**Emotional intelligence, Financing** structure and performance **of Tunisian Firms**

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**Abstract**

Set within the context of theoretical framework with behavioral corporate finance, the present article is designed to investigate the relationship binding emotional intelligence and firm performance via the financing structure as applied to the Tunisian context. Our envisaged model is targeted to ensure whether the financing structure does actually stand as a mediating variable between performance and emotional intelligence.

The conducted empirical study is constructed over a sample comprising 56 managers of firms observed over the year 2014. The results of the conducted regressions prove to confirm the persistence of a mediating effect of the financing structure in the relationship between emotional intelligence and the Tunisian firms’ performance.

**Key words:**  Emotional intelligence, financing Structure,firm performance***.***

**Originality**

This study stands as one of the very few research woks elaborated for the purposed of investigating the emotional intelligence indirect impact on the Tunisian firms’ performance in terms of their financing structure. Based on a new methodology that applies the Baron and Kenny (1986) devised theory, a number of mediating variables are used to assess the firm’s Emotional Intelligence and performance associating relationship.

**Introduction**

Over the last decade, extensively elaborated research works have culminated in unveiling and shedding light on a new concept known as "Emotional Intelligence" (now EI), which proves to intervene remarkably misshaping the leader's effectiveness, as a distinctive feature of leadership associated credentials Review of the relevant literature proves to reveal that the most of elaborated research works (Goleman 1995, Baron (1997) appear to examine the direct relationship persisting between EI leadership and firm performance while ignoring the latently indirect relationship prevalent between both variables. Hence, the present research work is intended to serve as originally initial work helping to scrutinize and be the bases for a behavioral corporate finance area through incorporating the human psychological and emotional aspects dimensions. The study is predominantly focused on explaining how work performance is not uniquely dependent on the competences’ growth and acquire’ skills directly related to the work activity itself but also the conduct which constitutes an essential element in shaping the firm’s proper financial decisions and strategies. To this end, a special questionnaire has been formulated, administrated and addresses to the directors of Tunisian listed firms.

The purpose of this research lies, then, in highlighting identifying the benefit of the behavioral approach as an alternative explanatory made for the relationship binding the managers’ EI and corporate performance via the funding structure.

By adopting a hypothetical-deductive approach, we consider the developing an assumption based research model through jointly combining a matter of fact behavioral bias associated theory and an exploratory quantitative study administrated with regard to a number of firm executives .

Our stance trows out to be essentially positivist (Martinet, 1990; Wacheux, 1996), as it prove to rest on a deductive approach, primarily targeted to test a number of questionable research hypotheses (Igalens and Roussel, 1998). Thus, the present study stands as an attempt to depict the relationships binding a set of relevant variables for the sake of testing their solidity once actually tested on a sample of executives.

Hence, the central problematic question associated to this study turns out to be: how can the EI help in explaining firm performance through the financing structure?

To address this problem, we consider subdividing the present research into two major sections. The first section highlights the theoretical model positing that EI could well influence performance. In the midst of this direct relationship there is a number of financing structure associated variables (self-financing, bank debt, bond debt and external funds).

In addition to their being influenced by the managers’ EI, these variables prove, in turn, to influence overall performance. The second empirical section is envisaged to test the potential effect of the financing structure, as a mediating variable between EI and firm performance.

**1-LITERATURE REVIEW AND HYPOTHESES ADVANCED**

In the light of the various studies elaborated on the subject of EI, performance and success appear to depend directly on the individuals’ ability to control their proper emotions as well as the emotions of others.

Worth noting, is that the initially conducted step dealing with the EI area emerged in the early 1990s with the pioneering work elaborated by Salovey and Mayer. In their study, the authors provide an explanation of the EI as being "a form of intelligence that involves the ability to control his feelings and emotions and those of others, to distinguish between them and to use this information to guide their thoughts and actions' (Mayer and Salovey, 1997, p 5). The authors have subsequently revised their definition of EI to refer to "the ability to perceive accurately, assess and express emotions; the ability to access and / or feel the feelings when they facilitate thought; the ability to understand emotions and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth "(Mayer and Salovey, 1997, p 10).

In this regard, Gardner (1983) distinguishes two types of intelligence, dubbed as personal, intra personal and interpersonal intelligence: interpersonal intelligence designates the ability to control the others’ moods and temperaments and predict their future behavior. While the intra-personal intelligence is explained as the ability to recognize, identify, understand and use one’s proper emotions in order to adapt and give meaning to one’s life.

In turn, Goleman (2000, p2) define EI as being "the concrete manifestation of certain skills (self-awareness, self-management, social awareness and social skills) in a timely, adequate and proportionate manner to be effective in a given situation ". As for Bar-on (1997: 14), he conceptualizes EI as "the set of skills, competencies and abilities non cognitive that influence the individual's ability to succeed in dealing with pressures and to its environmental requirements". To sum it up, various researchers turn out to be inspired by Salovey and Mayer (1990) advanced study and appear to focus on study the concept of EI, each conceptualizing it in a different manner: some prove to consider it as a trait, while others appear to treat it as an ability or skill.

In general, three major EI associated models have been advanced, according to which each author tries to put forward their own definition and conceptualization while adopting a particular aspect of EI as being either ability centered (Mayer and Salovey , 1997), or a mixed aspect (Bar-on 1997 and Goleman 2000).

In regard of the model capacity centered model, EI turns out to be characterized by a pure form of mental capacity. While in the mixed model, it is manifested as being as the result of a combination of cognitive ability or mental capacity and personality traits as it is the case with optimism and well-being (Mayer and Salovey 1999).

With respect to the managers’ EI, it proves to be cited in the quintessence of the effective leader skills portfolio, which stands as a clear manifestation of a key factor for any performance to be achieved. Hence, such a concept proves to involve the essential foundations of any intervention based on optimizing the emotional factor in the quest for increased performance.

According to Goleman (1995), we may well state that EI stands as a factor likely to influence managerial performance (more specifically the decision making process). Even though its impact might not seem to be as important as claimed, we can still confirm the persistence of a certain relating effect.

Noteworthy, however, is that a direct association between EI and performance does actually exist, and the high the EI rate is, the higher the firm’s performance will turn out to be (Mayer and Salovey, 1997, Bar-on 1997 and Goleman 2000). Consequently, the manager should, therefrom, take into consideration the fact of establishing t some kind of performance climate focused on promoting EI while accounting for the interpersonal dimension of work.

It is worth mentioning, still, that no research has been noted to have studies of the indirect relationship prevailing between EI and firm performance through any particular mediating role. So, we focus of interest intended through the present work lies in investigating whether the financing structure does actually stand as a mediating variable between performance and emotional intelligence.

Sincilarly , still to our knowledge, no research has been proved to undertake a study of the relationship: emotional intelligence, financial structure and firm performance

Several studies have been conducted to study the emotional intelligence impact on performance ((Mayer and Salovey (1997), Bar-on (1997) and Goleman (2000)).

Indeed, it seems imposed to introduce a mediating variable, namely, the financing structure (apprehended by the various available modes of financing, namely: self-financing, bank loans, bond debt and external equity) likely to help establish a stabilizing impact of the leadership associated EI on the firm’s performance. First thing to start with is the self-financing mode, which proves to play a remarkable role in helping to maximize business performance. It presents the entirety of resources generated by a company in connection with its business activity likely help in meeting the financing needs.

In effect, the emotionally intelligent leaders usually seek to increase performance at the lowest possible funding costs. They tend to opt for internal financing mode, as it is free and generates profits on a yearly basis. In addition, self-financing is characterized with the advantage of minimizing the investment cost as no interest is imposed on such funding amounts. Besides, the director does not feel to be constrained by any form of third party control (banks, partners, etc.) and feels therefore freer in his decision-making.

According to the pecking order theory, self-financing stands as the most preferred funding mode for executives. Indeed, the latter adapt their dividend distribution strategy on the basis of investment opportunities to fund in abid to generate the maximum possible of internal funding.

Thus, the self-financing turns out to stand as the most important mode of maximizing firm value.

Accordingly, the following hypothesis seems with formulating:

**H1: Appeal to the self financing mode positively mediates the relationship between the mangers’ EI and firm.**

For the company to continue its growth and for the shareholders’ wealth to prosper, the emotionally intelligent executives may also tend to opt for debt as an alternative financing mode. They often tend to consider that debt represents one of the most attractive options for the company, among which two modes appear to be critically essential. On the one hand, the first and most widely recognized option maintains that the debt cost is lower than the equity cost. The second option, on the other hand, advances that resorting to debt is closely connected with taxation, and that the debt generated interests could well be deducted from the company achieved earnings, as a measure to cut back on the amount of taxes.

Indeed, recourse to debt allows shareholders to increase their economic power by minimizing the dilution of their participation into the capital equity thus reduces the market imposed control and discipline.

In addition, the higher the debt level is, the greater the likelihood to undergo financial difficulties will prove to be, and, inversely, the least indebted company is, the least attractive is will turn out to be to speculators. Additionally, emotionally intelligent managers may resort to debt to take advantage of the capital provided by banks (eg, the advantage of exceptionally low interest rates in the economy). They may also go thinking that appealing to debt may sometimes stand as a sign of optimism sent to the market.

In this way, the finance relating literature (Modigliani and Miller, 1958 and 1963) proves to retain a positive relationship between debt and company value , owing mainly to the tax benefit the interest deductibility might well represent. Yet, such a relationship can only hold if the operating profit turns out to be higher than the interest imposed on the loans. Conversely, however, the leverage would turn out to have catastrophic outcomes. Debt may prove to reduce earnings per share. So, executives could well maintain that debt was now a source of value creation. Still, their recourse to leverage might well bring about a positive impact on firm performance.

In this respect, the following assumptions seem worth advancing:

**H2: Appealing to bank debt positively mediates the relationship between the managers’ EI and firm performance.**

**H3: Recourse to bond debt negatively mediates the relationship between the managers’ EI and firm performance. .**

Funding as maintained through capital increase constitutes another mode of external financing, and in case a company proves to be in need for increasing its stable resources, emotionally intelligent directors may resort to a capital increase procedure.

Thus, the company's capital will be increased through the subscription of new shares, intended to be purchased either by shareholders already present in the company or by new shareholders.

Indeed, emotionally intelligent executives usually believe that this procedure would help generate an increase in stable resources, thus reflecting the company’s improved financial health. Its working capital would certainly increase and help finance new investments, develop its activity range and improve its cash flow as well as its financial equilibrium. Besides, this capital increase would provides the shareholders with an opportunity to increase their shareholding participation in the company’s capital, while provide their employees with the opportunity to subscribe to the share capital, thus emitting a positive signal with respect to markets,

So, the emotionally intelligent executives will certainly respond positively to such an undertaking, whereby EI proves to have a positive effect on the executives’ decisions taking and on firm performance, alike..

In this regard, Goleman (2000) concludes that the directors’ EI is significantly related to the persistence of operating regulations and rules relevant to the emotionally intelligent group, and that such rules are associated with a direct impact on firm performance.. In this way, EI prove to allow the manager to ensure a homogenization of emotions as perceived by the team members and, therefrom, a convergence in the interpretation of the manager emanating announcement.

At this level, the following hypothesis can be suggested:

**H4: Recourse to external funds positively mediates the relationship between the managers’ EI and firm performance. .**

**2- EMPIRICAL ANALYSIS**

This section is designed to test the financing structure’s mediating effect in the relationship binding the directors’ EI and firm performance. In the first place, we proceed by depicting our study sample, the dependent and independent variables, along with the multivariate analysis method (a hierarchical one). As for the study achieved results’ presentation and interpretation remarks, they will make subject of the second subsection.

**2.1. Presentation of Data Variables’ Measures**

Regarding the present research study, the associated data are derived from the annual reports of 56 companies listed in the Tunis Stock Exchange relevant to the year 2014, along with a questionnaire sent and administered with the concerned firms’ executives. These companies operate in a variety of sectors, mainly those of industries, services, media and travel.

Our study involves three major variables namely: a dependent variable: performance of the firm, along with an independent variable: Emotional Intelligence as well as a mediating variable: the funding structure (self-financing, bank debt, bond debt and external funds) (see Fig1, below).

**Emotional Intelligence**

**Firm Performance**

**Financing structure**

|  |
| --- |
| **Figure-1.** Conceptual model of the financing structure’s mediating effect in the Emotional Intelligence/ firm performance relationship |
| **Source:** Manel (2015). |

**2.1.1. The Dependent Variable: Firm Performance**

It is worth reminding that a firm performance is axed around all that helps to improve the couple value-cost and tends towards maximizing net value creation. Thus, one could well consider that a successful company is a perennial company one, that is able to achieve respectable earnings and proves to be sustainably profitable, while being able to challenge its competitors in terms of quality and service promptness. Similarly, a company that proves to be innovative, efficient, responsive and that keeps evolving confidently constantly and sustainably turns out to be effectively intelligent financially, socially, environmentally and technologically. Such a firm is able to create value while satisfying the market pioneering its prospective needs and requirements improving its competitive edge. It is also a company that succeeds in maintaining customer loyalty that has its portfolio filled with orders thanks to continuously constant monitoring and along with a progressive projection into the future.

For a thorough evaluating of a particular company’s performance, it is necessary to thoroughly implement a set of measures: both economically and financially. Retracing the steps of the previously conducted studies, we undertake to define the firm economic performance by the Return On Assets "ROA" operating income before depreciation along with R & D / total assets (Zouari and Zouari-Hadiji 2014a and b)[[4]](#footnote-4) and financial performance by the Market to Book "MTB" = market capitalization / equity book value (Zouari and Zouari-Hadiji 2014 a and b).

**2.1.2. Independent Variable: Emotional Intelligence**

As part of our study, we undertake to apply the scale of Schutte et al. (1998), namely, that of the scale Schutte Self-Report Emotional Intelligence (SSREI). Indeed, based on a number of scientifically validated studies, the authors have derived a specially elaborated questionnaire that conceived to involve 33-items. The latter rests on a special conceptualization of EI as drawn from the definition put forward by Salovey and Mayer (1990). Actually, this particular approach has been selected outing to three main reasons. Firstly, it is recognized to be coherent and appropriately representative of the emotional intelligence concept, as considered by the scientific community. Secondly, it has been proved to display proper psychometric characteristics (mainly, Gignac, Palmer, Manocha, & Stough, 2005). Finally, its administration with the sample pertaining individuals remains easy and prompt. Worth highlighting, however, is that we have considered to retain just the most important items from the results of Schutte et al. 1998 namely twenty items, for the sake of maintaining the questionnaire’s fluidity, simplicity and, above all, maximizing the response rates.

Each item is encoded according a Likert scale involving 5 points (ranging from "strongly disagree" = 1 to "strongly agree" = 5).

**2.1.3. Mediating Variable: The Financing Structure**

In our study, the mediating variables related to the financing structure are: self-financing, bank debt, bond debt and external funds. To measure these variables, an appeal has been made to the financial statements of a number of Tunisian listed firms observed over the year 2014.

**2.1.4. Control Variables**

For the sake of achieving rather reliable results, we have introduced some control variables likely to have a significant effect on performance. The multiple linear regression models, as used in this empirical study, retain both of the company size as well as its activity sector.

Concerning the s firm size variable, is measured via the natural logarithm of total company assets. This measure has been used in several studies (see, for instance, Nekhili et al., 2012; Zouari and Zouari-Hadiji, 2013; 2014 a; 2014b).

With respect to the activity sector, it is a dummy variable that take the value 1, if the firms turns out to belong to a high-tech sector and 0 otherwise. This measure has been used by several researchers (e.g., Zouari and Zouari-Hadiji, 2013; 2014a; 2014b and Zouari-Hadiji and Zouari, 2010).

**2.2. The hypotheses’ Modeling**

The empirical study, as undertaken in the present work, is based on the use of hierarchical regression models[[5]](#footnote-5) for the purpose of testing the research advanced hypotheses. For the formulated assumptions to be assessed, it seems necessary to test the existence of a mediating effect, a procedure achievable through the construction of three models. According to Baron and Kenny (1986), four conditions are imposed for a complete mediating effect to be checked in terms of M of the X-Y relationship, namely:

* Condition (1): the variable X must have a significant impact on variable Y.
* Condition (2): the variable X must have a significant impact on M.
* Condition (3): the presumed mediator variable M must have a significant influence on the variable Y, once the influence of variable X on Y is controlled.
* Condition (4): the significant influence of the variable X on Y should disappear once the effect of M on Y turns out to be statistically controlled.

Econometrically, we estimate that models 1-3 test the indirect relationship between EI and firm performance via the effect of the financing structure (self-financing).

These models should allow for the validation of the hypothesis (H1).



Equations 4-6 serve to test the indirect relationship persistent between EI and firm performance via the financing structure’s effect (bank debt).These equations should help to validate the hypothesis (H2).



Equations 7-9 serve to test the indirect relationship prevalent between EI and firm performance via the effect of the financing structure (bond debt).These equations are used to help validate the hypothesis (H3).



Equations 10-12 enable to test the indirect relationship predominant between EI and firm performance through the effect of the financing structure (external funds). These equations are used to help validate the hypothesis (H4).

With,

- PERF i: Variable as measured by the ROA and MTB ratios of firm i,

- EI i: the EI Score as calculated through a questionnaire administered to firm i,

- SELF F i: Self financing i = earnings of firm i + amortization,

- EXT CAP i: External capital of firm i, capital increase,

- BANK DEBT i: Bank debt of firm i,

- BOND DEBT i: Bond debt of firm i,

- TAIL i: The natural logarithm of total assets of firm i,

- SECT i: A dummy variable which takes the value 1 if the firm i belongs to a high-tech industry sector, and 0 otherwise,

- Β0, β1, β2, β3, β4, β5, β6: the parameter to estimate,

-  i: standard error.

**2.3. Results’ display and Interpretation**

This section is devoted to highlight the results reached following the hypotheses testing step, as assumed to interconnect EI with company performance (ROA, MTB) via the respective financing structure (SELF FININCING, BANK DEBT, BOND DEBT, EXT CAP). For our advanced assumptions to be put to test, some distinct regression models have been estimated with respect to each of the four proceeding stages, as undertaken by Baron and Kenny (1986).

Model 1 (reduced) englobes the independent variable along with the control variables as applied to predict firm performance. . As for Model 2, (reduced), it is intended to help explain the variation noted in of the mediator variable (financing structure), as taking place in a third step via the independent variable (EI) as well as the control variables. Concerning Model 3 (full model), it includes the entirely of the variables’ set: the independent variable (EI), the mediating variables (SELF FININCING, BANK DEBT, BOND DEBT, EXT CAP) along with the control variables (TAIL, SECT), in a bid to explain the dependent variable, ie firm performance .

**2.3.1. Results’ Interpreting relevant to e the Indirect Relationship between EI and Firm Performance via Self-Financing**

Based on Table 1 depicted results, the first condition proves to be well satisfied, as the model 1 (designed to test the relationship binding between the variable EI and ROA) appears to display a very low explanatory power (R2 adjusted = 0.050). The model’s overall quality of the model turns out to be significantly acceptable (F = 0.130 at the 10% threshold). Yet, on measuring performance via MTB, the save model proves to demonstrate a low explanatory power as well (R2 adjusted = 0.076) along with a significant Fisher test (F = 0.069, p <10%).

As for the implemented Student tests, they turn out to indicate that EI variable proves to have a positive and significant impact on performance, whatever the adopted measure might be (for ROA: = 0.264, t = 1.859, p <10%; and for MTB:  = 0.223, t = 1.601, p <10%).

Concerning the second step, it is intended to demonstrate the persistence of a relationship between EI and self-financing. In regard of Model 2, its overall quality is discovered to be statistically significant at the threshold of 10% level and the EI variable turns out to be positively and significantly associated with the Tunisian companies’ self-financing modes (= 0.015, t = 0.025 p <10%). In this way the second condition relevant to the approach devised by Baron and Kenny (1986) appeared to hold truth.

**Table 1. Hierarchical Regressions’ results concerning steps 1 and 2 (models 1 and 2) relevant to Tunisian Companies**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Step1**  **Model 1** | | | | **Step 2**  **Model 2** | |
| **Firm performance** | | | | **Self-Financing** | |
| **ROA** | | **MTB** | |
|  | **T** |  | **T** |  | **t** |
| **V. control** | **TAIL** | -0.226 | -1.666 n.s | -0.187 | -1.406 n.s | 0.014 | 0.102 \* |
| **SECT** | -0.041 | - 0.295 n.s | 0.326 | 2.388 \*\* | -0.210 | -1.531 n.s |
| **V. independent** | **EI** | 0.264 | 1.859 \* | 0.223 | 1.601 \* | 0.015 | 0.025 \* |
| **R 2 ajusted** | | **0.050** | | **0.076** | | **0.056** | |
| **F** | | **0.130 \*** | | **0.069 \*** | | **0.045 \*** | |

\*\*\* Significant at 1%, \*\* significant at 5%, \*: significant at 10%, n.s: not significant

An examination of Table 2 depicted results reveals the predominance of relationship between self-financing, both of the firm performance (ROA and MTB), from these results, one may notice that self-financing appear to have a positive impact on the company’s economic and market performance (for ROA:  = 0.034, t = 0.045, p <5%; and for MTB:  = 0.088, t = 0.098, p <10%).

Concerning Model 3 (full model), it is used to help to verify third self-finance mediating condition between EI and firm performance (ROA and MTB). The results reached following the hierarchical regression analysis prove to indicate that the self-financing (as a mediating variable) turns out to stand as critically important in providing explanation for the dependent variable (both of the two performance modes) after accounting for the predictor variable. The statistical coefficient of the SELF FININCING variable proves to have a positive and significant value relative to the ROA (= 0.205, t = 2.705, p <1%) as well as to the MTB (= 0.102, t = 2.209, p <5%). Following these attained results, it turns out that the third condition appears to be completely verified.

The results figuring on Table 2 indicate well that the EI associated coefficients sound to be statistically significant for the (ROA) as an indicator of firm performance (= 0.021, t = 0.085, p <10%), while it does not seem to be statistically significant with respect to the MTB indicator (= 0.125, t = 0.812 ns). So, it follows that the mediation via self-financing turns out to be a partial mediation between EI and firm performance. . According to such findings, the hypothesis 1 proves to be confirmed (partial mediation) with regard to the Tunisian companies’ case.

According to Table 2, for both measures of performance, model 3 (full model) has an interesting adjusted explanatory power. Thus, this comprehensive model, which takes into account the effect of the self-financing mediator, also increases the percentage of explained variance from the model 1. This shows that the mediating variable is a good predictor of the dependent variable, namely the performance of the firm.

**Table 2. Hierarchical regression results relating to steps 3 and 4 (Model 3) relevant to Tunisian companies**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Step 3** | | | | **Step 3 and 4**  **Model 3** | | | |
| **Firm performance** | | | | **Firm performance** | | | |
| **ROA** | | **MTB** | | **ROA** | | **MTB** | |
|  | **t** |  | **t** |  | **t** |  | **T** |
| **V. control** | **TAIL** | -0.124 | - 0.697 n.s | 0.089 | 0.506 n.s | 0.102 | 0 .023 \* | 0.150 | 1.623 \* |
| **SECT** | -0.140 | - 0.960 n.s | 0.223 | 1.556 n.s | 0.068 | 0.032 \* | 0.323 | 2.362 \*\* |
| **V. independent** | **EI** | - | - | - | - | 0.021 | 0.085 \* | 0.125 | 0.812 n.s |
| **V. mediator** | **SELF FININCING** | 0.034 | 0.045 \*\* | 0.088 | 0.098 \* | 0.205 | 2.705\*\*\* | 0.102 | 2.209 \*\* |
| **R 2 ajusted** | | **0.053** | | **0.051** | | **0.086** | | **0.165** | |
| **F** | | **0.049 \*\*** | | **0.095 \*** | | **0.056 \*** | | **0.043 \*** | |
| **Ajusted R 2 variation** | |  | | | | **0.036** | | **0.089** | |

\*\*\* Significant at 1%, \*\* significant at 5%, \*: significant at 10%, n.s: not significant

Based on Table 2 depicted results (Model 3), one could well notice that the control variables (TAIL, SECT) are discovered to be statistically significant with regard to both of the performance related indicators, as the threshold of 10% and 5% level. Such findings prove to be consistent with those published in the research works conducted by Strahan (1999) as well as Neuberger (2000), stating that both of the company size and sector stand as two critical indicators necessary for a thorough evaluation of company performance. Both these variables’ emanating results do highlight, perfectly well, their crucial importance among executives in the financial decision-taking proceedings (financing, investment, etc. ...).

**2.3.2. Results’ Interpretation concerning the Indirect Relationship between EI and Firm Performance via Bank Debt**

In Consistence with some of the previously elaborated studies’ results, the first condition turns out to be satisfied (Table 3). The second step’s major objective lies in highlighting the persistence of a certain relationship between EI and bank debt. Regarding Model 2, it proves to demonstrate well that its overall quality proves to be statistically significant at the thresholds of 10% and that the EI variable is discovered to be positively and significantly associated with the Tunisian companies’ leverage rate (= 0.005, t = 0.045 p <10%). thus, the second condition relating to the Baron and Kenny (1986) set up approach does prove to hold true.

**Table 3. Hierarchical Regression results relevant to Steps 1 and 2 (model 1 and 2) concerning Tunisian companies**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Step 1**  **Model 1** | | | | **Step 2**  **Model 2** | |
| **Firm performance** | | | | **Bank Debt** | |
| **ROA** | | **MTB** | |
|  | **t** |  | **T** |  | **T** |
| **V. control** | **TAIL** | -0.226 | -1.666 n.s | - 0.187 | - 1.406 n.s | 0.527 | 5.358 \*\* |
| **SECT** | -0.041 | -0.295 n.s | 0.326 | 2.388 \*\* | 0.442 | 4.409 \*\*\* |
| **V. independent** | **EI** | 0.264 | 1.859 \* | 0.223 | 1.601 \* | 0.005 | 0.045 \* |
| **R2 ajusted** | | **0.050** | | **0.076** | | **0.405** | |
| **F** | | **0.130 \*** | | **0.069\*** | | **0.007 \*** | |

\*\*\* Significant at 1%, \*\* significant at 5%, \*: significant at 10%, n.s: not significant

An examination of the results appearing in Table 4 reveal with the predominance of a significant positive relationship binding bank debt and both the performance firm related indicators (ROA and MTB). Based on these reached findings, one could well noted that bank debt proves to have a positive impact on the company’s economic and market performance (for ROA:  = 0.065, t = 0.096, p <10%; and for MTB: = 0.015, t = 0.045, p <5%).

With Model 3 (full model), it is applied for the purpose of checking the third-mediating condition, bank indebtedness, as intervening between EI and firm performance (ROA and MTB). The concerning the hierarchical regression analysis attained results prove to indicate well that bank debt (mediating variable) stands as an important indicator that helps clearly in explaining the dependent variable (both forms of performance) after accounting for the predicting variable. The statistical coefficient associated with the BANK DEBT variable appears to have a positive and significant value in relevance to compared to the ROA (= 0.107, t = 0.075, p <10%) and MTB (= 0.125, t = 0.085, p <10%). On the basis of these findings, it turns out clearly well that the third condition proves to be perfectly checked.

The ultimate condition remaining to verify is that associated with the EI predictive variable’s effect on the dependent variable (ROA and MTB), which should, by no means, not be significant once the possible mediator (BANK DEBT) proves to be accounted for.

As figuring on Table 4, below, the achieved results appear to highlight that the EI variable associated coefficients do not turn out to be statistically significant with respect to both of the firm performance related indicators (for the ROA: = 0.114, t = - 1.543 and for the MTB: = 0.265, t = - 1.622). It follows that mediation via bank debt proves to be perfectly satisfied between EI and firm performance, a result which proves to validate well the hypothesis H2 posited in regard of the Tunisian companies subject of study.

**Table 4. Hierarchical regression results regarding steps 3 and 4 (Model 3) relevant to Tunisian companies**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Step 3** | | | | **Step 3 and 4**  **Model 3** | | | |
| **Firm performance** | | | | **Firm performance** | | | |
| **ROA** | | **MTB** | | **ROA** | | **MTB** | |
|  | **T** |  | **t** |  | **t** |  | **t** |
| **V. control** | **TAIL** | 0.112 | 1.166 \* | 0.180 | 1.148 \* | 0.102 | 0.069 \* | 0.115 | 0.076 \* |
| **SECT** | 0.156 | 0.060 \* | 0.412 | 2.581\*\* | -0.114 | - 0.701 n.s | 0.384 | 2.456 \*\* |
| **V. independent** | **EI** | - | - | - | - | 0.114 | - 1.543 n.s | 0.265 | - 1.622 n.s |
| **V. mediator** | **BANK DEBT** | 0.065 | 0.096 \* | 0.015 | 0.045 \*\* | 0.107 | 0.075 \* | 0.125 | 0.085 \* |
| **R 2 ajusted** | | **0.056** | | **0.065** | | **0.080** | | **0.096** | |
| **F** | | **0.042 \*\*** | | **0.091 \*** | | **0.098 \*** | | **0.100 \*** | |
| **Adjusted R2 variation** | |  | | | | **0.030** | | **0.020** | |

\*\*\* Significant at 1%, \*\* significant at 5%, \*: significant at 10%, n.s: not significant

Based on Table 4 (Model 3), we might well note that the control variables (TAIL, SECT) turn out to be statistically significant with regard to both of the firm performance relevant indicators at the thresholds of the 10% and 5%, respectively, except that the statistical coefficient associated with the variable SECT proves to be negative and not significant with respect to the ROA (= -0.1, t = - 0.701), in which the industry sector seems to have a negative impact on the firm’s economic performance and the financing structure. The fact that size is covered to have a positive impact on the firm’s economic and market performance, it still remains a critical indicator necessary for investigating the company’s overall performance and financing structure statuses. An examination of Table 4 shows well that the full range model, accounting for the bank leverage mediating effect, proves to increase the variance rate as explained with regard to model 1. This fact highlights well that the mediating variable stands as a perfect predictor for the dependent variable: namely the firm performance.

**2.3.3. Results’ interpretation concerning the Indirect Relationship between EI and Firm Performance via the Bond Debt**

In consistency with the previous stated findings, the first condition proves to be satisfied (See Table 5). The second step is aimed to demonstrate the existence of a relationship prevailing between EI and bond debt. Model 2 appears to display a statistically significant overall quality noticeable at the threshold of 10% , highlighting that the EI related variable turns out to be positively and significantly associated with the Tunisian companies’ relevant bond debt (= 0.156, t = 0.036, p <10%). This finding testifies well that the second condition concerning the proceeding proposed by Baron and Kenny (1986) turns out to be validated.

**Table 5. The Hierarchical Regression results concerning of Steps 1 and 2 (model 1 and 2) relevant to Tunisian Companies**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Step 1**  **Model 1** | | | | **Step 2**  **Model 2** | |
| **Firm Performance** | | | | **Bond Debt** | |
| **ROA** | | **MTB** | |
|  | **T** |  | **T** |  | **T** |
| **V. control** | **TAIL** | - 0.226 | - 1.666 n.s | - 0.187 | -1.406 n.s | 0.375 | 3.062 n.s |
| **SECT** | - 0.041 | - 0.295 n.s | 0.326 | 2.388 \*\* | 0.222 | 1.774 \* |
| **V. independent** | **EI** | 0.264 | 1.859 \* | 0.223 | 1.601 \* | 0.156 | 0.036 \* |
| **R 2 ajusted** | | **0.050** | | **0.076** | | **0.223** | |
| **F** | | **0.130 \*** | | **0.069 \*** | | **0.022 \*** | |

\*\*\* Significant at1%, \*\* significant at 5%, \*: significant at 10%, n.s: not significant

An examination the results of Table 6 depicted results prove to show the persistence of a positive and significant relationship between bond debt and both of the firm performance relating indicators (ROA and MTB). These results reveal well that the bond debt proves to have a positive impact on the firm’s economic and market performance (for ROA: = 0.027, t = 0.178, p <10%; and for MTB: = 0.026, t = 0.046, p <10%).

Model 3 (full model) help to check the third-mediating, relevant to bond debt, between EI and firm performance (ROA and MTB). The hierarchical regression analysis attained results prove to indicate well that the statistical coefficient of the variable BOND DEBT turns out to have a significant positive value with respect to the ROA (= 0.125, t = 0.075, p <10%) as well as to the MTB (= 0.102, t = 0.053, p <10%). In this way, as highlighted by these results, the third condition is discovered to be perfectly verified.

As for the results figuring on Table 6, they tend to reveal well that the EI variables relating turns out to be statistically significant with regard to both of the firm performance relevant indicators , for the ROA (= 0.299, t = 1.997, p <10%), and for MTB (= 0.112, t = 0.065 p <10%).

So, it follows clearly that mediation via bond debt appears to be incomplete between EI and firm performance, a result that does not seem to validate our advanced the hypothesis 3 (incomplete mediation) with regard to the Tunisian companies under review.

According to Table 6, still, and with respect to both of the performance related measures, model 3 (full model) proves to exhibit an interesting adjusted explanatory power. It enables to further enhance increase the rate of explained variance in relevance with model 1. Concerning the case in which the performance proves to be measured by ROA, the adjusted R2 appears to go up s from 0.050 to 0.065. Similarly, when performance turns out to be measured via MTB, the adjusted R2 appears to go up from 0.076 to 0.088. This increased recorded in adjusted R2 is associated with accounting for the bond debt mediating effect, thus, the variation noticed in adjusted R2 regarding both of the models associated with introducing the mediating variable turns out to be significant (0.015 and 0.012). This finding reveals well that this variable represents a good predictor of the dependent variable: firm performance. Still, such results do not prove to confirm our concerned hypothesis 3.

**Table 6. Hierarchical Regression Results regarding Steps 3 and 4 (Model 3) relevant to Tunisian Companies**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Step 3** | | | | **Etape 3 and 4**  **Model 3** | | | |
| **Firm performance** | | | | **Firm performance** | | | |
| **ROA** | | **MTB** | | **ROA** | | **MTB** | |
|  | **T** |  | **t** |  | **t** |  | **t** |
| **V. control** | **TAIL** | -0.172 | -1.199 n.s | 0.086 | 0.620 n.s | - 0.270 | - 1.828 n.s | 0.040 | 0.270 n.s |
| **SECT** | -0.130 | -0.903 n.s | 0.311 | 2.223\*\* | - 0.067 | - 0.470n.s | 0.340 | 2.373 \*\* |
| **V.independent** | **EI** | - | - | - | - | 0.299 | 1.997 \* | 0.112 | 0.065 \* |
| **V. mediator** | **BOND DEBT** | 0.027 | 0.178 \* | 0.026 | 0.04\* | 0.125 | 0.075 \* | 0.102 | 0.053 \* |
| **R 2 ajusted** | | **0.022** | | **0.041** | | **0.065** | | **0.088** | |
| **F** | | **0.055\*** | | **0.101 \*** | | **0.082 \*** | | **0.077 \*** | |
| **ajusted R 2 variation** | |  | | | | **0.015** | | **0.012** | |

\*\*\* Significant at 1%, \*\* significant at 5%, \*: significant at 10%, n.s: not significant

The results appearing on Table 6 (Model 3) reveal well that the control variables (TAIL, SECT) do not seems to be statistically significant with regard to both of the firm performance relevant indicators, with the exception of the SECT variable related statistical coefficient, which bearsa positive and significant value relevant to the MTB (= 0.340, t = 2.373 p <5%), marking the positive impact the industry sector proves to have on the company’s stock market performance. As for company size, it turns out to be have a negative impact on the firm’s economic and market performance.

**2.3.4. Results’ Interpretation concerning the indirect relationship between the EI and Firm Performance via External Capital**

In consistency with already reached results, the first condition turns out to be fulfilled (See Table 7).

The second step is aimed to demonstrate the persistence of a relationship between EI and external equity. The second Model 2 overall quality is discovered to be statistically significant at the threshold of 10% level, which the EI variable proves to be positively and significantly associated with the Tunisian firms’ external funds (= 0.141, t = 1.033 p <10%), indicating that the second condition of the Baron and Kenny (1986) advanced procedure proves to holds good.

**Table 7. Hierarchical Regression’s results concerning Steps 1 and 2 (model 1 and 2) relevant to Tunisian Companies**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Step 1**  **Model 1** | | | | **Step 2**  **Model 2** | |
| **Firm performance** | | | | **External Capital** | |
| **ROA** | | **MTB** | |
|  | **T** |  | **T** |  | **t** |
| **V. control** | **TAIL** | - 0.226 | - 1.666 n.s | -0.187 | - 1.406 n.s | 0.327 | 2.510 \*\* |
| **SECT** | - 0.041 | - 0.295 n.s | 0.326 | 2.388 \*\* | -0.121 | - 0.911 n.s |
| **V. independent** | **EI** | 0.264 | 1.859 \* | 0.223 | 1.601 \* | 0.141 | 1.033 \* |
| **R 2 ajusted** | | **0.050** | | **0.076** | | **0.124** | |
| **F** | | **0.130 \*** | | **0.069 \*** | | **0.020 \*** | |

\*\*\* Significant at 1%, \*\* significant at 5%, \*: significant at 10%, n.s: not significant

An examination of the results depicted on Table 8 reveals well the persistence of a positive and significant relationship between external capital and both of the firm performance relevant indicators (ROA and MTB). These reached results indicate well that external capital turn out to have a positive impact on the firm’s economic and market performance (for ROA: = 0.032, t = 0.006, p <10%; and for MTB: = 0.091, t = 0.075, p <10%).

Regarding Model 3 (full model), it is used to check the condition for a third mediation intervention of the external capital’ variable between EI and firm performance (ROA and MTB). The hierarchical regression analysis results seem to indicate that the external capital’ variable (as a mediating variable) remains important in providing explanation for the dependent variable (both forms of performance) after accounting for the predicting variable. The statistical coefficient related to the variable EXT CAP sounds to have a positive and significant value with respect to the ROA (= 0.069, t = 0.078, p <10%) and to the MTB (= 0.068, t = 0.035, p <10%). On the basis of such results, it appears clearly that the third condition turns out to be perfectly verified. The results appearing on Table 8 demonstrate well that the EI variable associated coefficients do not prove to be statistically significant with respect to both of the firm performance relating indicators (ROA and MTB), as for the ROA (= -0012, -0198 t = ns), and for the MTB (= 0.121, t = -0078 ns). Hence, mediation via external capital turns out to be entirely complete between EI and firm performance. Relying on such results, one could well note that the variable EI appears to have a positive effect on firm’s performance. Thus, assumption 4 proves to be validated with respect to the Tunisian companies’ context.

**Table 8. Hierarchical Regression Results concerning Steps 3 and 4 (Model 3) relevant to Tunisian Companies**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Step 3** | | | | **Step 3 and 4**  **Model 3** | | | |
| **Firm performance** | | | | **Firm performance** | | | |
| **ROA** | | **MTB** | | **ROA** | | **MTB** | |
|  | **t** |  | **T** |  | **t** |  | **t** |
| **V. control** | **TAIL** | 0.065 | 1.723 \* | 0.057 | 0.398 n.s | - 0.194 | -1.344 n.s | - 0.173 | -1.247 n.s |
| **SECT** | - 0.131 | - 0.950 n.s | 0.238 | 1.753 \* | - 0.053 | -0.375 n.s | 0.336 | 2.485 \*\* |
| **V. independent** | **EI** | - | - | - | - | - 0.012 | -0.198 n.s | 0.121 | -0.078 n.s |
| **V. mediator** | **EXT CAP** | 0.032 | 0.006 \* | 0.091 | 0.075 \* | 0.069 | 0.078 \* | 0.068 | 0.035 \* |
| **R 2 ajusted** | | **0.015** | | **0.027** | | **0.076** | | **0.099** | |
| **F** | | **0.009 \*** | | **0.056 \*** | | **0.095 \*** | | **0.053 \*** | |
| **ajusted R 2  variation** | |  | | | | **0.026** | | **0.023** | |

\*\*\* Significant at 1% , \*\* significant at 5%, \*: significant at 10% , n.s: not significant

The results figuring on table 8 (Model 3) prove to denote well that the control variables’ relevant (TAIL, SECT) do not appear to be statistically significant with regard to both of the firm performance related indicators (ROA, MTB), except for that relating to the SECT variable, which proves to bear a positive and significant value with respect to MTB (= 0.336, t = 2.485 p <5%). Therefore the industry’s activity sector turns out to have a positive impact on the company’s stock market related performance. Regarding firm size, however, it is discovered to have a negative impact on the firm’s economic and market performance.

**CONCLUSION**

It is within the context of the theoretical framework dealing into corporate behavioral finance that the present work can be set. The aim is to scrutinize relationship governing managerial EI and firm performance through the various associated modes of funding structure.

In its broad sense, EI is defined as the ability to perceive and manage one’s proper emotions as well as those of others (Mayer and Salovey 1997). Based on the assumption that the EI Manager is liable to affect attitudes and behavior and, therefore, he may prove to be capable of influencing the overall performance of the firm and the quality of the relationship with the members of his team. As a relatively new concept, initially developed by Peter Salovey and John Mayer in 1990, EI is generally defined as the ability to recognize one’s own emotions, along with the emotions of others, in a bid to fit more suitably to particular situations (Goleman, 2000). Subsequently, several researchers have began to bring in further contributions to this concept widely popularized by Daniel Goleman in 1995. The idea of EI has its origins in the concepts dealing with social intelligence as well as the intra and inter personal intelligence, as notably proposed by Howard Gardner in 1983. For a more thorough understanding the EI fundamental principles, the concept of intelligence will be briefly exposed, but prior to addressing its relationship with business, it seems rather appropriate and useful to present a bring recapitulation of what emotions are actually made up of.

As a matter of fact, the achieved regression results prove to show well an EI executive turns out have a noticeable impact on the performance of Tunisian companies through the mediation of the financing structure. Overall, the results obtained through the elaboration of this study appear to highlight well that Tunisian companies have an interest in financing theirs operations and investments via the various financing modes available, whatever the funding form might be :self-financing, bank debt, bond debt and external capital, in a bid to further enhance their performance. Moreover, one would also note that the EI director proves to actually play an important role in increasing the Tunisian companies’ overall performance. The modeling the relations hipes binding the three intermingling concepts, namely EI / financing structure / firm performance , could be summarized as follows. Given the fact that the funding structure could act as a mediating variable, an assessment of this mediating effect might be achieved via developing specific models based on particular variables as those selected in this study. In this respect, our reached results turn out to indicate that the EI variable is discovered to be noticeably implicated in determining the mediate effect, in respect of the methodology initiated by Baron and Kenny (1986). Indeed, the incorporation and highlight the mediating variable, i.e., the financing structure, turns out to remarkably improve the explanatory power of the model EI / financing structure / performance.

One the light of these results, one could well note that the mediating variable appears to stand as a more effective predictor of the dependent variable, namely, firm performance. Noteworthy, is that the hierarchical regressions prove to highlight well that the control variables prove to have a significant effect on the financing structure as well as on the firm performance as a whole. Indeed, this angular part allowed us, above all, to undertake an empirically explication of the contrast persistent between what is stipulated and advanced in theory and what is actually observed in practice.

Worth highlighting, also, is the fact that this study has limitations and leaves several questions open – ended, as to about the problematic issue of performance, EI and the funding structure. Indeed, the model should incorporate other variables for a more thorough representation of reality. Finally, consideration for EI as an important human dimension is expected to pave the way and opens new perspectives for the corporate finance area. Above all, one might cite the revival of such issues as those relating to governance mechanisms and value creation, as associated with the ability to develop new investment opportunities or strategies.

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**APPENDIX**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** |
| **IE**  **(1)** | 1 |  |  |  |  |  |  |
| **SELF FININCING**  **(2)** | 0.293 | 1 |  |  |  |  |  |
| **BANK DEBT**  **(3)** | 0.186 | 0.282 | 1 |  |  |  |  |
| **BOND DEBT**  **(4)** | -0.319 | 0.214 | 0.322 | 1 |  |  |  |
| **EXT CAP**  **(5)** | -0.122 | 0.124 | 0.161 | 0.565 | 1 |  |  |
| **TAIL**  **(6)** | 0.325 | 0.242 | 0.342 | -0.125 | -0.212 | 1 |  |
| **SECT**  **(7)** | 0.225 | 0.321 | 0.245 | 0.367 | 0.325 | 0.243 | 1 |

**Tableau-9.** Pearson correlation matrix

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4. This measurement of accounting performance has the advantage of eliminating the effect of accounting choices related to the treatment of R & D expenses in the financial statements largely prone to the executives’ opportunism. [↑](#footnote-ref-4)
5. In this work, the treatment of mediating variables should follow the approach devised by Baron and Kenny (1986). This framework, which aims at testing the mediating effect, is implemented via a multiple-hierarchical regression. This analysis consists in assessing the total effect (cumulative) of the explanatory variables on a certain criterion. The method can be performed on the basis of several steps. Firstly, it undertakes to test the predictor effect (independent variable) firstly on the criterion (dependent variable) and, secondly, on the mediator using partial and simple regressions. Then, the other relationship has to be tested (predictor and mediator on the criterion). In this case, a multiple-hierarchical regression has to be applied. It consists in gradually introducing certain independent variables into the regression-equation: starting with the predictors and control variables (Step 1), then the mediating variable (Step 2). On reaching an increase in the adjusted R² after inserting the mediator, one is able to assume the mediator effect on the relationship between the predictor and the criterion, Zouari and Zouari-Hadiji (2014a; 2014b), Dahmani and Zouari (2016). [↑](#footnote-ref-5)