

Characteristics, Obstacles and Problems of Algerian SMEs by Sector

Caractéristiques, Obstacles et Problèmes des PME Algériennes par Secteur

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Abstract

This study covers a group of SMEs in the city of Oran, including 64 SMEs belonging to the manufacturing sector, then, 10 SMEs belonging to the Building and Public Works sector, and 6 activating in foreign trade (import- export). Indeed, the data of the latter are collected for the year [2012]. This study is based on a statistical analysis, the principal component analysis which confirmed to us that, therefore, the companies have the same characteristics at the level of the same sector of activity.

Keywords: *SME characteristics, Profitability Indicators, Productivity Indicators, Debt indicators.*

Résumé

Cette étude couvre un groupe de PME de la ville d'Oran, dont 64 PME appartenant au secteur des Industries manufacturières, alors, 10 PME appartenant au secteur du Bâtiment et Travaux Publics « BTP », et 6 activant dans le Commerce extérieur (Import-export). En effet, les données de ces dernières sont collectées pour l'année [2012]. Cette étude est basée sur une analyse statistique à savoir l'analyse en composantes principales qui nous a confirmés que, les entreprises ont donc les mêmes caractéristiques au niveau d'un même secteur d'activité.

Mots clés : *Caractéristiques des PME, Indicateurs de Rentabilité, Indicateurs de Productivité, Indicateurs d'endettement.*

ملخص

تغطي هذه الدراسة مجموعة من الشركات الصغيرة والمتوسطة في مدينة وهران ، بما في ذلك 64 شركة صغيرة ومتوسطة تنتمي إلى قطاع الصناعات التحويلية ، ثم 10 شركات صغيرة ومتوسطة تنتمي إلى قطاع المباني والأشغال العامة ، و 6 مؤسسات تعمل في مجال التجارة الخارجية (الاستيراد، تصدير). في الواقع ، يتم جمع بيانات هذا الأخير للعام [2012]. تستند هذه الدراسة إلى تحليل إحصائي ، أي تحليل المكون الأساسي الذي أكد لنا، وبالتالي، فإن الشركات لها نفس الخصائص على مستوى نفس قطاع النشاط.

الكلمات الدالة : *خصائص الشركات الصغيرة والمتوسطة، مؤشرات الربحية، مؤشرات الإنتاجية، مؤشرات الديون.*

Introduction

The company's performance remains a central issue for research in management sciences, so its measurement remains a delicate problematic and methodological issue. Indeed, the literature concerning the evaluation of the performance in company is very important and complex.

And as Marmuse states, [1997], "performance does not exist. It is a contingent and multidimensional concept but necessary to evaluate any decision taken". To this end, our study consists in empirically testing the performance of the 80 Oranian SMEs surveyed in terms of branches of activity studied in 2012, and makes it possible to analyze if there are links between companies in the same sector in terms of performance indicators, by treating the increase in their profitability, the strengthening of the growth of their activities, the improvement of their productivity, the stimulation of their additional investments, as well as the financing costs by a decrease in the level of indebtedness. In order to meet this objective, a principal component analysis is used; We will first present a presentation of the basis of the conceptualization of performance, second, the principle of principal component factor analysis (PCA), then we will interpret the results of application of the PCA technique on our database.

1. Basis of Theoretical Analysis on Performance

In the face of the new complex economic and financial situation, characterized by the irrevocable globalization of economies and trade, the threat of open markets, the evolution of international, financial, regulatory and economic activities, as well as the emergence of new technologies, small and medium-sized enterprises are struggling to find their place. They are therefore led to manage increasingly difficult decisions in order

to find the most appropriate solutions. For that, the question of "Performance" has become an imperative for their survival, as well as a response to the range of perspectives crossed at the heart of the functioning of the economy, and even more to the structural changes that are transforming the economic regime.

In fact, the issue of SME performance is at the heart of all research and economic considerations. This concept is one of the most frequent words in the speeches of economists and managers, in the company's activity reports and in research on the organization. However, the meaning of this concept is often very different for each situation, each case, and each company, which does not lead to a common definition of this term. Thus, the evaluation of the company's performance goes far beyond the evaluation of its financial performance alone. The business diagnosis can not be reduced to the financial diagnosis. So, in order to make a valid diagnosis of a company, it is necessary to be able to analyze also the performances in the fields of production, quality, logistics, etc. (Plauchu, V, [2006]).

Also, according to Plauchu. V, [2006], "the notion of performance, always implies more or less a comparison with a competitor: it belongs to the language of the competition. We are efficient compared to someone, a technique is performance that a other".

2. Basis of the main statistical analysis

2.1. Empirical analyzes of the data

Followed by the statistical description of the data and the different variables, explained in the previous section, this paper consists of empirically testing our main hypothesis, by characterizing the performance of the 80 Oranian SMEs surveyed in terms of branches of activity. Our sample is presented as:

Table (1.): The 80 SMEs surveyed by sector of activity

Sector	Number of SMEs
Manufacturing industries (A.)	64
1. Food industry (A.A.)	17
2. Construction materials (A.B.)	15
3. Chemistry & Plastics and Pharmacy (A.C.)	14
4. ISMMEE (A.D.)	6
5. Wood & paper industry (A.E.)	5
6. Textiles (A.F.)	5
7. Leather, Skins & Shoes (A.G.)	2
B.T.P.H (B.)	10
Import&Export (C.)	6
Total	80

Source: Personal confection.

Indeed, this method makes it possible to test if there are links between the companies of the same sector in terms of performance indicators. And that, by analyzing the increase of their profitability, the reinforcement of the growth of their activities, the improvement of their productivity, the stimulation of their additional investments, as well as the costs of financing by a decrease of the level of indebtedness. In order to meet this objective, a principal component analysis will be used; we will first introduce the principle of Principal Component Analysis (PCA), then we will interpret the results of applying the PCA technique to our database.

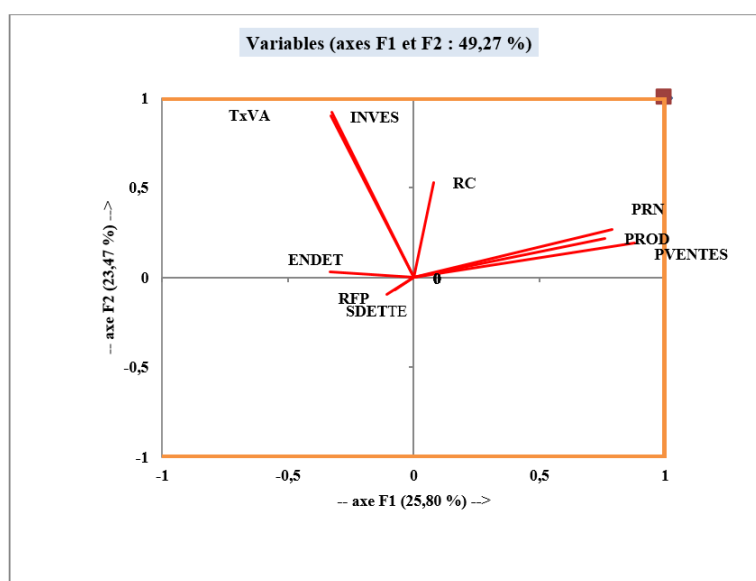
2.2. Applying P.C.A and Results of Practice Verification

Indeed, our analysis is based on the principle that we must elaborate and geometrically represent in a

Euclidean space and of small size, the most diverse information recorded in our digital database with double entry, which, taking into account the size or complexity of the table representing our data, can't be synthesized. The fundamental purpose of this method is to provide all the digital data an image that allows at a glance, to quickly grasp all the elements presented, and highlight some essential facts.

This method makes it possible to group the initial indicators into a limited number of synthetic indicators called axis forming factors that structure the positioning of the individuals-sectors of activity in the space of the performance indicator variables. In addition to its role of synthesis, this method makes it possible to draw up a typology of the sectors of activity according to their resemblance on the basis of these factors.

Figure (2.): Representation of the variable points j of N (j) in the factor space (1, 2)
"The factorial design ($\tau_1 + \tau_2 = 49,27\%$)"



Source: From the table of factorial coordinates of the variable points of N (J).

The axes are interpreted from the most represented variables, those whose correlation is close to 1 in absolute value. Indeed, this plan represents 49.27% of the explained variance. Thus, the Profitability of Equity "RFP", and the Structure of the Debt "SDETTE" do not seem very well represented by one axis or the other is however better represented on the plan than the variable "ENDET" which seems closer

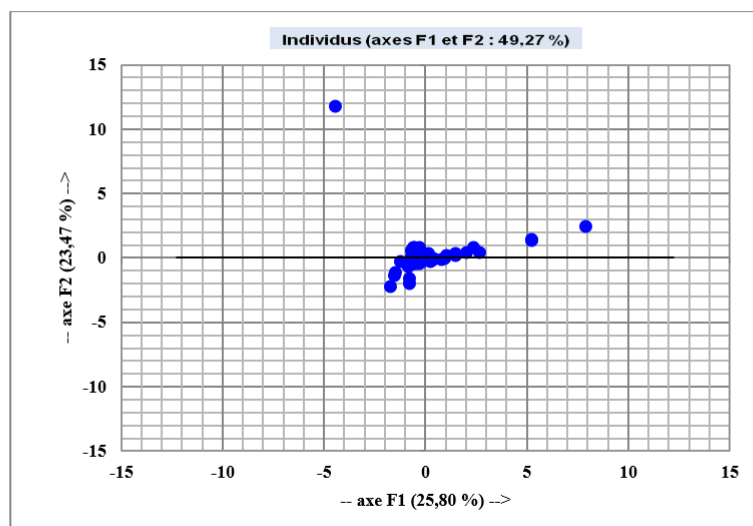
This is because the variables "RFP" and "SDETTE" are correlated both with axis 1 and in axis 2, whereas "ENDET" is only correlated with axis 2.

As already mentioned, the correlation between the initial variables and the main components retained is represented by the variable map. According to the figure (above) relating to the principal plane (1,2), the first principal axis "1" is strongly and positively

correlated with 3 variables "PROD, PVENTES, and PRN", and negatively related to 3 variables "ENDET, SDETTE, and RFP". The main axis «2» is strongly and positively correlated with 3 variables «TxVA, INVES, and RC», and negatively with 2 variables «RFP, and SDETTE».

Indeed, the individual points are represented in the factorial space considered as explanatory (four dimensions in our case). As for the variable points, one proceeds by projection on factorial planes. We considered the factorial plane constituted of the two first axes "factorial space (1, 2)":

Figure (3.): Representation of the individual points i of N (I) in the factor space (1, 2)



Source: From the table of coordinates of the individual points i of N (I).

The figure above represents the companies in the main factorial plan defined by the first two axes selected. The interpretation of proximities depends on the quality of representation. Indeed, this figure allows the detection of the most explanatory points, that is to say; the most representative SMEs; those which contribute the most to the inertia of the axis.

This group is made up of 23 SMEs (28.75% of the total), (5 of which belong to the Agribusiness "or 29.5% of the totality of the branch", 1 to the sector of Construction Materials "Almost 6.66% of the entire industry", 6 in the Chemicals, Plastics & Pharmaceuticals sector "that is 42.85% of the whole branch", 2 in the ISMMEE sector, ie "33.33%", then 5 to Import-export "is almost 83.33%", and finally 3 to the BTPH sector "that is 30% of the totality of this sector"). In this context, it should be noted that it can be subdivided into two contradictory parts; "High-performing (10)" and "non-performing (13) companies, of which (12) companies are in deficit".

2.3. Discussion of results

Then, the quality of representation, measured by the square cosine of the angle that forms the projection of the initial vector in the plane (which must be close to 1), is very good for the companies "A.C.8.", "C.6. And A.A.5. As well as for a few SMEs (such as "AA4.", "AA8.", "AA10.", "AA16.", "AB4.", "AC2.", "AC6.", "AC9.", "AD4.", "AD5.", "AG2.", "AC1.", "AC10", "B.5.", "B.6.", "B.9.", "C.1.", "C.2.", "C.4.", And "C.5.").

The company "A.C.8. "Seems strong in terms of TxVA, INVES, and RC, and average in terms of PVENTES, PROD, PRN, and ENDET, and low in terms of SDETTE and RFP. It is strongly and positively related to the axis 2. Among others, the companies "A.A.5.", "A.C.2. "A.C.6. "A.D.4. ", "B.5. "C.1. ", "C.2. ", "C.4. "C.5. And "C.6. Which are strongly and positively related to axis 1, appear strong in terms of PVENTES, PROD, and PRN, averages in terms of RC, TxVA, INVES, and are low in terms of ENDET, RFP and SDETTE.

Thus, the companies "A.A.4. "A.C.9. "And" B.6. Which are strongly and negatively related to axis 2, appear strong in terms of RFP, SDETTE and ENDET, averages in terms of TxVA, INVES, and RC, and low in terms of PRN, PROD and PVENTES. Enterprises "B.9. ", A.A.10. "A.A.16. ", A.D.5. "A.G.2. "A.C.1. "And" A.C.10. Appear strong in terms of ENDET, SDETTE, and RFP, low in terms of PVENTES, PROD, and PRN, and averages in terms of RC, TxVA, and INVES. Indeed, they are strongly and negatively related to Axis 1. Companies "A.A.8. And A.B.4. Are strongly and negatively correlated with both axis 1 and 2, and appear strong in terms of RFP, ENDET, and SDETTE, low in terms of PRN, PROD, and PVENTES, and mean in terms of TxVA, INVES and RC.

In addition, companies with very low cosine squares (43 SMEs or 53.75%) (10 of which belong to the food industry "or 58.82% of the whole industry", 10 to the Materials sector) "Almost 66.67% of the entire industry", 8 in the Chemicals, Plastics & Pharmaceuticals sector "accounting for 57.14% of the entire industry", 4 in the ISMMEE sector, ie "66.67% »1« a »in the Wood & Paper sector« that is 20% of the SMEs surveyed in this sector », then, 5 in the Textiles sector« that is 100 of the totality of this branch », and finally 5 in the sector BTPH« is 50% of the entire sector ").

These companies are: ("AA1.", "AA2.", "AA3.", "AA6.", "AA7.", "AA9.", "AA11.", "AA14. . ", "AA15. ", "AA17. ", "AB1. ", "AB2. ", "AB3. ", "AB6. ", "AB8. ", "AB9. ", "AB10.", "AB11.", "AB12.", "AB13.", "AC3.", "AC4.", "AC5", "AC7.", "AC. 11. ", "AC12. ", "AC13. ", "AC14. ", "AD1. ", "AD2. ", "AD3. ", "AD6. ", "AE3. ", "AF1. ", "AF2. ", "AF3. ", "AF4. ", "AF5. ", "B.1. ", "B.3. ", "B.7. . ", "B.8. ", And" B.10. ").

Indeed, the graphical representation shows a very clear grouping of these companies which are at the center of gravity, and can be considered as weak points. In this context, it should be noted that it can be subdivided into three parts: "weak enterprises (36)", "deficit (6)", and "failing (1)"

Finally, 14 SMEs are close to the center of gravity, representing 17.5% and can be considered as average

points, (2 of which belong to the Agribusiness "or 11.8% of the whole branch", 4 in the Construction Materials sector "almost 26.67% of the entire industry", then 4 in the Wood & Paper sector "ie 80% of SMEs surveyed in this sector", 1 "one" in the "Leather & skins" sector Footwear "is 50% of the totality of this branch", 1 "one" to the import-export "is 16.67%", and finally 2 to the sector BTPH "is 20% of the totality of this sector").

Thus, the firms "A.A.12. ", A.A.13. "A.B.7. ", A.B.15. "A.E.1. "A.E.2. "A.E.4. ", A.E.5. "A.G.1. ", "B.2. ", "B.4. And "C.3. "Are strongly and negatively related to the axis 1. Among others, the company" A.B.14. Is positively related to this axis. The company "A.B.5. Is positively related to this axis.

Conclusion

The purpose of this work was to analyze the existence of SME characteristics at the level of a given sector, in terms of performance indicators taken into consideration. In order to address this issue, and based on a sample of 80 SMEs from the sectors of Manufacturing, Buildings & Public Works, and Foreign Trade, we conducted a comparative analysis using statistical inference, and this, via the implementation of a method, namely the ACP Also, data from these companies are collected for the year [2012].

It was in fact, dealing with a range of performance indicators namely; (Return on Equity (RFP) (Financial Profitability), Business Profitability, Value Added Rate, Productivity "PROD", Productivity Value "PRN", Sales Productivity "PVENTES", Productivity Investment "INVES", and the debt ratio "ENDET", as well as the Debt Structure "SDETTE"), on which the economic analysis (Main Components Analysis "ACP"), characterization of performance of SMEs by branches of activity, has been highlighted.

Our study divided our surveyed population into three groups; The first who is majority, and in a situation of passivity and survival. It is thus characterized, for the most part, by; financial difficulties, loss of position in their traditional market, as well as lack of structuring. The sustainability of these companies is achieved through modernization investments and / or

divestments (to limit losses and release new resources or to redeploy to new products or activities).

The second is in a growth situation. It does not experience financial difficulties, and seeks to maintain or improve their positions in their traditional, mainly domestic market. With this in mind, it should be noted that "business leaders realize that their comfort will be challenged by commercial openness and that they must prepare for competition (I.F.P.E., [2011])". Thus, the third and last group, which is characterized by a satisfactory financial situation, a very modern organizational and managerial strategy, and a competitive commercial position.

Bibliography

- Abdlelahdi. Z., (2009), "Algerian SMEs face globalization: adapting or disappearing?", The tribune of Algeria, Algeria, March 2.
- Abedou Abderrahmane & Bouyacoub Ahmed & Kherbachi Hamid, (2013), "Entrepreneurship in Algeria 2011", Global Entrepreneurship Monitor (GEM), GIZ (Germany) CREAD (Algiers), January, 125 pages.
- Amblard. M. (2007), "Financial Performance: Towards a Critical Review of the Accounting Result", XVth Conference of the International Association of Strategic Management (AIMS), June 6-9, Montreal.
- Bergeron. H, (1998), "Dashboards to report on performance: typology and determinants", Proceedings of the XIX Congress of the AFC, Nantes, Volume II, pp. 555-568.
- Boukella, M and Bouaita. A, (2002), "Recent Developments in the IAA Sector in Algeria: Between Dynamism and Gravity", the CREAD Papers, No. 61, p 5-29.
- Daoud. S, (2013), "Sectoral Structure and Contribution of Algerian SMEs to Foreign Trade", In International Colloquium: "Evaluation of the Effects of Public Investment Programs [2001-2014] and their Impact on Employment, Investment and economic growth ", 11-12 March, Setif, Algeria.
- Joyal A, M Sabeg and O Torres (direction), (2010), "The Algerian SME and the challenge to internationalization": Foreign experiences, L'Harmattan, Paris.
- Lauras. Matthieu, (2004), "Methods of diagnosis and evaluation of performance for the management of supply chains: Application of the cooperation between mother and mother international subsidiaries in a pharmaceutical and cosmetic group", Thesis of doctorate in "Industrial Systems", prepared from the Industrial Engineering Center of Mines of Albi-Carmaux, Toulouse, France, supported on 07 July.
- Madoui. M, Boukrif. M, "From the administered economy to the market economy: SMEs facing the challenge of upgrading enterprises in Algeria", International Symposium: "Vulnerability of VSEs and SMEs in a globalized environment", 27 as of May 29, 2009, P 5.
- Ministry of Industry and Investment Promotion, (2008), "Draft Strategy and Upgrade Policies", internal document, November.
- Ministry of Industry, Small and Medium Enterprise and Investment Promotion - ANDPME, (2011), "Nomenclature of Expenditure: Financial Assistance for the National Upgrade Program", Internal Document, P 1-3.
- Ministry of Industry, Small and Medium Enterprise and Investment Promotion, (2012), "SME Statistical Information Bulletin, No. 21".
- Quach Thi Kim Oanh, (2006), "An Organizational Performance Research Perspective," 23rd Annual Conference of the Canadian Council of Small Business and Entrepreneurship, Trois-Rivières.