European Journal of Business and Management
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.8, No.36, 2016

The Creation of Added Value and Business Growth the Case of Algerian Firms

Soufyane Bouguetaia
Relizane University, Algeria

ILYES SLIMANI
Laboratory of Economics Study & Local Development In South West of Algeria
Department of Management, Béchar University, Algeria

Abstract
The work developed in this article concerns the problem of creating added value in the companies and it relation with the business growth. The objective of this study is to illustrate and describe the process of the creation of added value within the Algerians companies and to draw and direct the reflections for a efficacy relationship between added value creation and business growth.The results of our study showed that there is a positive relationship between added value creating and business growth which mean we should work hard for more creation of added value to get a fast business growth rates.
Keywords: value added, business growth, age, size.

1-Introduction

Since David Birch has found that small and medium-sized enterprises (SMEs) are an important driver of employment growth (Birch, 1981), governments have adopted public policies that have attempted to help and encourage them (Picot And Dupuy, 1996) in the regard as the true engine of economic growth and employment (Dixon & Rollin, forthcoming; Haltiwanger, Jarmin and Miranda, 2010), therefore, small businesses have become a priority and the cornerstone of Each economic success. In parallel and in support of these strategic initiatives, SMEs have played a major role in debates and economic studies; researchers have been interested in studying its characteristics, behaviours and needs, including funding, and Their growth.

The study problem

This article will try to answer the following initial problem:
What is the relationship between value creation and business growth?

The study methodology:

To answer these questions, we have based ourselves on the descriptive method which has concerned theoretical research, as well as an empirical study carried by an analytical method, supporting a quantitative study by trying to transpose the theoretical replica on the reality empirical.
The examination of the variables included in our problem requires evaluation of the various indicators constituting our research model.

2-The significance of the concept of value creation:

The past and current net accounting profit can't be considered as an indicator sufficient to approximate the value of a company because it is the result of accounting data not representative of economic reality on the one hand and which it can mask An insufficiency of tangible or intangible investments generating productivity, innovation, etc. For this reason, some analysts and practitioners have sought to develop methods to mitigate such failures. The objective was to find relevant indicators that Risk, growth, sustainability of results and which reconcile accounting data that are not in line with economic reality. This is how the idea of value creation emerged in the 1920s in United States of America.

The measurement of added value

The question of the measurement of added value creation is in the context of the governance of managers from an incentive-control perspective. The place taken by the theme of value creation led to the development of a battery of indicators trying to measure[1] it: TSR, MVA, EVA, CFROI, and ROCE-WACC ... whose Anglo-Saxon acronyms are sometimes esoteric. The most common indicator is economic added value (EVA).

3-ECONOMIC VALUE ADDED(EVA)

Popularized in the middle of 1990s by the Anglo-Saxon consulting cabinet Stern Stewart, the economic value added is a measure of the company's performance[2]. It is calculated by subtracting from operating profit net of

[1] G. Charreaux ,G.Desbrieres, Gouvernance des entreprises et création de la valeur, finance, contrôle, stratégie, vol 1, n2,1998 , pp.57-88
[2] J.Zhang, "The contracting benefits of accounting conservatism to lenders and borrowers",Journal of Accounting and

taxes (1-Tis)) the cost of capital invested (CI) multiplied by the adjusted weighted average cost of capital (CMPC)[1]

$$EVA=RE\ (1\text{-}Tis)\text{-}CMPC*CI$$

By reasoning in terms of profitability, the EVA is rewritten as follows:

$$EVA= (ROIC\text{-}CMPC)*CI$$

ROIC: return on invested capital

The EVA's advantage over traditional performance measures, such as earnings per option, return on equity or return on assets, is a consideration of risk. The EVA judges performance according to the return on investment (ROIC) while taking into account the cost and therefore the risk (CMPC) of the various modes of financing (CI) ,EVA is a management indicator that is generalized to all The operational levels by sensitizing the different actors both on objectives of results and also on the costs of the financial resources putting at their disposal.

- When the EVA is positive, the company generates profitability in excess of the cost of the funds made available, the company creates wealth for the shareholders.
- When EVA is negative, the performance of the company's investments or projects is insufficient to cover financing costs, so it is destructive of value.

4-Theory of business growth

4-1-Neoclassical theory - growth to an optimal size:

Although the neoclassical term encompasses a large body of literature, for our discussion of firm growth, we consider that the main contribution emerging from the traditional neoclassical perspective is that firms are attracted to some sort of size Optimal (Viner, [1931] [2]1952). This optimal size is the maximum profit-maximization level of output, in which the economies of large-scale production are negotiated against the co-ordination costs of large bureaucratic agencies. In this view, the growth of the firm is simply means of achieving this optimal size which is of no interest in itself. Once companies have reached their optimal sizes, they no longer grow.

The concept of an optimal size has attracted (and still receives) a lot of attention, despite a blatant lack of empirical support. The notion of an optimal industry-specific size contradicts observations on the broad support and asymmetry of the size distribution of the firm, which is even at finely disaggregated levels of 'analysis. Even the concept of an optimal size specific to the company seems to be in contradiction with the analysis of Time series of business growth patterns (Geroski et al., 2005[3]; Cefis et al., 2006).

However, the Gibrat[4] model of the stochastic drift in the size of the firm performs much better in the empirical analysis of firms' growth rates than linearisations neoclassical models that we mentioned. As a conclusion to this section, we suggest that the notion of "optimal size" is of little use in understanding why firms develop, and that it would be better to unlearn them quickly.

4-2-Theory of the growth of the firm of Edith Penrose

The founding book of Penrose (1959)[5] contains several important contributions to our discussion of business growth. We first present his idea of the economy of growth before moving to that based on the resources of the company**.**

Penrose (1959) has a fundamentally dynamic view of the firm, which argues that business growth is driven by an internal dynamic generated by learning-driven practice. Managers become more productive over time as they are accustomed to their tasks. The executive functions that were causing problems first because of their relative lack of knowledge soon become routine. As managers gain experience, therefore, their administrative tasks require less attention and less energy.

5-Presentation of the pattern:

This study is an analysis of the data of 30 Algerian companies, this data has been collected from the companies themselves and from the tax services, they concern the financial statements as well as the data concerning the number of employees. In addition, the data set has been correctly weighted to represent the sector of Algerian SMEs based on size, age, sector of activity (sector of activity concerns: industry, services).

Economics,2008, pp.27-54.

[1] James L. Grant,Foundations of Economic Value Added ,Wiley finance édition, 2003 , p.242.

[2] *Viner, Jacob (1931). "Cost Curves and Supply Curves". Zeitschrift für Nationalökonomie*. . Reprinted in R. B. Emmett, ed. 2002, *The Chicago Tradition in Economics, 1892–1945*, Routledge, v. 6, pp. 192–215

[3] Geroski, P. A. (2005). Understanding the implications of empirical work on corporate growth rates. Managerial and Decision Economics, 26(2), 129-138.

[4] J. M. Samuels,Size and the Growth of Firms,The Review of Economic Studies, Published by: Oxford University PressVol. 32, No. 2 (Apr., 1965), 105-112

[5] Penrose, E. (1959). The theory of the growth of the firm. Oxford: Oxford University Press.57-85

6-The Concepts of the Conceptual Model

The conceptual model developed through this study has a total of 4 concepts

- Growth
- the age of the company
- size of business
- the creation of added value(EVA)

so we can write the model as follow

business growth=$\beta o+\beta_1$ EVA+ β_2 SIZE+ β_2 AGE+ α

7-Descriptive analysis of the data

This is a stage preliminary standard for the study as a step through the various indicators and statistics metadata account (maximum value, minimum value, median and mean value, standard deviation) and that allows us to configure an initial idea of the most important statistical characteristics of these various data during the study period, as well as test normal distribution hypothesis through statistical Jarque –Bera

The table summarizes the results

	CA	EVA	TAILLE	AGE
Mean	2.75E+08	29463572	277.4239	25.50000
Median	2.84E+08	19562100	282.5100	25.50000
Maximum	6.05E+08	1.67E+08	337.2000	40.00000
Minimum	19860000	2581800.	158.4970	11.00000
Std. Dev.	1.29E+08	35240125	37.83763	8.803408
Skewness	0.429449	2.820666	-1.186751	2.53E-16
Kurtosis	3.294224	10.31326	5.028631	1.797330
Jarque-Bera	1.030340	106.6356	12.18607	1.808018
Probability	0.597399	0.000000	0.002259	0.404943
Sum	8.26E+09	8.84E+08	8322.716	765.0000
Sum Sq. Dev.	4.86E+17	3.60E+16	41518.90	2247.500
Observations	30	30	30	30

8-The results of the model estimation.

So we can know the nature of the relationship between the changing of the (CA) and independent variables (, TAILLE, AGE, EVA, C) we estimate the model using the least squares method (Mco), and using Eviews9 program, where after the model estimate we have acquired the following results:

$$CA = -1.91*10^{+08} + 3.948EVA + 644067.2Age + 1203586TAILLE$$
$$(-1.0743) \quad (5.8263) \quad (0.348) \quad (2.091)$$
$$R^2 = 72.347\% \quad (.)T-statistic \quad DW = 2.0277$$

Dependent Variable: CA
Method: Least Squares
Date: 04/26/16 Time: 14:32
Sample: 1985 2014
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EVA	3.948054	0.677619	5.826361	0.0000
AGE	644067.2	1846878.	0.348733	0.7301
TAILLE	1203586.	575589.5	2.091050	0.0464
C	-1.91E+08	1.78E+08	-1.074344	0.2925

R-squared	0.723473	Mean dependent var	2.75E+08
Adjusted R-squared	0.691566	S.D. dependent var	1.29E+08
S.E. of regression	71914669	Akaike info criterion	39.14342
Sum squared resid	1.34E+17	Schwarz criterion	39.33025
Log likelihood	-583.1514	Hannan-Quinn criter.	39.20319
F-statistic	22.67450	Durbin-Watson stat	2.027710
Prob(F-statistic)	0.000000		

9-First: the economic and the statistical study of the model.

9-1-economic study: Through the above equation we note that:

- For a fixed note that a negative reference and this means that there is an inverse relationship in the absence of independent variables, the CA impaired by

- For each of the transactions TAILLE, AGE, EVA note that their signals are positive, that is a positive

relationship between the dependent variable CA previous explanatory variables as:
-If EVA changed one unit, the CA will change to: (3,948) Unit
-If AGE change one unit, the CA will change to: (644,067.2) unit.
-If Change TAILLE (size) one unit, the CA will change to: (1203586) Unit.

9-2-The Statistical study:

9-2-A-coefficient of determination R^2 test this factor explains the relationship between the dependent variable with several independent variables at once. The value obtained for the coefficient of determination is estimated at: 0.7234)) as explanatory variables enter into the interpretation of the variable by 72.34%, which indicates that there is a strong correlation between CA and the explanatory variables, the rest which estimated (27.66%) explains other factors not included in the model and included in ε_t.error limit.

9-2-B- **Student test**: We use statistical Student (T) to assess the moral model parameters, and then the impact of the explanatory variables on the dependent variable evaluation. And can even moral estimated test parameters as follows: Student Test results will be clarified to assess the moral parameters model and that through the calculated value ()T_{cal}) Scheduled values (T_{tal}) and the lowest moral level (porb) 5% .

We calculate the value of scheduled as follows:

T^{α}_{n-k} =$T^{0.05}_{26}$=1.706

Where: n: number of the studied sample
k: number of parameters

Under the following assumptions:

Null hypothesis: $H_0: B_0 = 0$

Alternative hypothesis: the existence of at least a factor of between transactions contained in any form is nil: $H_1: B_0 \neq 0$

And it can be illustrated Student test results of the model are as follows:

Table Student statistical test results

Variables	the level of moral%5 (porb)	Scheduled values(T_{tab})	Calculated values(T_{cal})
C	0.3091	1.706	1.037
EVA	0.0000	1.706	16.475
AGE	0.0810	1.706	-1.815
TAILLE/SIZE	0.0000	1.706	6.214

For coefficient EVA note that the calculated value is greater than the scheduled value (T_cal> T_tab) and we have the lowest level significantly less than 5% of any (porb = 0.0000), Consequently reject H_0 meaning that moral ability and different from zero, and thus, the independent variable (EVA) affects the dependent variable (CA).

For coefficient AGE note that the calculated value is smaller than scheduler value (T_cal> T_tab) and we have the lowest level significantly less than 10% of any (porb =0.0810), consequently reject H-0 ie the moral ability and different from zero, therefore, the independent variable (AGE) affect the dependent variable (CA).

For coefficient TAILLE (SIZE) note that the calculated value is greater than the scheduled value (T_cal> T_tab) and we have the lowest level significantly less than 5% of any (porb=0.0000), Consequently reject H_0 meaning that moral ability and different from zero, and thus, the independent variable (TAILLE) affects the dependent variable (CA)

For fixed coefficient note that the calculated value is smaller than the scheduled value and we have the lowest level significantly less than 5% (0.3091 = porb), and it accept H-0 so it is not moral, and it can be hard to accept it in the model. We therefore delete the fixed variable from the model and it becomes as follows:

Dependent Variable: LCA
Method: Least Squares
Date: 04/26/16 Time: 14:41
Sample: 1985 2014
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LEVA	1.027664	0.018821	54.60334	0.0000
TAILLE	0.008059	0.000869	9.276959	0.0000
AGE	-0.009830	0.004884	-2.012658	0.0542

R-squared	0.918202	Mean dependent var	19.28174
Adjusted R-squared	0.912143	S.D. dependent var	0.658852
S.E. of regression	0.195288	Akaike info criterion	-0.334038
Sum squared resid	1.029715	Schwarz criterion	-0.193919
Log likelihood	8.010577	Hannan-Quinn criter.	-0.289213
Durbin-Watson stat	2.351001		

10- The second economic and the statistical study of the model.

10-1- Economic study: Through above equation we note that:

- For each of the coefficients TAILLE, EVA note that their signals are positive, that is a positive relationship between the dependent variable LCA previous explanatory variables as:

-If EVA increased by 1%, the CA will increase by 1.027%

-If Increased TAILLE one, the CA will be increased by: (0.0081) unit.

- The AGE variable note that a negative reference and this means that there is an inverse relationship, If AGE change one unit, the CA will decrease by: (0.0098) unit.

10-2- The statistical study.

10-2- A-Student test

Test results will be clarified Student to assess the moral model parameters and that through the calculated values (T_cal) Scheduled values T_tab) and this in the abstract level of 5% and the degree of freedom (n-k)

And from the scheduled value is calculated as follows: ..... $=T_{n-k}^{a}=T_{27}^{0.05}$

Where: n number of the studied sample: k number of parameters

Under the following assumptions:

Null hypothesis: $H_0: B_0 = 0$

Alternative hypothesis: the existence of at least a factor of between transactions contained in any form is nil:

$$H_1: B_0 \neq 0$$

And it can be illustrated test Student model debugger results as follows:

Table Student statistical test results

Variables	the level of moral%5 (porb)	Scheduled values(T_{tab})	Calculated values(T_{cal})
C	**0.0000**	**1.703**	**54.603**
EVA	**0.0542**	**1.703**	**-2.0126**
AGE	**0.0000**	**1.703**	**9.2769**
TAILLE/SIZE	**0.0000**	**1.703**	**54.603**

For coefficient EVA note that the calculated value is greater than the scheduled value (T_cal> T_tab) and we have the lowest level significantly less than 5% of any (porb = 0.0000), Consequently reject H_0 meaning that moral ability and different from zero, and thus, the independent variable (EVA) affects the dependent variable (CA).

For coefficient AGE note that the calculated value is smaller than the scheduled value (T_cal> T_tab) and we have the lowest level significantly less than 10% of any (porb=0.0542), Consequently reject H-0 meaning that moral ability and different from zero, therefore, the independent variable (AGE) affect the dependent variable (LCA).

For coefficient TAILLE note that the calculated value is greater than Scheduled value (T_cal> T_tab) and we have the lowest level significantly less than 5% of any (porb =0.0000), Consequently reject H-0,so it is a moral ability and different from zero, therefore, the independent variable (TAILLE) affect the dependent variable (CA) .

10-2- B-coefficient of determination R^2: The obtained value of the coefficient of determination is estimated at 0.9182: As the explanatory variables controlled by: 91.82% of the changes that occur on (CA) which indicates that there is a strong correlation between the CA and the explanatory variables, the rest who an estimated:

(8.18%) is explained by other factors not included in the model and are included in the error term ε_t

10-2- C-Fisher test

The moral test for each statistical estimators at the same time relying on statistical Fisher (F), which aims at the overall morale of the variables during the measurement of the following hypotheses:

Null hypothesis:

$$H_0: B_0 = B_1 = B_2 = B_3 = B_4 = 0$$

Alternative hypothesis: the existence of at least one of the coefficient of transactions contained in any form is nil:

$$H_1: B_0 \neq B_1 \neq B_2 \neq B_3 \neq B_4 \neq 0$$

Through the results obtained, we found that the calculated value (F_cal) is greater than the scheduled value (F_tab) We also have (porb = 0.0000) less than 5% and it will reject null hypothesis H_0 permission capabilities of the model overall morale, which shows a linear relationship between the dependent and explained variables.

W-autocorrelation between errors test Durbin-Watson (DW)

Durbin Watson is considered as the most common and accurate tests , it is used to confirm the presence or absence of a self-correlation of the errors of the first order.it is supposes(Test de Durbin-Watson) on the existence of two basic hypotheses

Null hypothesis: lack of self-H-0 link: $\rho = 0$

Alternative hypothesis: There autocorrelation H-1: $\rho \neq 0$

Where (ρ) represents autocorrelation coefficient of the first class.

After the completion of the calculation (d) compares it with th Scheduled values (d_L) which is the minimum for a lack of autocorrelation.

d_μ Which represents the maximum, depending on the number of observations (N) and the number of future variables in the model for each significance level $\alpha = (5\%.1\%)$.

The process and the acceptance or rejection of one of the hypotheses according to the following chart:

Positive self link	Doubt	Lack of autocorrelation	Doubt	négative self link

0 d_L $d\mu$ 2 $4-d_\mu$ $4-d_L$ 4

Through above scheme we can concluded that: the value of*(d)* moderation is (2) and at the lack of autocorrelation be: *p=0*

$$H_0 : d = 2 \Rightarrow \rho = 0$$

$$H_1 : d \neq 2 \Rightarrow \rho = 0$$

to calculate the value Scheduled of a statistical DW: with knowing that k = 3and n = 30 and depending on the statistical table (DW) we have acquired the following results:

$$d_L = 1.21 \qquad d_U = 1.65$$

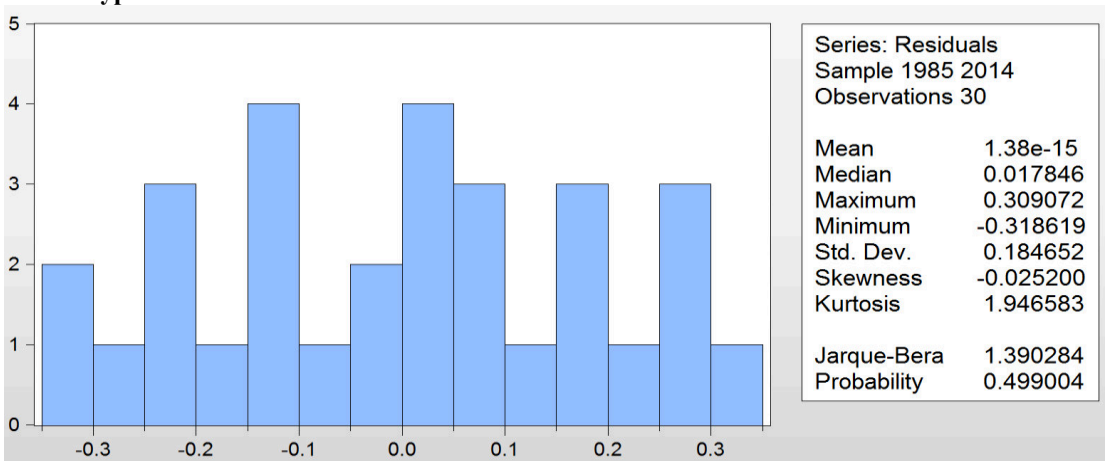
By the results of estimating model $d_\mu \langle DW = 2.35 \langle 4 - d_\mu$ errors independence and any lack of self-correlation between errors.

10-2- D-normal distribution test of the residuals estimated model.

We test the residual series under the following assumptions:

Null hypothesis: residuum series follow a normal distribution.

Alternative hypothesis: residuum series does not follow a normal distribution



To find the nature of the normal distribution of residuals estimated model we use the Jarque-Bera test

and results are shown in Figure test, in order to test the null hypothesis (H-0: residuum series follow a normal distribution) JB=1.39<$\chi^2_{0.05}$ 2 =5.991 and we have (P = 0.499> 0.05) this makes us accept the null hypothesis that residuals follow a normal distribution.

Acceptable economic and statistical model is the last model.

Dependent Variable: LCA
Method: Least Squares
Date: 04/26/16 Time: 14:41
Sample: 1985 2014
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LEVA	1.027664	0.018821	54.60334	0.0000
TAILLE	0.008059	0.000869	9.276959	0.0000
AGE	-0.009830	0.004884	-2.012658	0.0542

R-squared	0.918202	Mean dependent var	19.28174
Adjusted R-squared	0.912143	S.D. dependent var	0.658852
S.E. of regression	0.195288	Akaike info criterion	-0.334038
Sum squared resid	1.029715	Schwarz criterion	-0.193919
Log likelihood	8.010577	Hannan-Quinn criter.	-0.289213
Durbin-Watson stat	2.351001		

Conclusion

While there are a number of limitations to this study, as well as other unanswered questions, this study provides several contributions to the study of growth and corporate finance. First, in line with the RBV growth theory (Resource-based View) and the results of Carpenter and Petersen (2002), the creation of value added is the most important factor affecting sales and growth Employment. This shows that companies are forced to grow in response to the growth in cash flow generated. Second, SMEs by their very nature, are a heterogeneous group and reveal generalizations of their behavior, it is necessary to divide them into subgroups which results in increased homogeneity**.**

References

- J.Zhang, "The contracting benefits of accounting conservatism to lenders and borrowers",Journal of Accounting and Economics,2008, .27-54.
-James L. Grant,Foundations of Economic Value Added ,Wiley finance édition, 2003 , p.242.
-J. M. Samuels,Size and the Growth of Firms,The Review of Economic Studies, Published by: Oxford University PressVol. 32, No. 2 (Apr., 1965), 105-112
-Jonathan Levie. From "Stages" of Business Growth to a DynamicStates Model of Entrepreneurial Growth and Change. Centre for Entrepreneurship University of Strathclyde.United Kingdom.2008.8.
-Garnsey, E., Stam, E., & Heffernan, P. (2006). New firm growth: Exploring processes and paths .Industry and Innovation, 13(1),1-20.
-G. Charreaux ,G.Desbrieres, Gouvernance des entreprises et création de la valeur, finance, contrôle, stratégie, vol 1, n2,1998 , pp.57-88
-Geroski, P. A. (2005). Understanding the implications of empirical work on corporate growth rates. Managerial and Decision Economics, 26(2), 129-138.
-Penrose, E. (1959). The theory of the growth of the firm. Oxford: Oxford University Press.57-85.
-*Viner, Jacob (1931). "Cost Curves and Supply Curves".* Zeitschrift für Nationalökonomie. . Reprinted in R. B. Emmett, ed. 2002, The Chicago Tradition in Economics, 1892–1945, Routledge, v. 6, 192–215