Subject Area: Strategy and Organizational Behavior

Influence of Individual Values Dissimilarity in the Outcome of top Management Teams: a study in a management lab

Influência da Dissimilaridade de Valores Individuais no Resultado de Times de Alta Gerência: um estudo em laboratório de gestão

Influencia de la Disimilitud de Valores Individuales en el Resultado de Equipos de Alta Dirección: un estudio en laboratorio de gestión

Jorge Ramon D'Acosta Rivera[1]
Silvia Marcia Russi de Domenico[2]
Antonio Carlos Aidar Sauaia[3]

ABSTRACT

Several studies relate organizational outcomes to the performance of top management teams (TMT). Some of these studies suggest that the process of strategic choice is influenced by the cognitive background and values of the executives in those teams, and have focused on the composition of TMT, using demographic variables as proxies for deep-level characteristics. The aim of this descriptive and exploratory study was to verify directly the influence of deep-level characteristics – the dissimilarities of TMT members' individual values – on the team outcomes. This research was carried out using a quantitative method within a public university management lab environment located in the city of São Paulo, applying two value surveys validated in Brazil on TMT composed of Business Management and Accounting undergraduates submitted to a business game situation, resulting in a non-probabilistic sample formed of 32 teams comprising 186 students with valid responses. Through multiple linear regression technique, two statistically significant regression models were found. It was found that the improved performance of TMT occurs when members differ in the importance assigned to values related to openness to change and have similar appreciation

1. Master in Business Management from Mackenzie Presbyterian University.
   Visiting Professor at Mackenzie Presbyterian University and Getulio Vargas Foundation (FGV) [jorge.ramon.dacosta@gmail.com].
2. Doctor in Business Management and Professor at Mackenzie Presbyterian University [silviarussi@cdmil.com].
3. Doctor in Business Management and Professor at São Paulo University (USP) [asauaia@usp.br].
   Authors' address: Rua Itamandaré, 688 – Centro Universitário da FEI – São Paulo, SP – CEP 01525-000 – Brasil

of values related to rules and to security in life (conservation values) and the pursuit of power (prestige), giving evidence that this can occur not only in a laboratory environment, but also in the business environment, where time pressures and competition are even more severe and, therefore, more subject to deep-level subjective characteristics.

Keywords: Personal values. Work values. Top management teams. Team outcomes. Management lab.

RESUMO

Numerosas pesquisas atribuem os resultados organizacionais à atuação de times de alta gerência (TAG). Algumas delas sugerem que o processo de escolha estratégica é influenciado pela base cognitiva e pelos valores dos executivos que compóem esses times e têm centrado sua atenção sobre a composição dos TAG, utilizando variáveis demográficas como *proxies* de características em nível profundo. O objetivo deste estudo, de natureza descritivo-exploratória, foi verificar, diretamente, a influência de características em nível profundo no resultado de TAG, mediante as dissimilaridades de valores individuais (pessoais e laborais) dos membros desses times. Utilizando o ambiente de um laboratório de gestão de uma instituição de ensino superior paulista e o método quantitativo, aplicaram-se dois inventários para mensuração de valores pessoais e laborais, respectivamente, validados no Brasil, em TAG formados por graduandos de Administração e Contabilidade em situação de jogo de empresas, resultando amostra não probabilística de 32 times, contemplando 186 estudantes com respostas válidas. Mediante técnica de regressão linear múltipla, dois modelos resultaram estatisticamente significativos. Verificou-se que a melhoria dos resultados de times de alta gerência ocorre quando os membros diferem na importância atribuída a valores relacionados à abertura à mudança e valorizam de forma semelhante aspectos relacionados a regras e segurança na vida (valores de conservação) e à busca de poder (prestígio), dando indícios de que isso pode ocorrer não só

em ambiente de laboratório, mas no ambiente empresarial, no qual as pressões de tempo e competição são ainda mais severas e, portanto, mais suscetíveis às características subjetivas de nível profundo.

Palavras-chave: Valores pessoais. Valores laborais. Times de alta gerência. Resultados de times. Laboratório de gestão.

RESUMEN

Numerosos estudios atribuyen los resultados de las organizaciones a la actuación de los Equipos de Alta Dirección (EAD). Algunos sugieren que la decisión estratégica está influenciada por la base cognitiva y los valores de los ejecutivos que componen estos equipos y centran su atención en la composición de los EAD, utilizando características demográficas como proxies de características de nivel profundo. El objetivo de este estudio descriptivo-exploratorio, fue verificar directamente la influencia de características de nivel profundo en el resultado de los EAD, mediante las disimilitudes de los valores individuales (personales y laborales) de miembros de los EAD. Utilizando el ambiente del laboratorio de gestión de una universidad en São Paulo y el método cuantitativo, se aplicaron dos inventarios de valores validados en Brasil en EAD compuestos por estudiantes de Administración y Contabilidad en situación de juegos de empresa, obteniendo una muestra no probabilística de 32 equipos, contemplando 186 estudiantes con respuestas válidas. Mediante la técnica de regresión múltiple, dos modelos resultaron estadísticamente significativos. Se verificó que la mejoría de los resultados de los EAD ocurre cuando los miembros difieren en la importancia atribuida a valores relacionados con la apertura al cambio y valorizan de forma semejante aspectos relacionados con reglas, seguridad en la vida (valores de conservación) y la búsqueda de poder (prestigio), dando indicios de que esto puede ocurrir no sólo en el ambiente del laboratorio, sino también en el ambiente empresarial, donde las presiones de tiempo y competencia son aún más severas y, por tanto, más susceptibles a las

características de nivel profundo.

Palabras clave: Valores personales. Valores laborales. Equipos de alta dirección. Resultados de equipos. Laboratorio de gestión.

1 INTRODUCTION

The expression "Top Management Teams" (TMT) have been used by scholar and managers. In this paper, it refers to a small group of executives occupying top positions (HAMBRICK, 1995). It is incumbent upon this team to come up with responses aligned with the environment, implement such responses, set priorities and make decisions on how to use resources. Studies have shown that its performance may be significantly affected by the characteristics of the team and its members (LANKAU et al., 2007).

A study conducted by Hambrick and Mason (1984) is considered a starting point for the matter, as it formulates a model which attempts to understand how the personal characteristics of managers, TMT members, influence organizational outcomes. For these authors, executives combine their perceptions of the situation with their values to make decisions.

Ilgen, Hollenbeck and Johnson (2005, p. 527) identified, among other issues, team members' heterogeneity as a factor influencing the team's performance. The effects of the degree of differences between TMT members are presented based on two conflicting perspectives. On the one hand, executives sharing close demographic characteristics are likely to operate based on similar cognitive bases and values, which increases the likelihood of a consensus regarding critical objectives for the organization's success. On the other hand, more dissimilarity may lead to better decisions, as it allows more creativity and innovation, which enriches the number of alternatives considered (LANKAU et al., 2007). As regards this approach, TMT research identified two types of conflict which explain the different effects of dissimilarity between group members. Task, or cognitive, conflicts favor the quality of

decisions, as several perspectives may be taken into account, whereas affective or relationship conflicts are dysfunctional, as there is hostility, distrust, apathy and cynicism (LANKAU et al., 2007).

While organizational outcomes are usually seen as a reflex of the TMT members' cognitive bases and values (HAMBRICK; MASON, 1984), whose differences are deeper, with higher influence on the social interaction of the group, (BARSADE et al., 2000), a number of studies (e.g.: CARPENTER; GELETKANYCZ; SANDERS, 2004; HAMBRICK, 1995) have examined demographic and functional characteristics of the TMT members in order to infer them. The underlying assumption is that demographic characteristics are reasonable proxies of deep level differences, such as values. This assumption disregards, however, a possible difference in personality, motivation, beliefs and values within a group defined solely based on demographic characteristics. In this respect, Carpenter, Geletkanycz and Sanders (2004, p. 772), in their review of literature, conclude that:

> Finally, it is important to remember that the practices of using demographic indicators as proxies is but a methodological convenience. [....] Demographic indicators are not key theoretical factors of choice or strategic processes themselves. Instead, the theoretical model states that cognitions, values and perceptions affect the strategic choice (free translation). (CARPENTER, GELETKANYCZ, SANDERS, 2004, p. 772).

Human values have been considered by field researchers as enduring beliefs on desirable purposes or modes of conduct that guide the selection or assessment of behaviors and events, and are organized by their relative importance (SCHWARTZ, 2006, p. 56). Rohan (2000) proposed the existence of a causal relationship between personal value priorities and the decisions of an individual, whereas Guth and Tagiuri (1965, 1998) considered the (personal) value of managers as determinant in strategic choices, which usually involve "unstructured, complex and ambiguous"

decision-making processes (LANKAU et al., 2007, p. 12, free translation).

Is managers' values influence their choices and, as a result, their decision-making processes, it is reasonable to hypothesize that differences of individual values between TMT may be related to the differences in the outcomes of such teams. Hambrick and Mason (1984) pointed out the difficulty in systematically and comprehensively testing the influence of personal characteristics. Despite the number of research, few studies directly examined perceptions, knowledge and values of TMT members (LANKAU et al., 2007), by analyzing the differences deeply (BARSADE et al., 2000), based on these very variables.

This study aimed to check the influence that TMT members' values (global and labor) dissimilarity have on the outcomes of these teams, no longer using proxies, but the measurement of their actual individual values.

This study has a descriptive and exploratory nature and used questionnaires with indications of scale validity, for self-completion regarding primary data collection and analysis with mono-, bi- and multivariate statistics techniques. We studied TMT in the laboratory environment of a Business Game, in a subject of a qualification program for accountants and managers of a university in the state of São Paulo.

In order to achieve the general objective of this research, it was unfold in the following specific objectives:

1. determining the general values of TMT members;
2. determining work-related values of TMT members;
3. determining dissimilarities of general values by TMT;
4. determining dissimilarities of work-related values by TMT;
5. checking for correlations between dissimilarities of TMT members' general values and organizational outcomes;
6. checking for correlations between dissimilarities of TMT members' work-related values and organizational outcomes;

Over the past two and a half decades, simulation tools that reproduce some situations to which TMT members are subject upon making strategic decisions were developed (SAUAIA, 2008). The students gathered in teams played the role of top management members in Business Games, and competed against each other in the same market. Students in each team, playing the role of TMT members, made market, operational and financial decisions, in order to apply the knowledge acquired to manage the company and leverage outcomes (SAUAIA, 2008).

This environment is different from a real situation as managers of a team are subject to several types of pressure stemming from possible power disputes and relationship issues (BARSADE et al., 2000). Despite this issue, it is a plausible environment in which teams seek high performance to pass the subject, which allows comparison between team outcomes, by means of the outcomes of the companies, all of which start at the same position, with the same amount of funds available, except for human capital.

The simplification of the decision-making process, by eliminating some context factors, in the case of the Business Game environment, allows "company's technical management and behavioral management" (SAUAIA, 2008, p. 10). Despite the simplification, the strategic choice before unstructured problems made by a team playing the role of executives in a simulated laboratory management environment preserves two essential elements of a strategic organizational choice, to wit: the decision-making process, and perception and selective construction of variables affecting the outcome and that, according to Hambrick and Mason (1984) model, are influenced by values and cognitive bases of decision makers.

This study seeks to check, directly, the influence of dissimilarity of TMT member values on the outcomes of such teams in a simulated environment and, indirectly, on the elements of the strategic choice, which the laboratory simulation reproduces in relation to the organizational environment.

This paper now presents one of the most used theories of value, over the past two

decades, which is adopted in this study, and other methodological procedures, presentation and discussion of the results, and, lastly, conclusions and proposals for continuity.

2 SCHWARTZ'S THEORY OF BASIC HUMAN VALUES

Human values have been the subject matter of research in several areas within social sciences, in an attempt to understand and explain the human phenomenon, both at the individual level and collective level (AGLE, CALDWELL, 1999; KLUCKHOHN, 1951; ROHAN, 2000; ROKEACH, 1973; SCHWARTZ, 1992).

According to Rohan (2000), Milton Rokeach is entitled to the credit of starting studies on values, defined as ensuring beliefs regarding the modes of conduct or final states of existence that are personal or socially preferable to opposed modes of conduct or final states of existence (ROKEACH, 1973). This researcher considered that values indented to guide decisions and express basic human needs, in addition to being the criteria for one to judge themselves or others.

Shalom H. Schwartz shared with Rokeach the understanding of values as criteria used by people. He also shared the purpose of conducting research that allowed the preparation of comparative studies between cultures, and "also saw in this transcultural analysis the key to develop a basic theory of the content and structure of human values" (SCHWARTZ, 2006, p. 56).

Upon reviewing field literature, Schwartz (2006, p. 56) detected five characteristics of the conceptual definition of values which appear consistently in several authors:

> A value is: 1) a belief; 2) belongs to desirable purposes or modes of conduct; 3) transcends specific situations; 4) guides the selection or assessment of behaviors, people and events; and 5) is organized by its importance vis-à-vis other values to form a value priority system.

Recognizing that these common traits define the formal aspects that differentiate values from other related concepts, the author stated, however, that these very features say nothing about the substantive content, or on the structure of relationships between different value types (SCHWARTZ, 2006). Based on these two problems to develop his theory, he defined values as desirable and cross-situational goals that vary in importance and serve as principles in the life of a person or other social entity (SCHWARTZ, 2006).

According to the theory of basic values of Schwartz (1994), all values represent motivational contents. What differentiates them is "the type of motivational goal they express" (SCHWARTZ, 1994, p. 21, free translation). Based on the foregoing, the author distinguishes ten types of motivational values, which can be differentiated by most companies and that tend to be universal, as they stem from the three basic requirements inherent in the human existence: "the needs of individuals as biological organisms, coordinated social action requirements, and need of group survival and well-being" (SCHWARTZ, 2005a, p. 23-24).

According to Schwartz (1994), the key to understand the dynamics of relationships between values of different motivational types is that mobilization (physical, expressive or emotional) in the sense to achieve a certain value has consequences that may be compatible or may conflict with the search for other value types. For instance, actions to guarantee personal security may impede or, at least, make initiatives towards more independence or creativity more difficult; efforts towards realization frequently conflict with the search for values associated with benevolence, such as being proactive; values associated with the tradition usually conflict with the values associated with stimulation. According to the author: "Behaviors (and attitudes) are not guided by the priority given to a single value, but bargains between opposing values that are simultaneously involved in the behavior" (SCHWARTZ, 2005a, p.84-85).

Based on the relationships of compatibility and conflict of motivational contents, the types

presented are arranged in a circular structure, in which the categories of underlying values share similar motivational contents. In this circular structure, Schwartz (2005b) identified dual bipolar antagonism between the types of higher-order values he called "self-promotion" (power and achievement), "self-transcendence" (universalism and benevolence), "openness to change" (self-determination, stimulation and hedonism, the latter being part, depending on the sample, of "self-promotion") and "conservation" (tradition, conformity and security), illustrated in Figure 1.
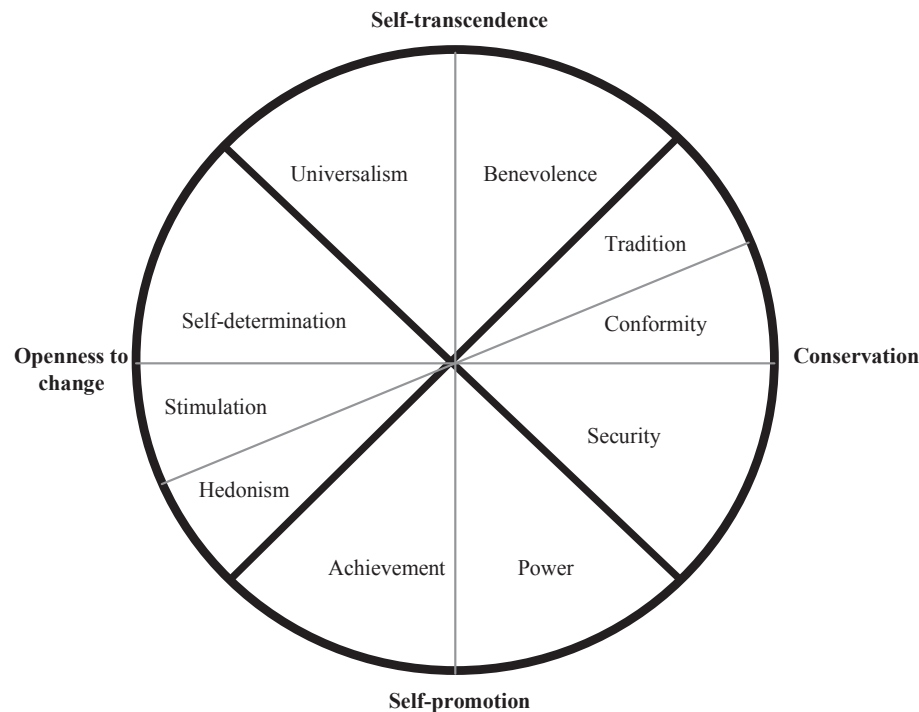
FIGURE 1 – Theoretical framework of the relationships between value types
Source: Schwartz (2006, p. 62)

The theory was initially verified by Schwartz (1992) by means of broad cross-cultural survey of 97 samples in 44 countries, with the application of the Schwartz Value Survey (SVS), with 57 questions. Based on this study, he concluded that he was supported to state recognition by individuals, almost universally, of these four types of higher-order values, which are organized into two bipolar dimensions, by contrasting self-promotion to self-transcendence and openness to change to conservation (Figure 1). Several other studies were conducted using different research tools, such as PVQ-40 (Portrait Value Questionnaire) designed by Schwartz et al. (2001), translated and validated in Brazil by Porto and Tamayo (2007) and PVQ-21 of the European

Social Survey, prepared for research via Internet. Both corroborate previous findings, indicating that the structure of opposition between the poles of both axiological dimensions included in the theory of basic values takes place regardless of the measurement method (SCHWARTZ, 2005a), further supporting the theory.

Individual values, in turn, relate not only to general questions, but also to specific contexts (TAMAYO, 2005), such as work. Ros Schwartz and Surkiss (1999) considered the work- or labor-related values as expressions of general individual values in the labor context and propose a bipolar structure in two dimensions, in line with the structure of the higher-order individual values of the basic values theory.

In Brazil, the theory of general values of Schwartz (1992) was applied to the specific context of work by Borges (1999) and Porto and Tamayo (2003) who developed scales of work values, the first being specifically aimed at a low education level public, which is not the case of this study. Considering the research conducted by Porto and Tamayo (2003), four factors of work values were identified – achievement at work, prestige, stability and social relations –, corresponding to the four types of higher-order general values of Schwartz (1994), respectively: openness to change, self-promotion, conservation and self-transcendence (PORTO; TAMAYO, 2007).

3 METHODOLOGY

This study was conducted in a Management Laboratory as proposed by Sauaia (2008), which consists of an environment of management education and applied research in the Business Game subject, which allows reproduction of some of the conditions of unstructured problems that TMT face when making their strategic choices. In this environment, it is possible to apply the concepts of Management, Economy and Accounting and also exercise "[...] the coordination of teamwork, task assignment, negotiation of ideas, use of time, leadership, planning and decision-making in a group" (SAUAIA, 2006).

The study population consisted of 48 teams consisting of four to six members, and gathered 231 undergraduates enrolled in the 2007 academic year in Business Management and Accounting from a university located in the city of São Paulo. Of this population, a non-random sample of 194 students was obtained for convenience. Data treatment involved the following steps: organizing and verifying data entered; analyzing missing data; analyzing questionnaires with discrimination bias, considering the elimination of participants with more than 80% of responses in the same score (ESS, 2009), and identifying unusual observations (HAIR JR. et al., 2005).

Once the database was debugged, of 186 records (80.5% of the population) and 32 groups (66.7% of total population) of the original sample remained. Missing data was treated in line with the procedure recommended by Hair Jr. et al. (2005, p. 64-70).

Of the 186 valid cases, 61.3% of respondents were male, 91.8% were under 30 years of age, 86.4% were concentrated in the seventh and ninth semesters, and 42.2% were enrolled in the Business Management course and 57.8% in the course of Accounting Course. The percentages of daytime and nighttime students corresponded to 43.7% and 56.3%, respectively. Of the study participants, 86.6% reported to be working for a company, of which 51.1% had employment, and 35.5% worked as interns. The percentage of unanswered items ranged from 0% for gender and professional performance to 1.6% for age and time, which corresponds to three missing responses. A special difference was observed in the case of the function performed by the members within the team. The absence of responses in this item reached 9.7% of the debugged sample.

To measure individual values, the Portrait Value Questionnaire (QPV) designed by Schwartz under the name of PVQ-40, translated in Brazil by Porto and Tamayo (2007), was used. To operationalize the measurement of work-related values, we used the Work-Related Values Scale (EVT) designed by Porto and Tamayo (2003). For both instruments, validity evidence was found.

Regarding measurement of TMT outcomes, the identification of factors that make a team effective depends on the aspect of effectiveness evaluated and meets several approaches. Among others, the following can be considered: productive performance outcomes, satisfaction or attitude of members, team survival and behavioral outcomes. It is also possible to use of factors at the individual, team and organization level. The outcome variables to assess teams also depend on the type of team studied and the unit of analysis used (ALBUQUERQUE, PUENTE-PALACIOS, 2004; COHEN, BAILEY, 1997; HACKMAN, 2003; QUEIROZ, 2005). In this

study, we recognized multiple aspects considered by many researchers in the field to assess the effectiveness of a team, but restricted our focus to the exclusive consideration of organizational outcomes in terms of TMT actions. According Queiroz (2005), in TMT, the assessment is usually made by using objective organizational outcomes such as profitability, increased profitability, market share and return on investment.

Thus, the team outcomes were obtained from the Statements of Operations and Financial Statements, generated each round of the business game and consolidated at the end of the semester by industrial simulator Simulab, in the form of passing grade in the subject, which expressed the final outcome of the managed company per team of four to six students in the role of TMT members.

The scores of values were calculated according to the protocols of QPV and EVT and submitted to the process of correcting the use of individual scales (ESS, 2009).

The dissimilarity of values of TMT members was obtained by calculating the standard deviation of value distribution of its members (BARSADE et al, 2000; CHOI, 2007), according to the formula:

$$DesvpVv = \sqrt{\sum_1^n (Vvi - \overline{V}v)^2 \times 1(n-1)}$$

In which:
$DesvpVv$ = Dissimilarity of team vis-à-vis the Vv value considered
V i = Measurement of the Vv value for member i
$\overline{V}v$ = Average of Vv values in the team considered
n = Number of TMT members considered

Once the database was debugged and individual value dissimilarities calculated for the groups, any Pearson correlations were examined between the second-order motivational types and labor values, in order to check the opposing relationships between poles, as stipulated by Schwartz (1992).

Finally, to explore the relationships between TMT outcomes and individual values, we used the multiple linear regression technique. Considering that the number of observations (50 per independent variable) required by Stepwise method could not be met with the sample size of this study, the method used in the search for significant regression models was the combinatorial approach, i.e., including variables through the Enter method (SPSS), and assessing the significance of various combinations (HAIR JR. et al., 2005). 42 regression models were analyzed, corresponding to all possible combinations (15) between dissimilarities of second-order general values, all possible combinations (15) between dissimilarities of work-related values, and 12 combinations involving dissimilarities concerning both types of values that were statistically significant in previous models.

4 PRESENTATION, ANALYSIS AND CONSTRUCTION OF RESULTS

For the sample in this study, after debugging the database as described in the methodological procedures, we proceeded to the calculation of second-order motivational types (Table 1). In this table, we also presented the result of the calculation of work-related values described above, and the correlations among second-order motivational types and between work-related values.

TABLE 1 – Motivational types, labor values and correlations

	Average	Standard deviation	Cronbach α	No. items	1	2	3
General values							
1. Self-transcendence	4.72	0.65	0.764	9			
2. Openness to change	4.70	0.63	0.723	8	-0.256**		
3. Self-promotion	4.36	0.81	0.790	7	- 0.702**	0.151*	
4. Conservation	3.89	0.61	0.689	12	0.160*	-0.723**	-0.549**
Labor values							
1. Stability	4.26	0.62	0.873	11			
2. Achievement at work	4.22	0.58	0.907	15	-0.422**		
3. Social relations	3.52	0.59	0.837	7	-0.188*	-0.225**	
4. Prestige	3.02	0.74	0.836	12	-0.150*	-0.392**	-0.589**

Source: the authors.

** Bivariate correlations are significant at level 0.01 (bi-caudal).

* Bivariate correlations are significant at level 0.05 (bi-caudal).

Sample respondents privilege Self-transcendence and Openness to change, followed by Self-promotion and Conservation. Interestingly, the study sample comprising undergraduates in their last semesters, when respondents were exposed to the specific context of work, the most valued motivational type was Stability, which, according to the theoretical framework (ROS, SCHWARTZ, SURKISS, 1999), corresponds to the Conservation type, precisely the one which received the lowest score among the second-order motivational types of general values. This result may be associated with the specific circumstance of students in their last semesters who intended to pass the subject and complete the course, were beginning their career in the field, and sought financial independence.

In the correlations between second-order motivational types of the respondents, as can be seen, Self-transcendence and Self-promotion motivational types feature negative correlation of 0.702, significant at the 0.01 level, whereas Openness to change and Conservation values have negative correlation of 0.723 at the same level of significance, which supports the opposition of these poles according to the Schwartz (2006) model.

In the correlations between work-related values, there were also the oppositions provided by the theoretical framework, considered herein, of Porto and Tamayo (2003) – Prestige and Social Relations (-0.589 **) and Stability and Achievement at Work (-0.422 **) –, corresponding to negative correlations of greater magnitude.

We present below the two models that obtained statistical significance for each set of values considered as an independent variable. Both were in line with the assumptions of this kind of statistical analysis, i.e., testing for normality, linearity, homoscedasticity and analysis of influential observations, as recommended by Hair Jr. et al. (2005).

4.1 The influence of general value dissimilarity in the consolidated tmt outcome

Table 2 presents the model found for the second-order general values, including some basic parameters. As one can see in this model, the determination ratio indicates that 21.6% of total variation in the dependent variable is explained by the model. We also obtained the standard error of the estimate, corresponding to the estimated standard deviation of actual scores of the dependent variable in connection with the regression line, of 1.503 and adjusted R squared of 0.162. The collinearity diagnosis showed Tolerance values of 0.838 and Variance Inflation Factor of 1.193 for both variables, and is therefore acceptable (HAIR JR. et al., 2005).

TABLE 2 – Model 1

Dependent variable	R²		Adjusted R²		Estimated standard error	
TRI09 AVERAGE (Consolidated outcome)	0.216		0.162		1.50258	
Model 1	Regression ratio	Ratio standard error	β ratios	t value	Significance
Intercept	5.559	0.784		7.088	0.000
Conservation diss.	-3.646	1.590	-0.412	-2.293	0.029
Openness to change diss.	3.526	1.450	0.437	2.431	0.021

Source: the authors.

a. Predictors: (Constant), ABERTUR_CEN_DESVP_GPO, CONSERV_CEN_DESVP_GPO

b. Dependent variable: TRI09 AVERAGE

With regard to the analysis of variance for the model, 1 to F ratio of the average square regression and the residue is 3.987 that, for two ratios and 29 degrees of freedom, has statistical significance at 0.030 level. This means that, for the sample considered, the regression model can explain the variation in the team outcome approximately four times more than when using the average, without the probability of occurring by chance (HAIR JR. et al., 2005).

Table 1 also presents the regression ratios for the model. It is observed that the standardized regression ratios of the independent variables are of similar magnitudes (-0.412 and 0.437) and have opposite signs, the negative for the dissimilarity of the Conservation value and positive for the dissimilarity of the Openness to change value; both have statistical significance lower than 0.05.

4.1.1 *Analysis and construction of model 1*

Obtaining a statistically significant model demonstrates the influence of the dissimilarity of second-order general values of the teams on the outcome of those teams. What is true, however, in accordance with Model 1 of regression found, is that this influence is due to some types of values (Conservation and Openness to change) and can be either positive (Openness to change) or negative (Conservation).

Dissimilarities involved in the regression model expressing the differences of team members in how to design individual goals linked to the general aspects of life. Considering the dissimilarity of values with positive influence on performance, i.e., Openness to change, the regression model indicates that the more differently independence of thought and action, creativity and curiosity, and pleasure and reward are valued by members, the better outcomes are obtained by the team. In contrast, considering the dissimilarity in relation to the Conservation value (opposite Openness to change, according to the theory of basic values), the more differently team members value respect, commitment to the established standards, customs, search for security and stability, the more negatively will the team outcome be influenced.

The goal to be achieved by students, as members of the TMT in the Business Game, is to leverage the outcome of their teams according to a set of indicators established at the beginning of the subject. Therefore, members should consider the possible factors affecting these indicators and make strategic decisions. Unlike most of the work developed in the subjects of university training courses, the decisions to be made involve unstructured problems, as students are unaware of the calculation algorithm of the simulator and are considering changing factors represented by the strategies of the competing teams, which characterizes the presence of uncertainty.

In this context, they have reports for analysis, which are the financial and operating statements and concepts learned about the functioning of markets and management of organizations. Accordingly, to achieve the team's

goal, the problem to be solved is to identify, in an unstructured reality, the influence of the factors that determine the outcome and the competition strategy, and, based on that, make strategic choices.

To solve this problem, i.e., construe data of laboratory reality and make decisions in pursuit of higher performance, the dissimilarity of members in relation to Openness to change values, i.e. the dispersion of how much they value intellectual autonomy and independence of thought, leads to better decisions and therefore the better results. Faced with the same "unstructured" problem, little dissimilarity related to the Conservation value, i.e., low dispersion of the team in relation to the pursuit of safety, respect for tradition and conformity with social norms and expectations, has a positive influence.

In other words, the more team members similarly value social expectations and established rules and differ as regards the pursuit of change, the better is the outcome. Thus, it seems advisable to have in the same TMT more daring and creative, but at the same time balanced, people aligned by rules and expectations.

To construe this outcome, it should be borne in mind that, according to the theoretical model of Schwartz (2005b), the Openness to change and Conservation motivational types correspond to bipolar dimensions of the model and express the conflict between an orientation to the independent thought and action that promote change and preservation of traditional practices and preservation of stability. However, if part of the problem is to identify the strategy of competitors and the factors that determine the outcome, the teams in which there is a diversity of orientation for independent thought and action appear to have better position to offer a greater number of alternatives, which leads to a better strategic decision, which corroborates the findings of Lankau et al. (2007), for whom the dissimilarity of values can lead to better strategic decisions by providing greater number of alternatives.

4.2 The influence of labor value dissimilarity in the consolidated tmt outcome

Table 3 shows the statistically significant regression model, which relates the dependent variable Consolidated outcome to the dissimilarities of teams regarding Achievement at work and Prestige work-related values as independent variables.

TABLE 3 – Model 2

Dependent variable	R²	Adjusted R²		Estimated standard error	
TRI09 AVERAGE (Consolidated outcome)	0.246	0.194		1.47353	
Model 2	**Regression ratio**	**Ratio standard error**	**β ratios**	**t value**	**Significance**
Intercept	6.410	0.886		7.235	0.000
Achievement at work diss.	4.385	1.973	0.367	2.223	0.034
Prestige diss.	-4.073	1.598	-0.421	-2.549	0.016

Source: the authors.

a. Predictors: (Constant), PRESTI_CEN_DESVP_GPO, REALIZ_CEN_DESVP_GPO

b. Dependent variable: TRI09 AVERAGE

As can be seen in this model, both types of work-related values account for 24.6% of the variance of the final team outcome, and is slightly higher than the first model. Estimated standard error is 1.473.

With respect to the analysis of variance in model 2, ratio F between the average square regression and the residue is 4.723, which, for two ratios and 29 degrees of freedom, has statistical significance at 0.017 level. Therefore, for the

sample considered, using the regression model, it is possible to explain the variance of about five times more than when the average is used, without this having probability of taking place by chance (Hair JR. Et al. 2005). The collinearity diagnostics showed Tolerance valued of 0.954 and the variance inflation factor of 1.048 for both variables – and is therefore acceptable (HAIR JR. et al., 2005).

Table 3 also presents the regression ratios for Model 2. As in Model 1, the standardized regression ratios of the independent variables are of similar magnitudes (-0.421 and 0.367) and have opposite signs, the positive for the dissimilarity of the Achievement at work value and negative for the dissimilarity of the Prestige value; both have statistical significance lower than 0.05.

4.2.1 *Analysis and construction of model 2*

Similarly to Model 1, which involved dissimilarities of two second-order general values, Model 2 of regression indicated the influence of dissimilarity of two work-related values, Achievement at work and Prestige, on the dependent variable, Consolidated outcome. Model 2 also points to adverse effects of these independent variables on teams' outcomes, being positive in the case of the dissimilarity of the Achievement at work value, and negative for the dissimilarity of the Prestige value.

This outcome indicates that the dissimilarity of team members in relation to aspects of Openness to change in the labor context, the pursuit of pleasure, personal and professional achievement, independence of thought and action by intellectual independence and creativity through work led to better decisions, which increased the team outcome. Differently, the differences among members regarding Self-promotion values, related to the search for authority, professional success and power to influence, negatively affect the team outcome.

The senses of the influence of dissimilarities present in the regression model with labor values indicated the theoretical framework provided (LANKAU et al., 2007), as it indicated a positive influence on differences related to the Achievement at work value, associated with the task conflict, and a negative influence on differences related to the Prestige value, associated with the relationship conflict.

5   CONCLUSIONS

If the organizational outcome is seen as a reflection of the TMT performance (GUTH TAGIURI, 1965; HAMBRICK, 1995; HAMBRICK, MASON, 1984) and, according to several studies, its performance can be significantly affected by the characteristics of the team and its members (LANKAU et al., 2007), we verified by the results of this theoretical and empirical research for the studied sample, that differences in individual values of TMT members affected team outcomes. Starting from the measurement of individual values through the application of two previously validated inventories in Brazil, it was possible to study, in a laboratory environment, the influence of deep level differences between team members and the outcome of such teams.

We obtained two linear regression models relating the dissimilarity of motivational types and work-related values TMT member to the outcome of these teams.

Thus, we achieved the general objective of the study upon determining the influence of dissimilarity of values among TMT members on the outcomes of these teams. However, we point out that this is true for some types of values only, not for others. Moreover, depending on the motivational type involved, the effect of these dissimilarities on the outcome can be either positive or negative.

Unlike the research results reported by Hambrick and Mason (1984), indicating that routine problems are best solved by homogeneous teams, whereas heterogeneous teams cope better with unstructured problems, it was found that, as far as unstructured problems are concerned, in the environment research of this study, the heterogeneity of teams, for certain types of

individual values, such as Conservation (general value) and Prestige (labor value), had a negative influence on the outcome.

It is at this point that this study presents a specific contribution, as it is not enough to broadly consider the dissimilarity of values, as an influential variable; it is necessary to specify the type of value to which the dissimilarity refers, as the effect occurs for some types and not for others, and may increase or decrease the TMT outcome.

The results of this study indicate that differences associated with both general and labor values, concerning the second-order motivational type Openness to change, i.e., related to the appreciation of innovation, independence of thought and action, freedom, curiosity and personal achievement, suggest the promotion of more alternatives by TMT members before the ill-structured problems they face in the business games . In turn, the best outcomes appear when there are few differences associated with Conservation, for general values, and Self-promotion, for labor values. Therefore, the more members similarly value aspects related to security and rules and in life in general and the pursuit of power in the workplace, the better the outcome, and one may think that homogeneity in the appreciation of certain goals (values) among members help reduce relationship conflicts that would arise if these issues were considered in very different ways between them. These findings thus corroborate Lankau et al. (2007), in that it provides evidence that individual values, deep level variables, can influence the promotion of task conflicts (positive) and reduction of relationship conflicts, which generates better business outcomes.

To what extent, however, can the results obtained in a laboratory experiment be extended to a real event? In an attempt to answer this question one must take into account that the experimental situation preserves two important elements, which are also present in the strategic choice process in a real organization (HAMBRICK, MASON, 1984): decision making and selective perception and construction of the variables affecting the outcome. From the research findings,

it is reasonable to assume that if the influence of values on the team outcome occurs in a laboratory environment, it can also occur in circumstances in which the time pressures, cost and competition are more severe, giving rise to the activation process of values described by Schwartz (2005b, p. 80), thus being less technical and more subject to deep level subjective characteristics (cognitive base and values) of the executives, and points to an effective contribution to the study of organizational management.

Some limitations inherent in this study should be taken into account. This study considered a sample for accessibility and not a probability sample. Incomplete groups were analyzed, as not all subject participants completed the survey. Another limitation is that no other variables that could influence the result, such as course and transcript of studies of team members were considered (the groups were formed according to a non-random criterion, based on prior individual performance (SAUAIA, 2003), which may be subject new research).

Accordingly, it is proposed that this study be replicated with larger samples to consider differences in relation to other variables, including demographic variables, and new research be conducted in organizational settings, so that the influence of differences in deep level variables (values) and the influence of demographic variables can be compared in both environments.

We also propose new studies to examine, in greater detail, the relationship between dissimilarities of values, conflict and outcomes, to deepen understanding of the negative effects of some dissimilarities and the positive effects of others.

Finally, we should point out that the primary data collected through surveys are always subject to limitations arising from the text construction by in the research tools.

REFERENCES

AGLE, B. R.; CALDWELL, C. B. Understanding research on values in business. Business and

Society, Thousand Oaks, v. 38, n. 3, p. 326-387, Sept. 1999.

ALBUQUERQUE, F. J. B. D.; PUENTE-PALACIOS, K. E. Grupos e equipes de trabalho nas organizações. In: ZANELLI, J. C.; BORGES-ANDRADE, J. E. (Ed.) Psicologia, organizações e trabalho no Brasil. Porto Alegre: Artmed, 2004. p. 357-379.

BARSADE, S. G. et al. To your heart's content: a model of affective diversity in top management teams. Administrative Science Quarterly, Ithaca, v. 45, n. 4, p. 802-836, Dec. 2000.

BORGES, L. O. A estrutura fatorial dos atributos valorativos e descritivos do trabalho: um estudo empírico de aperfeiçoamento e validação de um questionário. Estudos de Psicologia, Natal, v. 4, n. 1, p.107-139, jan./jun. 1999.

CARPENTER, M. A.; GELETKANYCZ, M. A.; SANDERS, W. G. Upper echelons research revisited: antecedents, elements, and consequences of top management team composition. Journal of Management, Thousand Oaks, v. 30, n. 6, p. 749-778, Dec. 2004.

CHOI, J. N. Group composition and employee creative behavior in a Korean electronics company: distinct effects of relational demography and group diversity. Journal of Occupational and Organizational Psychology, London, v. 80, n. 2, p. 213-234, June 2007.

COHEN, S. G.; BAILEY, D. E. What makes teams work: group effectiveness research from the shop floor to the executive suite. Journal of Management, Thousand Oaks, v. 23, n. 3, p. 239-290, 1997.

EUROPEAN SOCIAL SURVEY EDUNET – ESS. Measuring values. [2009]. Disponível em: < http://essedunet.nsd.uib.no/cms/topics/1/4/>. Acesso em: 20 abr. 2009.

GUTH, W. D.; TAGIURI, R. Personal values and corporate strategy. Harvard Business Review, Boston, v. 43, p. 123-132, 1965.

_____; _____. Personal values. In: HAMBRICK, D. C. (Ed.). The executive effect: concepts and methods for studding job managers. Greenwich, Conn.: JAI, 1998. p. 3-34.

HACKMAN, J. R. Learning more by crossing levels: evidence from airplanes, hospitals, and orchestras. Journal of Organizational Behavior, [S.l.], v. 24, n. 8, p. 905-922, Dec. 2003.

HAIR JR., J. F. et al. Análise multivariada de dados. Porto Alegre: Bookman, 2005.

HAMBRICK, D. C. Fragmentation and the other problems CEOs have with their top management teams. California Management Review, Berkeley, v. 37, n. 3, p. 110-127, Mar. 1995.

_____; MASON, P. A. Upper echelons: the organization as a reflection of its top managers. Academy of Management Review, Briarcliff Manor, n. 9, n. 2, p. 193-206, Apr. 1984.

ILGEN, D. R.; HOLLENBECK, J. R.; JOHNSON, M. Teams in organizations: from inputo-process-output models to IMOI models. Anual Review of Psychology, [S.l.], v. 56, p. 517-543, 2005.

KLUCKHOHN, C. K. M. Values and value orientation in the theory of action. In.: PARSONS, T; SHILDS, E. (Eds.). Toward a general theory of action. Cambridge, MA: Harvard University Press, 1951. p. 388-433.

LANKAU, M. J. et al. Examining the impact of organizational value dissimilarity in top management teams. Journal of Managerial Issues, Pittsburgh, v. 19, n. 1, p. 11-34, Spring 2007.

PORTO, J. B.; TAMAYO, A. Escala de valores relativos ao trabalho - EVT. Psicologia: Teoria e Pesquisa, Brasília, v. 19, n. 2, p. 145-152, maio/ago. 2003.

_____; _____. Estrutura dos valores pessoais: a relação entre valores gerais e laborais. Psicologia: Teoria e Pesquisa, Brasília, v. 23, n. 1, p. 63-70, 2007.

Jorge Ramon D'Acosta Rivera / Silvia Marcia Russi de Domenico / Antonio Carlos Aidar Sauaia

QUEIROZ, R. C. A influência da diversidade demográfica no desempenho de times multifuncionais em indústria automobilística. 2005. 218 f. Dissertação (Mestrado em Administração de Empresas) – Universidade Presbiteriana Mackenzie, São Paulo, 2005.

ROHAN, M. A rose by any name? The values construct. Personality and Social Psychology Review, Mahwah, v. 4, n. 3, p. 255-277, Aug. 2000.

ROKEACH, M. The nature of human values. New York: The Free Press, 1973.

ROS, M.; SCHWARTZ, S. H.; SURKISS, S. Basic individual values, work values, and the meaning of work. Applied Psychology: An International Review, London, v. 48, n. 1, p. 49-71, Jan. 1999.

SAUAIA, A. C. A. Conhecimento versus desempenho das organizações: um estudo empírico com jogos de empresas. In: SEMINÁRIOS EM ADMINISTRAÇÃO – SEMEAD, 6., 2003, São Paulo. Anais... São Paulo: FEA/USP, 2003. p. 1-12.

_____. Gestão da estratégia: um guia prático. São Paulo: USP, 2006. (Material instrucional - Livro apostilado).

_____. Laboratório de gestão: simulador organizacional, jogo de empresas e pesquisa aplicada. Barueri, S.P.: Manole, 2008.

SCHWARTZ, S. H. Are there universal aspects in the structure and contents of human values? Journal of Social Issues, Ann Arbor, v. 50, n. 4, p. 19-45, Winter 1994.

_____. Há aspectos universais na estrutura e no conteúdo dos valores humanos? In: ROS, M.; GOUVEIA, V. (Orgs.) Psicologia social dos valores humanos. São Paulo: SENAC, 2006. p. 55-85.

_____.Validade e aplicabilidade da teoria de valores. In: TAMAYO, A.; PORTO, J. B. (Orgs). Valores e comportamento nas organizações. Petrópolis: Vozes, 2005b. p. 56-95.

_____.Valores humanos básicos: seu contexto e estrutura intercultural. In: TAMAYO, A.; PORTO, J. B. (Orgs.). Valores e comportamento nas organizações. Petrópolis: Vozes, 2005a. p. 21-55.

_____. Universals in the content and structure of values: theoretical advances and empirical tests in 20 countries. Advances in Experimental Social Psychology, [S.l.], v. 25, p. 1-65, 1992.

_____ et al. Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. Journal of Cross-Cultural Psychology, Thousand Oaks, v. 32, n. 5, p. 519-542, Sept. 2001.

TAMAYO, A. Prefácio. In: TAMAYO, A.; PORTO, J. B. (Orgs.). Valores e comportamento nas organizações. Petrópolis: Vozes, 2005. p. 17-19.