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Fourth Assignment in Special Topics of Business Economics 2023-2024

The role of several variables on firm's performance has been extensively examined in the literature (Wernerfelt and Montgomery,1988; Connolly and Hirschey, 2005). Relationships between corporate governance a firm performance have been a steady stream of research in the last decades. Particularly, scholars emphasized the crucial importance of adopting an "independent" board of directors (Bell et al. 2012), highlighting that boards with a majority of non-executive directors are essential for preventing self-serving behaviour by top management or controlling shareholders and for providing objective oversight of strategy formation and execution (Zattoni&Cuomo, 2010). In the same direction, for more than a decade, regulators across the globe emphasized the crucial importance for each company of adopting an "independent" board of directors, enshrining the need for board independence in corporate governance regulations and codes throughout the global economy.

However, the real role of board independence is not the same in every context where firms operate. In fact, in countries where companies are characterized by high levels of ownership concentration, the role of independent directors in controlling management or dominant shareholders is less important than in countries where companies' equity is dispersed among a large number of small investors. In these latter contexts, in fact, there is a concrete separation between ownership and control of the firm and the board of directors (external management) effectively exercises a concrete decision-making power. The typical agency relationships refer to manager–owner conflicts of interests and the independence of the board of directors, consequently, can represent an indispensable governance mechanism to prevent management opportunistic behaviours.

On the contrary, in countries where companies are characterized by high levels of ownership concentration, there is no concrete separation between ownership and control and the most important agency problem refers to conflicts of interest between large controlling shareholders and minority shareholders (Maury and Pajuste, 2005). In this context the decision-making power is exercised by dominant shareholders, rather than by board of administration, and consequently the monitoring function on the dominant shareholders is probably carried out by the other largest shareholders different from the dominant, rather than by the board of directors.

The Stata file named *Fdata.dta* reports the variables from different firms in different sectors for four European countries (France, Germany, Spain and Italy) over the 2010-2016 period. Using the theoretical foundation and the methodological approaches already developed in our lectures please estimate the following:

1. Using an appropriate econometric technique and having in your mind the available variables please estimate a model the following model: $\Pi_{it} = x_{it}\beta^{'} + \varepsilon_{it}$ (1) where x_{it} is a vector of the firm's specific characteristics as well as the characteristics of the industry in which the prospective adopter is examined, $\beta^{'}$ a vector of parameters to be estimated and ε_{it} an error term that is associated with the firm's profitability (please use the variables of question . Please recall in your mind the corresponding literature concerning variables that affect firms 'profitability as has been expressed using the Tobin's Q variables which is the dependent variable. Also use statistical measures and additional graphs to understand the main variables of your econometric estimation.
2. In the second question of our exercise please consider ownership concentration as an instrumental variable. Following the literature estimate the previous model (1) having in your mind now that OC is an instrumental variable associated with some instruments. Please indicate variables that affect firm's Tobin's Q through ownership concentration and indicate their effect. How do you account for the heterogeneity arising from different countries. Please also provide your estimations.

Please use the above estimations to create a report (in Latex) which will describe your results concerning the abovementioned questions (no more than 3000 words). The report should present your estimations and your explanations about firm's financial performance and their determinants in an analytically way using possible argumentation.

References

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Wernerfelt, B., & Montgomery, C. A. (1988). Tobin's q and the importance of focus in firm performance. *The American Economic Review*, 246-250.
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APPENDIX

Variable	Description	Measurement
TQ	Natural logarithm of Tobin's Q	Natural logarithm of the market value of assets divided by the book value of total assets
OC	Concentration ratio-Herfindahl-Hirschman Index	Natural logarithm of the sum of squares of the percentage shares held by the first three largest shareholders.
DT	Natural logarithm of disposition time	Natural logarithm of 365 divided by the ratio between the number of resolved cases over a period and the number of unresolved cases at the end of the period
CPI	Corruption perception index	Corruption measure computed based on 13 different surveys and assessments from 12 different institutions
Size	Firm size	Natural logarithm of total assets
Lev	Leverage	Total long-term debt divided by total assets
GS	Sales growth	Growth rate of sales
Long term Debt	Long term Debt	non-current liability
PM	Performance Measure	Profit margin
LN_SMCap_GDP	Market capitalization (log)	the value of a company that is traded on the stock market, calculated by multiplying the total number of shares by the present share price.
JSEI	judicial system efficiency	Moderating variable measuring the efficiency of Judicial System. It is obtained as the Natural Logarithm of the Ratio between DT and CR
DTCR	DT/CR	Moderating variable measuring the efficiency of Judicial System. It is obtained as the Ratio between DT and CR
ROA	Return on assets	Profit before taxes divided by total assets