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A Psychological Approach to Credit Risk Management: A Qualitative Dyadic Survey of Moroccan SMEs

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Abstract:
The banking environment has become both unstable and vulnerable due to various fluctuations in the monetary sphere. Faced with these various disruptions, banks are increasingly threatened by risks affecting their activity and position on the financial market, notably credit risk. Risk management is the best defense shield for ensuring a healthy financial equilibrium in the long term. Nevertheless, it remains an advanced practice, which Moroccan banks are unable to support, due to the lack of human and financial resources. This article intends to highlight the importance of customer and banker behavior in the credit granting process. It analyses the customer's profile, which can have an impact on the credit granting decision, using differential psychology and in particular the theory of personality traits -BIG5-, and the banker's behavior, using the theory of judgement and decision-making -JDM-.

Keywords: Risk management, behavioral studies, BIG5 theory, JDM theory, differential psychology

1. Introduction

Controlling credit risk is at the core business of the bankers, as it determines the profitability of the operations carried out. If the financial institution underestimates this risk, the amount lent and the interest due will not be collected, and will be recorded as a loss. Assessing credit risk requires a good knowledge of the customer, and a good assessment of the company and the sector in which it operates. The bank's credit risk assessment is based on its own experience and, if necessary, on statistical tools (scores or expert systems).

In banking institutions, those responsible for undertaking risk assessment, notably the front-line officers who deal with existing and potential customers (Favarel-Garrigues et al., 2007), are required to exercise their intuition and judgment to assess the customer's risk characteristics (Johnson, 2003). On a daily basis, a banker has to assess the customer's risk, judge whether the customer is a high- or low-risk customer and, if necessary, decide whether to proceed with banking transactions requested by the customer. Risk assessment therefore systematically involves judgment, which would imply anchoring and adjusting basic heuristic rules specific to the agent's knowledge and value system (Presutti, 1995).

In addition to the importance attached to structural variables such as company size, age and ownership structure (hooks, 2003; Robb and Wolken, 2002; Vos et al, 2006), business managers also include in their studies behavioral and cognitive variables such as the manager's experience, age and previous training (Robb and Wolken, 2002; Gröbl and Levratto, 2004), as well as his or her attitude to the disclosure of accounting and financial information (Chapellier, 1994; Lavigne, 2002; Lavigne and Saint-Pierre, 2002;

Berry and Roberston, 2006), as presented in the second part of this article.
However, the quantity and quality of the information obtained depends on the nature of the relationship between the bank and the borrower (Berger and Udell, 2002). It has been proven that a long-term customer relationship gives clients the confidence to reveal information to their bank without worrying about confidentiality (Psillaki, 1995). On the one hand, the customer relationship reduces the cost of external information, and on the other, it is a source of internal information production.
The most recent research recognizes the role played by managers in the evolution of their relationships with different markets, customers, suppliers and, more particularly, with financial intermediaries. In this article, we attempt to provide an explanation of the behaviour and attitude of the manager by mobilizing theories of differential psychology, with the aim of proposing, theoretically, a tool that could facilitate the evaluation of business loan files.

2. Literature review

In general, growing companies, and especially SMEs, which today represent almost the entire Moroccan business fabric (95%), find themselves with insufficient equity capital, and are therefore faced with a pressing increase in working capital requirements. Since the banking network is the ideal solution to this problem, entrepreneurs inevitably turn to it for a cash line to match their business cycle, or for long-term financing of their investment projects. This explains the strong dependence of SMEs on banks, a dependence that is growing ever stronger as information becomes increasingly opaque.
This brings us to the important relationship between banker and entrepreneur. According to Boot (2000), it's a mutual commitment based on trust and respect. As for Bink and Ennew (1997), they define it as a partnership relationship, identified on the one hand by the nature of the contract established between the two parties and the manager's willingness to share management information, and on the other, by the understanding, advice and support provided by the banker. In this context, the agency theory of Michael C. Jensen and William H. Meckling (1976) is rightly given its full meaning.
To remedy the information asymmetry and minimize counterparty risk, the banker must carry out an investigation into the company and its environment, which in banker's jargon is called a "file study". This includes: a financial analysis, a market study, an industrial study, and of course an investigation on the manager's profile.
Formally, financial analysis is the essential tool, and the main support, for any credit decision. Indeed, practice shows that most bankers require at least three years historical financial statements to diagnose a company's financial health (Fournier, 1992). Although the decisions required to grant credit are mainly based on quantitative elements and guarantees, an empirical study carried out by Kwok (2004), proves that these financial statements are only used during sequential reading. In fact, according to the same study, the account manager almost never remembers the monetary information, due to the complexity of the documents provided, the difficulty of using them, and the lack of training of the agents. The account manager will therefore have to rely on other sources of information to support his decision. In the Tunisian context, Bellouma and Omri (2005) find, on the basis of 76 companies between 1998 and 2000, that the combination of a good level of real collateral and an adequate interest rate does not overcome the problem of informational opacity traditionally faced by banks.
Commonly, banks focus on the size, age and structure of the company to determine the terms of a loan (Chapellier 1994, Robb and Wolken 2002 and Vos et al. 2006), but recently, studies have highlighted the importance of other variables, notably the characteristics of the company's owner/manager, and confirmed

their weight in the decision to grant a loan (Stein, 2002).

2.1. Profiling the manager

It is difficult to assess the willingness or ability of owner-managers to obtain the funds they need to carry out their investment projects, or to finance their operating cycles. To do this, we resort to manager profiling: education, age and experience are often used as proxies (Robb and Wolken, 2002).
A doctoral thesis by Chapellier (1994) breaks down the manager's profile into objective criteria: gender, age, experience, level of education; subjective criteria: ambition and goals; and psychological variables.

2.1.1. Objective criteria

Gender (Wahidi, Partuel 2016): a literature review reveals alarming discrimination against women entrepreneurs in the granting of bank loans (Levy Tajedine and Chebil 2010; Levy Tajeddine & Zouiten 2005). St-Jean et al (2013), deduce that "gender is likely to influence the perception of subjective norms, entrepreneurial self-efficacy and outcome expectations, just as all of these elements influence the intention to choose entrepreneurship as a career".
Age (Lucas 1975, Reix 1984, Nelson 1987, Nadeau et al 1988): according to Berger and Udell (1998), older owners are more likely to benefit from bank loans.
Level of education: Gröbl and Levratto (2004) show that managers with a good level of education in management or accounting motivate their employees, and involve them in diagnosing the company's weaknesses and assessing risk. Like the well-informed manager, the manager with modest training relies more on his or her experience in managing the business, and puts forward his or her reputation as an argument in the financing application. They obtain disadvantageous conditions if credit is granted. In addition, higher education in management or accounting gives the manager the knowledge and skills needed to negotiate more effectively with external parties, especially the banker.
Experience (Reix 1981, 1984, Martel et al 1985, Nelson 1987, Nadeau et al 1988): although the banker's decision does not depend on the executive's level of experience, a study by Mehdi Nkhili and Manal Derbel shows a statistically significant correlation between the two variables, especially in the case of refusal. They conclude that the more experience the SME manager has, the higher the probability of obtaining credit.

2.1.2. Subjective criteria

In addition to the objective criteria mentioned above, many authors (Marchenay 1982, 1990, 1993; Mintzbegr 1986; Hamilton 1987; Solomon and Fernald 1988; Slatter et al 1988; Blais and Toulouse 1990; Taguiri and Davis 1992) consider that the goals pursued influence entrepreneurial success, and we can therefore assume that they may have an impact on the credit decision. The literature groups them under 4 goals:
Independence: the main objective of SMEs. Independence is a vital desire that presupposes the search for financial securitý capable of ensuring dependence on fund providers. To this end, the entrepreneur makes a special effort to keep the entire ownership in the hands of the same people, and to restrict the delegation of power, often translates into "a concern to hold the share capital and avoid long-term indebtedness" (M. Marchesnay, 1994).
Desire for continuity and stability: the aim is to ensure the survival of the organization, and a stable business that will be passed on to heirs. "The entrepreneur performs a multitude of tasks, and his main objective is the survival of his business" (Lorrain, Dussault, 1988).

Desire for growth: "The owner-manager's logic of action a rapid valorization of the capital invested" (GREPME, 1994). On the one hand, they are tempted by growth, which translates into success, power and prestige. On the other hand, they find themselves held back by the risks of growth: loss of control, financial problems, fear of losing autonomy.

Profit: the translation of this objective depends on the company's size (G. Hirigoyen, 1981). Profit-seeking in an SME stops at achieving satisfactory short-term profitability, at the opposite of large firm, that looks for a wealth maximization.

These goals can be intimately linked, even intertwined. Indeed, growth is a necessary element for survival, and vice versa. Mintzberg (1986), points out that the pursuit of one goal could conflict with others, such as the case of growth, which could be detrimental to profit and therefore to the company's survival.

2.1.3. Managerial behavior

In general, SME managers base their decisions on their own judgment, intuition and experience (Mintzberg, 1976; Simon, 1987; Nadeau et al., 1987). According to Naro (1989), it's difficult to establish a typical image of the manager, whether self-taught, sometimes with a higher education diploma, a young creator with no experience, an executive who has resigned from a large group or the heir to an old family business.

This heterogeneity leads Julien and Marchenay (1990) to wonder about the managerial characteristics of these managers. These different managerial profiles may have nothing in common, but they certainly have an impact on management style (Fallery, 1983; Specht, 1987; Marchenay, 1988; Julien and Marchenay 1988; Lorrain and Dussault 1988; d'Amboise, 1989; Lefebvre 1991; Woo et al. 1991; Marchenay 1992).

2.1.4. Disclosure behavior

A review of previous researches shows that managerial behavior has a profound influence on management and accounting practices, especially in SMEs (Chapellier, 1994; Lavigne, 2002; Lavigne and Saint- Pierre, 2002). As a result, bankers are expected to take in consideration the importance attached by managers to accounting information, when assessing a request for financing. Based on the standard that "attitudes explain behavior", as expressed by Ajzen (1987-1991) in the planned behavior theory, we stipulate that utility accorded by the manager to the accounting information in the decision-making, can have an impact on the process of granting bank credit. This idea was confirmed in the study by Nkhili and Derbel (2016). Indeed, the probability of obtaining credit is higher when managers transmit all the necessary accounting documents, namely the balance sheet, income statement and cash flow statement.

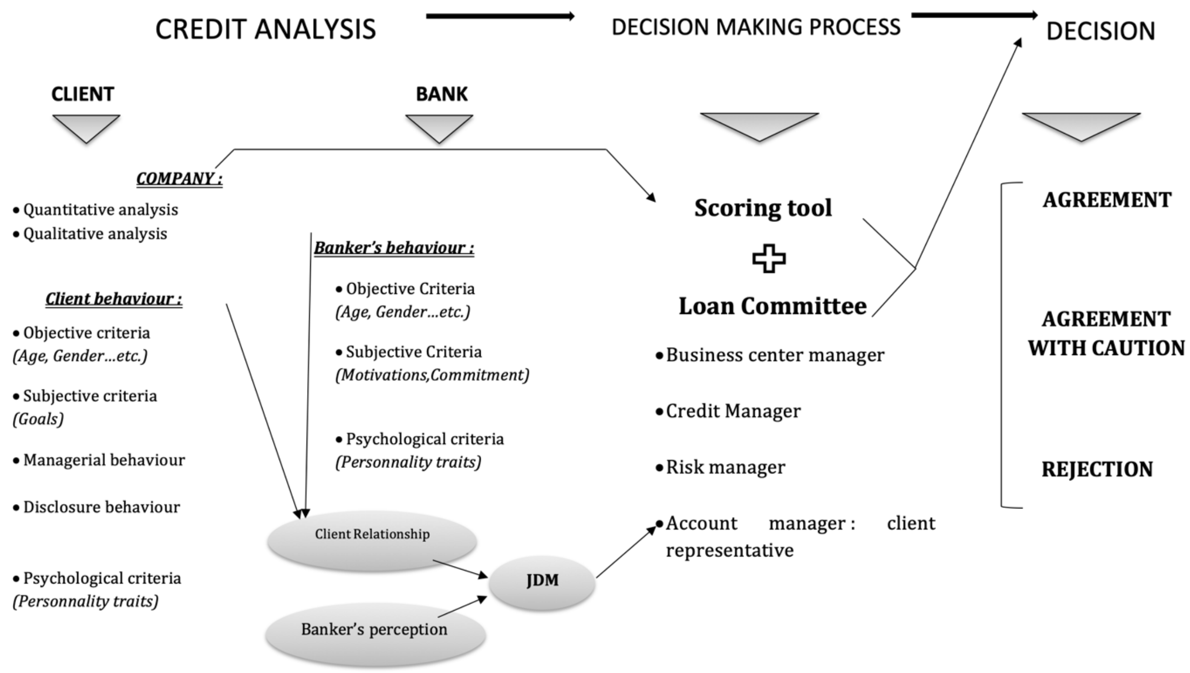
2.1.5. Psychological variables

In identical situations, not all individuals behave in the same way. Personality is studied using questionnaires that define traits relating to more or less broad classes of situations, such as the "Big-five", which lists 5 traits: introversion-extraversion, emotional stability or neuroticism (nervousness), benevolence (agreeableness), conscientiousness (concern for order, responsibility) and open-mindedness. These dimensions are considered to be the underlying traits that make up an individual's overall personality, and are more reliable for predicting behavior.

A statistical study carried out by Brandstätter in 1997 on 368 entrepreneurs of both sexes, including founders, heirs and individuals interested in setting up a business, revealed that personality traits are significantly correlated with perceptions of project and entrepreneurial success. For example, founders are more emotionally stable and independent, but less rational than heirs. Personality characteristics are both causes and effects of entrepreneurial behavior. True, personality is modulated by environmental opportunities and incentives, but there is no doubt that individuals choose and shape their environment

according to preferences rooted in personality structure (Holland 1985, Bolton 1985). Other authors (Eysenck and Eysenck 1985, Coshlin et al 1988) go further and assert that the fundamental dimensions of personality, namely stability and extraversion, are to a large extent genetically determined.
These statistically significant studies could well be combined with the meanings of the facets (high & low values) given by Big-five theory for each personality trait, and serve as a complement to the credit scoring tool set up by the banker to reduce uncertainty concerning the manager's profile, which up to now has been filled in arbitrarily by the business manager, according to his own perceptions and judgments.
On the basis of those theoretical outputs, we have proceeded to schematize the credit granting process in the form of an abstract model listing the elements that can influence the credit decision.

Abstract Model proposition



3. Methodology

This article aims to highlight the link between the two phenomena -manager's behavior, and the credit granting decision-, by proposing manager's behavior as the generating mechanism of credit decision making.
According to the critical realist paradigm, we have opted for a multiple case study, which we have extended with a personality test, designed from the 3 most credible tests in differential psychology namely: The Big five, the Big 6 also known as HEXACO and the life orientation test LOT.
We focus on understanding the elements that justify the construction of the financing decision: the why, as well as those that participate in this construction: the how.

3.1 Contrast sample with interviews

In order to open the way to external comparison or to a kind of "heterogeneous totality", we constructed a mosaic through a diversified number of cases.

Thus, in constituting our sample we were focused to ensure the presence of at least 1 representative of each group relevant to our object of study. Our objective is to identify a psychological mechanism that generates the decision to grant credit. The latter is three-dimensional:

- Agreement: A
- Agreement with caution: AC
- Rejection: R

This is how we framed our study around 10 dyads, that leads to 20 interviews, grouping diversified cases according to the above-mentioned decision categories. Our empirical framework is as follows:

	Actor	Gender	Age	Exp	Sector/Bank	Duration	Décis
Dyad1	Banker	Masculin	34ans	4years	BMCE	20min	R
	Manager	Masculin	34ans	1an	Agro-business	39min	
Dyad2	Banker	Feminin	35ans	10 years	AWB	26min	AC
	Manager	Masculin	46ans	10 years	Iron	29min	
Dyad3	Banker	Masculin	39ans	13 years	BMCE	28min	R
	Manager	Masculin	39ans	7 years	Food service	45min	
Dyad4	Banker	Feminin	42ans	15 years	AWB	24min	A
	Manager	Masculin	55ans	24 years	Textiles	21min	
Dyad5	Banker	Masculin	31ans	3 years	AWB	70min	A
	Manager	Masculin	57ans	25 years	Textiles	36min	
Dyad6	Banker	Masculin	38ans	15 years	SG	36min	AC
	Manager	Masculin	55ans	13 years	Bedding & Insolation	48min	
Dyad7	Banker	Feminin	36ans	12 years	SG	32min	A
	Manager	Masculin	42ans	18 years	Security and services	34min	
Dyad8	Banker	Masculin	32ans	8 years	AWB	21min	A
	Manager	Masculin	42ans	19 years	Pharmaceutical sales	21min	
Dyad9	Banker	Masculin	37ans	12 years	BP	31min	A
	Manager	Masculin	36ans	9 years	Energetic-efficiency	40min	
Dyad10	Banker	Feminin	36ans	14 years	BP	30min	AC
	Manager	Masculin	66ans	46 years	Home appliances	40min	

We then looked for contrast by exploiting 2 strategic variables:
- General variables: age, gender, marital status, experience, level of study.
- Specific variables: directly related to our object of study, previously treated, or at least suggested by theory, -subjective and behavioral variables-.

It should be emphasized that in our case, it's not a question of numerical representativeness, but solely to the desire to have 1 to 2 examples per category, for the sake of completeness. Indeed, according to Michelat (1975), in this type of sample, the researcher knows how many subjects he would like to have for each category, and therefore has an idea of the total number of interviews making up his sample.

As this is qualitative research, we are not seeking to generalize our results. Our objective stops short of what the literature calls "empirico-analytical generalization". Here, it is the differences between the groups that reinforce the relevance of the description proposed for each group, and it is precisely in this way that we manage to identify trends, and generalize to all similar individuals (Bourdieu, 1993).

3.2 Access to the field and collection of empirical material

The dyadic approach should be carried out in the same way, on both sides, to guarantee the collection of usable and meaningful information.

3.2.1. The interview guide

We opted for collection through semi-directive interviews. Our study was thus conducted by interview guides oriented by 4 main axes:

- Objective criteria;
- Subjective criteria;
- Behavioral criteria;
- Relational criteria.

To make the most of the dyadic approach, we drew up interview guides for each of the actors -client manager and banker-, respecting a parallelism in the above-mentioned axes, according to the outline below.

Manager of the SME	**Banker**
Objectif criteria	
− Gender, − Age, − Entrepreneurship experience − Study level…	− Gender, − Age, − Seniority level − Experience in the actual position …
Critères subjectifs	
− Goals	− Motivations, ambitions and expectations
Managerial behavior	**Position held**
Bank relationship	**Customer relationship**
Psychological criteria Personality test	

3.2.2. Personality test: collecting psychological data

We built a personality test to identify the components of the psychological variant.

This test is a compilation of 3 psychological tests: the Big 5 "OCEAN", the Big 6 "HEXACO", and the life orientation test "LOT". We then combined the criteria of these three tests, to finally obtain a test with 7 factors (traits), all evaluated on a LIKERT scale, with a neutral point:

- Optimism
- H-factor: sincerity, fairness, non-greed, modesty
- Professional awareness: sense of competence, orderliness, sense of responsibility, combativeness, self-discipline, diligence, perfectionism
- Neuroticism (Natural reactions): anxiety, sensitivity to stress, dependence
- Agreeableness: indulgence, flexibilitý, patience, trust in others
- Extraversion: activity levelĺ, social self-esteem, social boldness, assertiveness

- Openness: intellectual curiositý, creativitý, unconventionality

4. Results

4.1. Comparative reading

It should be remembered that the analysis of each axe was carried out in relation to the credit decision, in line with our objective of identifying the mechanism that generates it.

The general comparison between the actors on all the Criteria and aspects included in the interview guide brought out the significance of some of them, as shown in the table below.

		H	**N**	**AGE**	**EXP**	**POSITION**	**REL PER**	**Goals /Attachement**
4	**Banker**	51,11%	20%	42	15	Director	T. BIEN	YES
	Manager	80%	42,8%	55	24	Employee		GROWTH
5	**Banker**	73,4%	71,4%	31	4	Business manager	T. BIEN	YES
	Manager	93,33%	48,6%	57	25	Partner*		GROWTH SUSTAINABILITY
7	**Banker**	71,2%	40%	36	12	Director		YES
	Manager	73,33%	54,29%	42	18	Partner*	T. BIEN	INDEPENDANCE PROFIT
8	**Banker**	93,33%	60%	32	8	Portfolio manager	T. BIEN	YES
	Manager	82,22%	51,4%	43	19	Partner*		INDEPENDANCE PROFIT
9	**Banker**	80%	42,86%	36	7	Business manager	T. BIEN	NO
	Manager	64,44%	57,14%	36	9	Partner		INDEPENDANCE PROFIT
2	**Banker**	88,88%	73%	35	10	Director		YES
	Manager	71,11%*	62,86%	46	10	Partner	BIEN	PROFIT INDEPENDANCE
6	**Banker**	93,33%	48,57%	38	13	Director		YES
	Manager	66,67%	74,29%	55	15	Partner *	BIEN	STABILITY
10	**Banker**	75,56%	65,71%	36	14	Business manager	BAD	NO
	Manager	71,11%	71,42%	66	46	Partner *		STABILITY GROWTH SUSTAINABILITY
1	**Banker**	75,55%	57,14%	34	8	Business manager	BAD	NO
	Manager	43,33%	37,14%	34	1	Owner & manager		PROFIT

3	**Banker**	37,8%	34,2%	39	13	Business manager	BAD	NO
	Manager	57,8%	34,2%	39	7	Owner & manager		PROFIT

In sum, we can conclude from the comparative case study that:

In terms of objective criteria, the age criterion can have an influence on the credit decision, if both actors: banker and client are the same age. Similarly, experience is a decisive factor for managers, but not for bankers. In our case, managers with more than 7 years' experience are more likely to receive a favorable response.

It also emerges that, from the bank's point of view, the manager's position in the company's shareholder structure is important. In this respect, salaried managers and managers with partners are more likely than managers who are unique owner to be granted a loan.

In terms of subjective criteria, we retain:

For managers: the ultimate pursuit of profit is liable to rejection. Executives who are not profit-seeking, or who are profit-seeking in conjunction with another goal, are more likely to get an agreement.

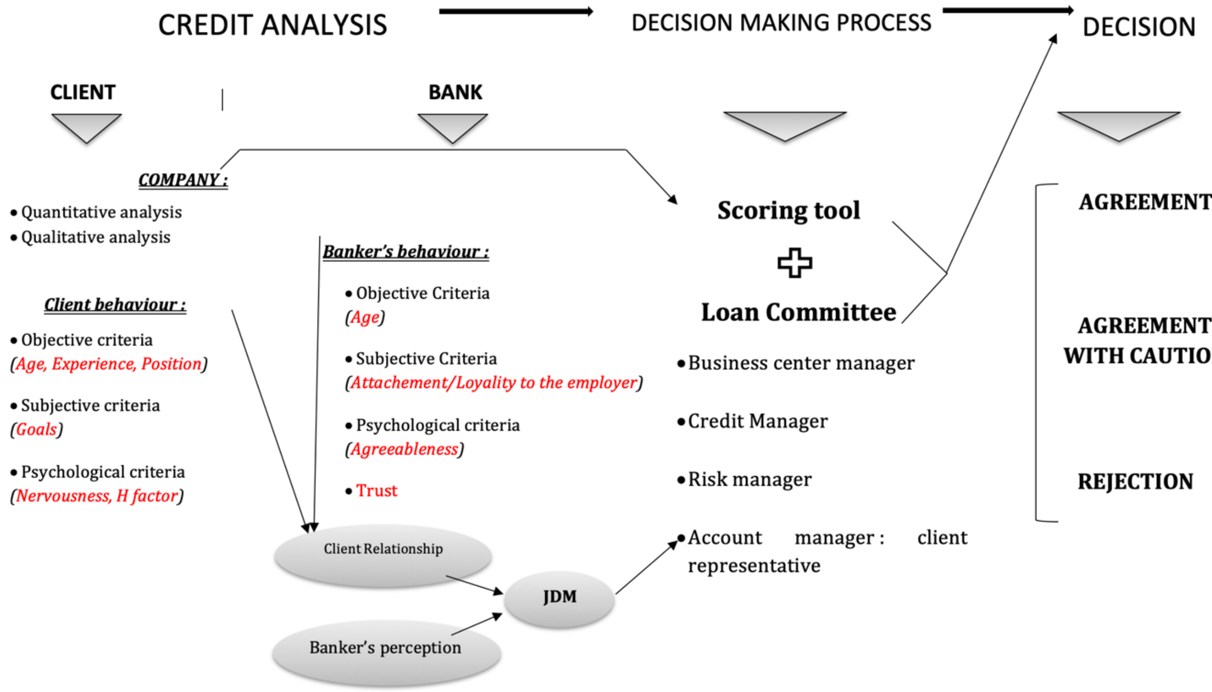
For bankers: agents who feel an attachment to their employers are more likely to defend their clients' files, and move towards agreement, than those who are ready to change employer at the first opportunity.

- As far as the banker/manager relationship is concerned, we note that a good relationship, judged by the actors in our case to be "GOOD" and "VERY GOOD", is a decisive factor not only in securing an agreement, but also in minimizing the level of guarantees retained, even when the company is suffering from financial imbalance. On the other hand, a relationship judged to be "POOR" leads to rejection, or at best, a cautious agreement, conditional on a high level of guarantees, even if the company in question is in good financial health.

For the psychological criteria, based on 7 personality traits, we were able to highlight a link for 2 factors, while the others were discarded. As a result, we found that managers with a "Nervousness" score between 40% and 60% are more likely to get a deal as it stands. A higher score results in a revision of the grant conditions, while a lower score may result in rejection. Similarly, managers with a relatively high H Factor score (>60%) are more likely to have an agreement, than managers with a score below this threshold.

4.2. Redefining the abstract model

Referring to the elements retained in the inter-case analysis, we propose below a redefinition of the abstract model already proposed, considering survey's results which appear significant, and which we retain as the "generating mechanism" of the credit granting decision, in our research context.



After this analysis, it seems appropriate to return to the questions that have driven this research, and to provide some answers.

1. Can non-numerical information change the credit decision?

As the literature shows, the credit decision considers qualitative, non-numerical elements, known as "soft information". In addition to their complementary role in the file study, our inter-case analysis shows that this type of information can indeed change the credit decision, as shown by the comparison between dyads 3, and 9, which, in a purely quantitative or transactional approach, would have been treated differently. File 3, with its good financial health and market position, would have been approved, rather than file 9.

2. Is the customer's profile a key factor in the credit application process?

In the Moroccan context, the literature states that the profile of the customer, the company director, is obviously a preponderant element. By profiling, the literature means age, experience and level of study, whereas in our research question, it implies many more elements. The result of our survey suggests points in common with the literature, but also points of divergence. We can conclude, therefore, that the customer's profile is preponderant in the study of the credit file.

3. Does the banker fill in the customer form arbitrarily?

Referring to the testimonies of those working in the field, it must be remembered that the way in which "soft" information is filled in, concerning the customer, differs from one organization to another. Some banks provide bankers with a detailed questionnaire (SG), others provide their agents with grids (BP and BMCE), and many others give their employees a margin of expression through a comment, filled in on a rating tool (AWB). Almost all of these bankers claim that this data is not entered arbitrarily, since it is based on: "their personal judgement", "their day-to-day dealings with the customer"...etc. As a result, we can say that the banker does not fill in the customer form arbitrarily, but rather subjectively.

4. Does the banker's behavior have an impact on the credit decision?

The banker is universally recognized as the main agent in the credit decision. That said, we need to be clear about what we mean by "banker behavior". If the banker's behavior includes his commitment to, and attachment to, his employer, then yes, in the context of our research, we can say that the banker's behavior guides the credit decision. For, as mentioned above, a banker who feels a sense of recognition and attachment to the employing organization is more likely to defend his customer's case and secure a credit agreement.

CONCLUSION

With the continued development and evolution of the credit industry, loan products play an increasingly important role in the economy. The evolution of technology in credit risk assessment represents one of the significant innovations in the banking industry. The traditional method based on the personal expertise of the customer relationship manager has given way to the so-called "act-based" relationship which is based on the use of standard criteria such as the credit scoring system or the rating of credit. Today, within large banks, the majority of professionals use these new methods when making the decision to grant credit. This work tends to highlight certain criteria to be taken

taken into consideration in the standardization of their relations with companies and in the design of their own rating systems.

The objective of this research is to examine the relationship between the decision to grant bank loans to SMEs and the behavioral variables concerning respectively the company and the manager.

The works and research cited explain the effect of exogenous variables on the banker's decision ("agreement versus agreement with prudence" or "refusal versus agreement with prudence"). Our article seeks to explain the decision to grant a bank loan by taking into consideration the behavior of the manager. It mainly emerges that the profile of the manager is decisive in the formulation of credit requests. However, like any research work, this has certain limitations, especially with regard to psychological variables. Studies of loan files differ from one bank to another, from one region to another and from one context to another.

But the question that persists is the following: what is the future of the bank-business relationship, particularly after the adoption of the new "Basel II" regulations, in a country like Morocco where the relational culture and the informal character dominate the business world?

REFERENCES

1. Alaoui, M. & Boulahbach, Y. (2014) Le rôle de la confiance dans la décision d'octroi de crédit bancaire aux PME marocaines : d'une relation de transaction à l'approche relationnelle. 12ième congrès international francophone en Entrepreneuriat et PME, Agadir
2. Baltas, A. (2001) Gestion du risque crédit par les banques Marocaines. Revus Tenjis de droit et d'économie volume (N°8)
3. Baltas, A. (2010) Gestion risque crédit par la méthode du scoring, cas de la BP. Revue Marocaine de recherche en management et marketing Rabat volume(N°2)
4. Benthami, A. (2016) Les limites de l'outil de notation interne appliqué par les banques aux PME : Cas du Maroc. Épargne sans frontière « Techniques Financières et Développement volume (2016/3 n° 124, p143)
5. Berrichi, A. & El Gazi, M. (2016) Le modèle interne de notation bancaire et ses effets sur la mobilisation des connaissances et l'évaluation des agents. Dossiers de Recherches en Économie et Gestion, Dossier Spécial (n°3, p178-192)
6. Berry, M. (1998) Strategic planning in small high-tech companies, long range planning, volume (31, no. 3), pp. 455-466

7. Brandstatter, H. (1997) Becoming an entrepreneur — a question of personality structure? Journal of economic psychology volume (18, issue 2-3, p157-177)
8. Chapellier, P. (1997) Profil du manager et données comptables de gestion en pme. Revue internationale pme : économie et gestion de la pme ; volume 10, n°1
9. Daoud Ben Arab, S. & Masmoudi Mardessi, S. (2015) Le management des risques dans les entreprises tunisiennes, un état des lieux après la révolution. La revue gestion et organisation volume (7) p106-115
10. Hassad, M. & El ghak, T. (2010) Risque de crédit à travers les cycles d'activité : une analyse sur un panel de banques de dépôt tunisiennes. Revue libanaise de gestion et d'économie volume (3, issue 5, p1-35)
11. Nekhili, M. & Derbel, M. (2007) L'importance des variables structurelles et comportementales dans la décision d'accord de credit aux pme tunisiennes. Revue internationale p.m.e. : économie et gestion de la petite et moyenne entreprise, volume (20), n°3-4, p. 191-218.
12. Rapport de la société marseillaise de crédit SMC, finance méditerranée, jeudi 24 mai 2004
13. Wahidi, I. & Paturel, R. (2016) Octroi des crédits aux femmes entrepreneuses libanaises par les banquiers : le cas du dispositif. Revue gestion et organisation (8), p 40-52