained by the factorial axes, which exhibit the profiles of the variables is again 42,94%. If we compare the results obtained by the Principal Components method to those obtained by the correlation matrix and the regression we realize that they are quite similar.

Summarizing the results of the statistical inquiry of our study, mainly pertaining to the regression of the Management Shareholdings to Tobin's Q, we would like to express some thoughts on the use of statistical methods- especially these of inferential Statistics- as means to *explain* problems of ownership and control in the firm. From the theoretical point of view important parameters as mobility of the managers between the firms and time within the same firm are not taken into consideration. But these parameters are closely related with the loyalty of the managers. Further, no information is available in our data relating to the criteria according to which the managers are appointed in their posts. Hence, the explanatory power of the statistical models cannot be but limited. In addition comes, that the application of the ordinary regression methods, do not result to strong correlations between the variables and significant values of the regression parameters. We cannot decide if these poor regression results are accidental or they are due to incomplete statistical treatment of the data from our part. However, we thing that even the best statistical approach cannot give a convincing answer to such theoretical problems as the ones treated in our study.

The statistics alone cannot prove or disprove any theory. This is the task of the specialist, who employs statistical methods to measure to describe, correlate and forecast. In this sense the statistics is an indispensable tool for his job. In our case the results obtained from the application of statistical methods, in the measure that we have applied them to our data correctly and that we have interpreted the results correctly, do not give any convincing answer to our posed question: for whom do the managers in the modern large corporation work in the first place. The only certain conclusion resulting from the data and their statistical treatment is that the managers' ownership in the corporation is as a rule negligible. It does not show any systematic tie with any of the parameters of the firm pertaining to our study. Certainly the collection or more data and the application of more sophisticated methods can enlighten more the problem.

CONCLUSIONS

Coming back to our problematic on the relationship between ownership and control we find it necessary to summarize and comment the controversy between the aspects represented mainly by Berle and Means on the one side and Fama and Jensen on the other. Berle and Means adopt the view that in the modern firm ownership and control are two separated functions. They have based their argumentation on the fact that the rise of the modern corporation has already by the end of the 19th century motivated two parallel procedures: The first is the increase of the size of the corporation; the second, which is mostly a result of the first, is a falling tendency of the stock-percentage each individual shareholder maintains. These two tendencies are supposed to have reduced the possibility, hence the desire, of the shareholders to apply control on the managers. So, according to Berle and Means, if the firm maximizes something, it is not the profits but the personal profit that the managers extract from running the firm. Exactly this fundamental conclusion of Berle and Means is rejected by Fama and Jensen on grounds that mechanisms as the stock

exchange market, managers market, etc. are able to establish an optimal compromise of the shareholders interest to these of the managers. This view is based in the individualist-contractual concept of the reality of the modern corporation, which sees the firm as a compact unit of capital. This view means that the managers are in a position to arrange a long-term planning of the firm to the end of increasing the firm's wealth. This conception doesn't, of course, discard the possibility that the managers ignore their own interests in the firm, that they don't "consume" resources of firm or that they identify their future to that of the specific firm. But it does mean that in contrast to the shareholders, who are interested in the firm as investors-especially in short-term profits, the managers are oriented in the long-term optic of the firm's function.

Both of the above trends of thought are critical to the neoclassical theory, but they are also subject of critique by other trends of investigation, which understand the firm as a historical and institutional product. The difference of the functioning of the two groups in question, the managers and the shareholders and mainly the difference of their perspectives, short-term for the shareholders and long-term for the managers has important impact to the way we understand their relationships. This understanding is equivalent, in principle, to the understanding that the two groups are in a continuous conflict. But this conflict is a conflict of functions and not a conflict of interests. If this is true, then the solution cannot be in the frame of the firm, but in the general frame of the institutions and the practices in which the corporation operates. In any case the outcome of the controversy will have heavy implications for the evolution of the modern economy, which will eventually decide which theory is the "correct" one.

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