

Psychological types and their effect on the use of accounting information: a study about managers of small enterprises

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Resumo:

The objective of this research is to investigate if there is a relation between the psychological profile of the entrepreneurs of small enterprises and the use of accounting information in a decision making. This study is based on Jung's (1921) works, which inspires the typologies used in this research, the MBTI - Myers-Briggs Type Indicator. For the accomplishment of this research, we considered the answers of 80 entrepreneurs of small enterprises. The results show that there is no relation between the psychological profile and the use of accounting information. Notwithstanding this fact, we hereby observe that the objective of the use of the information is mostly for legal requirements and a very small fraction for management purposes. Emphasizing that the entrepreneur's profile is determined by the psychological type SJ (Sensorial and Judgment), and this is the one that most uses accounting information.

Palavras-chave: *Psychological Types; Accounting Information; MBTI and decision making*

Área temática: *Controladoria*

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Summary

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Key Words: Psychological Types; Accounting Information; MBTI and decision making.

Introduction

The objective of this study is to understand if the psychological types of the managers of small enterprises influence the use of accounting information for decision-making. The psychological types were divulged in 1921 by Jung, who inspired the development of the evaluation instruments of the mentioned typology such as MBTI - Myers-Briggs Type Indicator, which is the instrument used in this work to evaluate the psychological types of the managers of small enterprises.

In spite of several studies about the psychological profile of small entrepreneurs, there are very little studies relating to this profile and to the use of accounting information for decision-making. This situation may represent a good opportunity to evaluate the reasons that make a user rely more on accounting information than another one with similar functions and types. MBTI tools used follow the instructions of the test and the conceptual aspects established by authors like Meier (1978), Carskadon (1982), Rosenak (1988) and Gardner (1996).

The studies on the application of the MBTI in the accounting scope normally relate to the profile of the accountant or of the accounting student comparing this profile with the professional or educational performance, being these conclusions shared with Wheeler (2001). Studies relating to the profile of the user of accounting information are less frequent and consider a field to be better explored by accounting research.

1. Theoric Referential

1.1 Psychological types

In 1921, Jung presents the psychological types, a result of the combination of peoples' attitudes in the world and of psychological functions related to perception and to the process of decision-making. Jung's book Psychological Types can be considered a mark in this line of study and the typology generated a series of studies in several contexts, as well as it inspired the development of evaluation instruments of that typology, such as the MBTI - The MBTI - Myers-Briggs Type Indicator. This matter was developed after the Second War by Katherine Cook Briggs and her daughter, Isabel Briggs Myers, and validated for application within

several countries; it analyses the preferences of persons considering four scales: introversion or extraversion; sensation or intuition; thinking or feeling; and perception or judgment. This last dimension, that represents the way people guide themselves in an external world, was not included in Jung's typology, having been added by Myers and Briggs when the test was elaborated.

To understand the psychological types, it is necessary to define the concepts of attitude and of psychic's functions according to Jung's point of view. He considers attitude as a disposition of the psyche to act or react in a certain direction (JUNG, 1991, p.45). Jung refers to the existence of two basic attitudes: extraversion and introversion. To understand the difference between both, it is necessary to explain, according to Jung, the difference between the objective and the subjective world. The objective world refers to the external world of the subject; this includes people, physical surroundings, social rules, and so on. Therefore, the object represents everything that is "not I". The subjective world designates the inner world of the psyche. It is private and, sometimes, does not even emerge the conscience mind of the subject (HALL and NORDBY, 1986, p.32).

In the extraverted attitude, the psychic energy is canalized to the representations of the objective world and applied to the thinking, feelings, and perceptions of the external world of the subject. In the internal attitude, the psychic energy goes to the structures and subjective psychic processes. These two attitudes are mutually excluding, not appearing simultaneously in the psychic state of the person, although they may alternate in their conscience. Therefore, although there is a standard of dominance for each subject, a person can be extraverted in certain environments or situations and introverted in others (HALL and NORDBY, 1986, p.11; JUNG, 1991, p.89).

The characteristics of an introverted person are the exploration and analysis of its inner world. Generally, this person is reserved and concerned with inner matters, therefore passing an image to others of a non-social person and of someone reserved. On the other hand, the extraverted person turns to the external world, being concerned with the interactions between people and things; the image is of activity and interest in other people. The classification of a person, in extraverted or introverted, depends of the degree in which those attitudes manifest themselves. Another modulating factor is that, at the unconscious level, the attitude opposed to the one expressed is present (VON FRANZ, 1971, p.123; HALL and NORDBY, 1986, p. 94); this attitude of the unconscious, although controlled, not expressing itself openly, influences peoples' actions.

The psychic functions are, according to Jung, types of activity that remain identical under several conditions; they are the resources through which conscience obtains its guidelines for the experience. Jung classifies four functions, two rational and two irrational, respectively thinking and feeling and sensation and intuition. Jung made that distinction between the functions with base on his experience; according to him, each one of them cannot be related or reduced to the other; they are independent among themselves.

Rational functions: thinking is an intellectual function, the objective of which is to reach comprehension of the world, since it consists in an association of ideas to reach a general concept or to arrive to the solution of problems. Feeling is an evaluating function, organizing, basing its judgment on a pleasant or unpleasant feeling, originated in the evaluated situation. Those functions are considered rational because they require a judgment act: through reasoning or through feelings. It is interesting to observe that, according to Jung, feeling cannot be mistaken with emotion, since the last one is involuntarily (JUNG, 1991).

The irrational functions: sensation is the subject's perception of all sensorial external or internal stimuli. Intuition is different to sensation, because a person that has an intuition picks

up the alterations in the perceived object, but is not able to precise its impressions, cannot say from where was intuition originated; according to Jung, it is a “tip” (HALL and NORDBY, 1986, p.44; JUNG, 1991, p.22). Sensation and intuition are considered irrational functions since they are mental states that develop from the flow of stimuli over the person. They have no aim, contrary to the evaluating functions.

Jung resumes the four functions as follows: sensation (sensorial perception) tells the person that a thing exists; thinking says what that thing is; feeling reveals if that thing is pleasant or not; and intuition says from where it comes and to where it goes (JUNG, 1977, p.54).

Attitudes and functions combine themselves forming the psychological types. According to Jung, there are eight psychological types, resulting from the combination of four functions and two attitudes. The psychological types may be identified from early childhood (up to the time of preschool) and sometimes even earlier, when some of the characteristics are very evident. For example, a small child that, when entering an unknown environment, needs to attentively observe all the space and name the objects that are unknown to her, shows a predisposition of a predominant introversion. The attitudes and functions combine forming psychological types.

It is important to emphasize that Jung describes the psychological types separating the manifestations of the introversion and extraversion attitudes in the dominions of conscience and unconscious. The main function of each person ends up by being emphasized, generating a unilaterality, that manifests itself at conscience level and which is reinforced by the environment. It is natural that people are inclined to what is easier for them and thus they increase this unilaterality.

These unilateralities, considered abilities Von Franz (1971, p.34), develop an increase of the main function and, on the other hand, cause a degeneration of the person’s personality, the unconscious level. Therefore, it is understood why some people express “distorted types”, that is to say, people who were forced by environment to develop functions that are not naturally theirs (VON FRANZ, 1971, p.65). Families exercise that interference, since they frequently attribute the roles that their members must assume.

You can see a summary of psychological types on Tables 01, 02 and 03, as described in Jung’s original typology (HALL and NORDBY, 1986, p.23).

Extraverted types	Introverted types
Rational functions	
<p>Extraverted thinking (ET)¹</p> <p>Objective, rational thinking is the passion of their lives. They dedicate their energy to learn everything they can. They like theory formulations and tend to control the aspect of feeling in their nature; therefore, they pass the impression that they are cold and arrogant. When the control of their feelings is very severe, they may become autocratic, fanatic, and impenetrable to criticism.</p>	<p>Introverted thinking (IT)</p> <p>Thinking is inner directed; they try to understand their inner reality. Their feelings are controlled and they pass the impression that they are distant people, since they do not value other people. This type of people likes to be alone to think. They do not expect their ideas to be accepted by others. They are inclined to be pertinacious, stubborn and arrogant.</p>
<p>Extraverted feeling (EF)</p> <p>People with this typology subordinate thinking to feeling. They appear to be “capricious”, because their feelings vary as much as the situations change. They are considered</p>	<p>Introverted feeling (IF)</p> <p>Contrary to the extraverted feeling type, that boast about their emotions, introverted feeling people hide their emotions from the world. They tend to be seen as silent, inaccessible, indifferent. Frequently they</p>

effusive, emotional, exhibitionists and unstable. They create very strong ties with other people, but in a transitory manner. They can convert love in hatred. When the function of thinking is very much controlled, this type of people tend to present rational processes in a little developed way.	present a melancholic or depressed look. They tend to pass the impression that they have an inner harmony, tranquility and self-sufficiency. Sometimes they seem to have a mysterious knowledge or some type of charisma. Once in awhile, their profound and controlled feelings tend to explode highly surprising their relationships.
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Table 01: Psychological types – rational functions

Extraverted types	Introverted types
Irrational functions	
<p>Extraverted sensing (ES)</p> <p>People of this type like to accumulate facts about the external world. They are realists, practical, stubborn, but do not have a particular interest on the meaning of things. They accept the world as it is. They can be sensual people, eager for excitement, but their feelings are superficial. They live in function of the feelings they may get out of life.</p>	<p>Introverted sensing (IS)</p> <p>People with this typology maintain themselves distant from the external objects, “diving” into their own psychical sensations. They think the external world is banal comparing with their internal sensations. They have difficulty to express themselves. They tend to look calm, passive and controlled; they are not interesting people, since they do not take an interest in rationality or feelings.</p>
<p>Extraverted intuition (EN)</p> <p>People belonging to this typology tend to be voluble and unstable. They jump from one situation to another to be able to discover new possibilities in the external world, even before they conquer the present space or the previous ones. They can promote new events or new causes, but they do not maintain their interest in them. They do not like routine and novelty is what sustains their nature. They do not keep long-term relationships; they frequently hurt other people due to their lack of continuous interest.</p>	<p>Introverted intuition (IN)</p> <p>In general, people of this typology are dreamers, visionaries and eccentric. Their friends see them as enigmas; they consider themselves as not understood genius. Since they take no interest in the external reality, they find it difficult to communicate. They change from situation to situation and do not develop any of their intuitions. They are capable of having brilliant intuitions that end up by being elaborated and developed by others, because they have a great difficulty in maintaining their interest and therefore cannot concretize their visions.</p>

Table 02: Psychological types – irrational functions

The descriptions presented in the MBTI for the functions and attitudes are very similar to those of Jung. On Table 03, one can see the descriptions for the guidelines in relation to the external world, not foreseen in Jung’s typology (MYERS, 1993, p.43).

Judgment	Perception
<p>People that prefer to use the judgment process and are usually methodic. They have a style of planned and organized life. They like definitions. They consider important to follow timetables and agendas. They appreciate their own capacity to reach targets. They avoid last minute running.</p>	<p>People that prefer to use the Perception process have a habit of living in a flexible and spontaneous manner. They try to understand life instead of controlling it. They feel restrained whenever they have to plan or make decisions. They like to be open to last minute’s options. They like and believe in their creativity to adapt themselves to new situations.</p>

Table 03: MBTI – dimension of orientation in relation to the external world

In a way, it can be said that a summary of these points are as follows: (E) Introversão; (S) Sensorial, (T) Razão, (J) Juízo, (I) Introversão, (N) Intuição, (E) Emoção and (P) Percepção.

1.2 The relation between the psychological profile and the use of the accounting information

The study of an eventual effect of the psychological profile foreseen by Jung in the use of accounting information by small entrepreneurs could help to explain the use of accounting information in small enterprises that, according to the literature regarding this area, present shortages or difficulties in the use of accounting information.

Therefore, the idea is that managers with different profiles may have different levels of use of accounting information. Thus, we can try to understand if intuitive-introverted managers (IN), according to Jung, would have different behaviors regarding the use of accounting information than an introverted thinking manager.

For Teixeira (2002, p.22) the importance of studying the decision-making process and the social, economic and psychological profile of the managers of small enterprises has a focus on the establishment of channels that may make feasible the pro-active participation of accounting as a strategically tool in the process of decision-making.

However, Smith (1999, p.11) studies the relation among sex, cognitive style and personality in the decision-making, showing that, although it is difficult to arrive to a more direct relation regarding these items, they may be considered imported for the accounting area for a better understanding of how these factors relate among themselves.

In other areas such as business, the study of psychological styles and their eventual impact in decision-making is more advanced and demonstrate more effective results than in the accounting area, this can be understood by the work of Hough (2005, p.32) where different managers with different MBTI present different strategies of decision. Another study in this line is Gallén's (1997, p.11), being this one more conceptual.

The opportunities of studies in this area are bigger, since the majority of the researches show a great concentration of studies regarding psychological studies of accountants and accounting students in international literature, according to the reports of Wheeler, Hunton and Bryant (2004, p.24).

2. Methodological aspects

The study shall be the phenomenological paradigm. Phenomenology is the science that studies social phenomenon, facts and occurrences, from the point of view of the person who is living them, since they consider the personal references of the participants of the research and their subjective condition. A phenomenon is a fact or an occurrence, which appears, or is perceived especially in this specific case (COLLIS and HUSSEY, 2005, p.11). This research is a social empiric research, about an approach with a phenomenological base.

The selected population for the accomplishment of this study was formed by entrepreneurs, the business of which were classified as micro and small enterprises of Sao Paulo - SP, city considered the most important in , under the economic point of view. Only questionnaires that fulfilled the requirements of this research were selected for this sampling: the questionnaire should be answered by the entrepreneur himself or the main responsible for the decision-making and with relation to the classification of the enterprise, whether a micro or a small enterprise. One hundred and twenty questionnaires were distributed, being 96 of them answered and 80 considered valid, therefore being characterized as a convenience sampling and of enough size for the research method adopted.

To obtain the result of these researches two questionnaires were applied. The first one to characterize the profile of the entrepreneur was utilized in a compact version of MBTI, composed by 30 items. In addition, the purpose of the second one was to identify the frequency, dependency and importance of the accounting information that the entrepreneurs of small businesses give to accounting information.

When the job of collecting the questionnaires was terminated with the respondents, the tabulation of the collected data was begun and the respective data treatment in the SPSS software took place, as well as the respective interpretations of same.

2.1 Matter of the Research and Hypothesis of the Study

The matter researched by the present study is: Does the psychological type of the managers of small enterprises influence the use of accounting information for decision-making? The importance of that matter can be proved by Wheeler, Hunton and Bryant (2004). To try to answer this question some hypothesis are formulated, as well as the general hypothesis and specific hypothesis. Therefore:

Ho : The psychological profile of the entrepreneurs does not influence the use of the information of the entrepreneurs.

Ho₁ : There is no relation between type of use of information and previous experience of the management entrepreneurs.

Ho₂ : There is no relation between the type of use of the information and the time of study of the entrepreneur.

Ho₃ : There is no relation between the use of information and the activity area of the enterprise of the entrepreneur.

Ho₄ : The psychological type SJ of the respondents and the importance given to the accounting information for decision-making are independent.

Ho₅ : The psychological type NP of the respondents and the importance given to the accounting information for management decision-making are independent.

Ho₆ : The psychological type of the respondents (SJ) and the adoption of the different types of information considered important for the management of the enterprise were independent.

Ho₇ : The psychological type of the respondents (NP) and the adoption of the different types of information considered important for the management of the enterprise are independent.

3. Data analysis

A predominance of subjects of the type sensation, introverted or extraverted, and of those using the judging process in their orientation regarding the external world (ISTJ, ESTJ and ESFJ) was found in this research. Table 4 shows the description presented in the MBTI for

the more frequent psychological types among the subjects of the research (MYERS, 1993, p.28).

ISTJ	ESTJ	ESFJ
Subjects are serious and quiet, that reach success by means of concentration and meticulous. They are practical, methodical, factual, logical, realists and reliable. They are well organized. They assume responsibilities. Make decisions with base on what is necessary and act in a stable way, indifferent to the complaints or distractions.	They are practical, realists, naturally capable for business. They do not show interests for abstracts theories; they want to know about direct and immediate applications. They like to organize and conduct activities. They are generally good administrators. They are determined, quick in deciding. They are careful with routine details.	They are loving, talkers, popular, careful, good collaborators, active members of committees. They need harmony and have the capacity to create it. They are always helping someone. They work better if encouraged and praised. Their main interest is on what affects peoples' lives directly and visibly.

Table 04: MBTI – More frequent psychological types

From the total of respondents, there is 34.6% with the psychological types STJ (Extraverted or Introverted). They are mainly practical people, focused, realists, organized. If we consider the SJ characteristics, there are 67.3% of the people of the sampling. This makes us suppose that the people that chose to be entrepreneurs of small enterprises end up by embracing areas in which they feel easy, therefore reinforcing unilaterality.

However, the combination of an irrational function (S), based on the flow of stimuli over the subjects, with rational functions (Thinking – T, and Feeling – F), ends up by generating a multiplicity of action styles. May be, due to this fact, it was not found a correlation of the psychological types with the specific ways of using accounting information. Besides, let us remember that Jung's typology is only a classification in accordance to peoples' way of behaving; this does not mean that people with the same psychological type have identical personalities. Moreover, personality depends of an ample variety of factors and the psychological types do not explain its complexity. If we add to this the individual motivations, there are infinite combinations of individual differences.

3.1 Use of accounting information analysis and entrepreneurs' profiles.

3.1.1 Use of the accounting information for management's decision-making and the professional experience of the respondents

As per Table 01, it can be seen that the majority of the respondents use accounting information only to fulfill legal requirements (51/78); 20 respondents use them for a management decision-making (two only for this purpose and 18 other for management decision and to fulfill legal requirements).

A crossed tabulation of the variables was effected "use of accounting information for several purposes" and the "previous professional experience in the area". The values found in the contingencies coefficient test (value .157, p .742) show that the variables are independent, and H_0 cannot be rejected - There is no relation between this type of use of information and the previous experience of entrepreneur in management. This means that the use of the accounting information does not depend of the professional's experience in administrative areas.

		Previous professional experience in management		Total
		Yes	No	
Use of the accounting information to attend the needs of the enterprise	Legal	33	18	51
	Management	1	1	2
	Legal and Management	11	7	18
	Do not use	4	3	7
Total		49	29	78

Table 01 - Use of the accounting information and professional experience of the entrepreneur's in previous management

3.1.2 Use of accounting information for management decision-making and scholar level

The relation between the use of accounting information and scholar level of the respondents was not found; considering as H_{02} – There is no relation between the use of information and the time of study of the entrepreneur. The values found in the contingencies coefficient show that H_{02} cannot be rejected (value 0.489 and significance level 0.147). This is clarified by the analysis of Table 02, where it can be seen that between those that use the accounting information only to comply with legal requirements, or of those who use it for legal requirements and management needs, there are respondents of all scholar levels.

	Years of Study						Total
	Up to 4 years	From 5 to 8 years	Up to 11 years	Graduated	Post Graduated	Master's Degree	
Legal	13	4	3	13	17	1	51
Management	0	0	1	1	0	0	2
Legal and Management	1	1	1	7	7	1	18
Do not use it	2	0	3	0	1	0	6
Total	12	5	8	21	25	2	77

Table 02 – Use of accounting information and scholar level

3.1.3 Use of accounting information for management decision-making and activity area of the enterprise

No relation was found between the use of accounting information and the area of activity of the enterprise. Considering as H_{03} there is no relation between the type of use of information

and the activity area of the entrepreneur’s enterprise. The values found in the contingencies coefficient show that the hypothesis cannot be rejected (value 0.310, and significance level of 0.769).

3.2. The use of accounting information and the psychological profile of the entrepreneurs

3.2.1 Size of the enterprise and psychological type of the respondents

To analyze the relation between the size of the enterprise and the psychological profile of the respondents, the following adjustment was made:

- The variable psychological type was re-classified, considering the frequency of the profiles found in the distribution. Profile 1 was considered for the psychological type ISTJ, which had 16.3% of frequency in the sampling; profile 2 for the ESFJ type, with 12.5% of distribution in sampling; profile 3 for the ESTJ type, with 31.3% of distribution in sampling, and profile 4 for other psychological types that had a great dispersion in sampling, thus representing 39.9% of the samples.

With these adjustments, a crossed tabulation was accomplished between the variables “classification of the enterprise” and psychological types of the respondents. The following distribution was found in the crossed tabulation:

		ISTJ	ESFJ	ESTJ	Other Profiles	Total
Classificati on according to the size of the enterprise		0	0	0	0	2
	Micro	9	10	18	18	55
	%	16.4%	18.2%	32.7%	32.7%	100.0%
	Small	4	0	7	12	23
	%	17.4%	0.0%	30.4%	52.2%	100.0%
Total		13	10	25	30	80

Table 03 – Distribution of the frequency of the psychological types of the respondents according to the size of the enterprise

Analyzing Table 03, you can see that in the micro-enterprise the psychological types find a uniform distribution if comparing to a small enterprise, in which the psychological type ESFJ does not appear. In the small enterprise, there are 52.2% of the owners with profiles fitted into others, which unfold as follows: 13.0% in the profile ESTP, 17.4% in the profile ESFJ and 11.8% distributed among the remaining profiles.

It is curious to observe that the rare profiles (one only or none of the respondents presented this profile) were INFJ and INTJ, for the owners of micro, as well as of small enterprises. It is also understood that in the most frequent profiles, the perception of the respondents was characterized by sensation (S), that is to say, people are more attentive to details, more pragmatic, prefer to analyze the present than to think about the future. The least frequent are those with personalities where perception is characterized by a higher intuition; they are people with a long-term vision, more reflexive, less pragmatic. The predominant style of life in the psychological types was the ESTJ.

3.2.2 Cluster analysis: importance of the use of accounting information and the psychological profile of the respondents

We want to know if clusters of respondents can be formed by utilizing the importance variables attributed to the accounting information for decision-making and the profiles of the respondents that have their psychological types with S (perception) and J (style of life). A data bank was formed with that type of respondent. In this data bank, a new variable was created representing the average of the classifications attributed to the respondents to the following variables: Importance of Accounting Information - IC to attend to the fiscal or legal requirements, IC to compare internal controls, IC for investment decision-making, and IC to decide on the development of business. The new variable was given the name “Average of Importance of Accounting Information”. An analysis was accomplished of this new variable and it showed that it did not present a normal distribution. The variable was transformed applying a logarithmical function to it. The resulting distribution also did not present a normal distribution. Therefore, the variable did not show itself appropriate for the application of multivariate analysis techniques, and the proposal of making a cluster was abandoned.

3.2.3 Correlation analysis among respondents’ psychological types and use of Accounting Information regarding Management Actions.

Then an analysis took place of the correlation between each variable related to the Importance of the accounting information for the managing requirements with the SJ profiles of the respondents. A crossed tabulation was accomplished between the variables, introducing one management variable at each time. The contingency coefficient found for each crossing was analyzed; this coefficient is a measure associated based on the Chi-Square test. It was assumed as H_{o_4} : the psychological type SJ of the respondents and the importance attributed to the accounting information for a management decision-making are independent. The values of the Contingency Coefficient are shown in Table O4 (that varies from zero o 1.0), as well as the degree of significance (if less than 0.05, H_o is rejected) found for each crossing.

Variable	Contingency Coefficient Value	Level of significance	Position in Relation to H_{o_4}
Process of business	0.432	0.452	H_{o_4} cannot be rejected
Attend to fiscal or legal requirements	0.546	0.036	H_{o_4} rejected
Comparison with internal controls	0.429	0.470	H_{o_4} cannot be rejected
Investment decision	0.522	0.077	H_{o_4} cannot be rejected

Business development	0.460	0.304	H_{o_4} cannot be rejected
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Table 04: Correlation tests between psychological test of the entrepreneur (SJ) and the type of accounting information used

The only correlation found was with the variable “importance of accounting information to attend to fiscal and legal requirements” with a significance level inferior to 0.05 (value of 0.036) and correlation percentage of 54.6%, relatively high value, considering the field of Social Science. It could be that this correlation found is associated to the style of life “J”, which defines methodic people, with a strong sense of adjustment to norms and rules.

The same analysis was repeated to search for the correlation of psychological types with the importance attributed to accounting information for management requirements, now the NP profiles. As you can see on Table 05, H_{o_5} cannot be rejected for any of the variables, thus indicating that there is no correlation between the psychological types (NP) of the respondents and the attribution of the importance to accounting information for management matters.

Variable	Contingency coefficient Value	Significance level	Position in relation to H_{o_5}
Business processing	0.343	0.785	H_{o_5}
Attend to fiscal or legal requirements	0.434	0.390	H_{o_5} cannot be rejected
Comparison with internal controls	0.455	0.334	H_{o_5} cannot be rejected
Investment decision	0.374	0.714	H_{o_5} cannot be rejected
Business development	0.343	0.785	H_{o_5} cannot be rejected

Table 05: Correlation tests between the psychological types of the entrepreneurs (NP) and the type of accounting information used

3.2.4 Correlation analysis between the psychological types of the respondents and the use of accounting information for the management of the enterprise

The crossed tabulation was accomplished between the psychological types of the respondents (SJ) and the different types of information considered important for the management of the enterprise.

As you can see on the following Table, H_{o_6} cannot be rejected, the psychological type of the respondents (SJ) and the adoption of the different types of information considered important for the management of the enterprise are independent.

Variable	Contingency Coefficient Value	Level of significance	Position in relation to H_{o_6}
Invoicing x profit	0.471	0.251	H_{o_6} cannot be rejected
Non-financial data	0.515	0.095	H_{o_6} cannot be rejected

Margin of profit/profitability	0.476	0.228	H_{0_6} cannot be rejected
Income versus expenses	0.520	0.082	H_{0_6} cannot be rejected
Costs	0.495	0.156	H_{0_6} cannot be rejected
Formation of the sale price	0.517	0.090	H_{0_6} cannot be rejected
Fiscal and labor situation on the fiscal government departments	0.440	0.406	H_{0_6} cannot be rejected
Cash flow	0.511	0.105	H_{0_6} cannot be rejected

Table 06: Correlation test between the psychological type of the owner (SJ) and information considered important for the management of the enterprise

If a level of significance of 0.10 is considered, instead of 0.05 for rejection of H_0 , there would be three aspects related to the use of accounting information for management of the business related to the SJ profile: use of non-financial information (p 0.095), income x expenses (p 0.082) and formation of price (p 0.090). These findings suggest that the SJ psychological profile, in a certain manner, has a higher affinity with the use of accounting information, since it is an introverted personality, which chooses to use accounting information, because it ends up by guiding himself to areas, which are easier for him. However, this does not mean that people with the same psychosocial type have similar personalities.

Then the crossed tabulation was repeated, only this time utilizing another preponderant profile among the psychological types of the respondents (NP). The hypothesis H_{0_7} the psychological types of the respondents (NP) and the adoption of different types of information considered important for the management of the entrepreneur are independent.

Variable	Contingency coefficient Value	Level of significance	Position in relation to H_{0_7}
Invoicing x profit	0.418	0.431	H_{0_7} cannot be rejected
Non-financial information	0.367	0.567	H_{0_7} cannot be rejected
Margin of profit/profitability	0.475	0.286	H_{0_7} cannot be rejected
Income versus expenses	0.418	0.431	H_{0_7} cannot be rejected
Costs	0.539	0.150	H_{0_7} cannot be rejected
Formation of the sale price	0.475	0.436	H_{0_7} cannot be rejected
Fiscal and labor situation in the fiscal governmental departments	0.319	0.831	H_{0_7} cannot be rejected

Cash flow	0.434	0.556	H_0 cannot be rejected
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Table 07: correlation test between psychological test of the entrepreneur (NP) and the information considered important for the management of the entrepreneur

As you can see on Table 07, H_0 cannot be rejected, meaning that the variable are independent and the level of significance is of 0.05.

Final considerations

The sample initially proposed by the study was reduced, due to the difficulty in collecting the data on the questionnaires initially proposed, and it was not possible to obtain answers from the entrepreneurs with approximately the same age, same schooling degree, as well as same worked time in the enterprise, which was the initial intention.

With base on the theoretical referential study, related to the two variables in question: the psychological profile (independent variable) and the use of the accounting information (dependent variable), it was possible to obtain a better understanding of the matters related, not only to entrepreneurs of small business and the use of accounting information, but also through studies of the psychological profile related to the behavior of decision-making, in general.

According to this information, it was feasible to study the problem of research that would unite those two variables in an expectative of positive influence, in the hypothesis that the psychological profile of he small business entrepreneurs really affects the use of accounting information.

Upon obtaining the data, its description and analysis of the results, it was possible to arrive to the conclusion that the initial expectative that there would be a positive relation of the influence of the psychological profile in the use of accounting information, that is to say, of accepting the research hypothesis, was not conferred by the results. What was perceived is that, independent of the profile, the entrepreneur only gives importance to the information that refers to legal or fiscal requirements, what may represent a very strong relation with the characteristics of accounting, which is very turned to fiscal purposes. However, the matter of enterprise management, the use of that information as a way to control to obtain a management view of the business, there is no great importance. It is interesting to comment about a profile, the ESFP, which may be tested in a suggestion of a future research with a larger sample, and really, check if that is the profile of the entrepreneur concerned with accounting information.

Based on the obtained results, it can be observed the presence of the ESTJ and ISTJ profiles representing 50% of the sampling. These profiles, according to some researchers, have, because of two scales, the “SJ”. In addition, emphasize that this is the typical temperament of the entrepreneur. However, the ESFP profile gave importance to the use of accounting information for the management of its business and not only to attend to the legal and fiscal aspects. It can be interesting for future researches, to obtain a larger sampling and try to observe if that profile is really the one that is concerned with the management of the business as a whole. This placement aims to subsidies the formulation of hypothesis and questionings for future researches.

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ⁱ The abbreviations hereby expressed correspond to the way functions and attitudes are referred to in MBTI. We chose this manner to make the comprehension of the reader easier regarding the comparison among Jung's typologies and the ones presented by MBTI.