

PERSONAL VALUES AND ENTREPRENEURIAL ATTITUDE AS INTELLECTUAL CAPITAL: IMPACT ON INNOVATION IN SMALL ENTERPRISES

Edgar A. Sánchez-Báez¹, José Fernández-Serrano² and Isidoro Romero^{3*}

¹⁾ National University of Asuncion, Paraguay

^{2), 3)} Department of Applied Economics I, Universidad de Sevilla, Spain

Please cite this article as:

Sánchez-Báez, E.A., Fernández-Serrano, J. and Romero, I., 2018. Personal Values and Entrepreneurial Attitude as Intellectual Capital: Impact on Innovation in Small Enterprises. *Amfiteatru Economic*, 20(49), pp. 771-787.

DOI: [10.24818/EA/2018/49/771](https://doi.org/10.24818/EA/2018/49/771)

Article History

Received: 6 March 2018

Revised: 15 May 2018

Accepted: 22 June 2018

Abstract

This paper analyzes the effects of entrepreneurs' personal values and their entrepreneurial attitudes, as forms of intellectual capital, on the innovative behavior of small businesses. The influence of personal values is examined through Schwartz's value theory and entrepreneurial attitudes via assessments associated with risk taking and personal autonomy. A model of structural equations using the Partial Least Squares technique was applied to a database composed of 191 small business owners in Paraguay. The results show that personal values of conservation and self-enhancement in the entrepreneur have a direct negative effect on innovation. It is also noted that entrepreneurial attitudes, such as openness to change and self-transcendence, have a mediating role in the positive impact of values on innovation. The article contributes to the literature by showing that some elements of intellectual capital, such as entrepreneurial attitudes and entrepreneurs' personal values, interact to influence innovation in small businesses.

Keywords: personal values, entrepreneurial attitude, small business, innovation.

JEL Classification: M14, O30, O54

* Corresponding author, **Isidoro Romero** – isidoro@us.es

Introduction

Intellectual capital (IC) comprises a set of intangible assets and intangible resources that contribute to the generation of value in the company. These resources are made up of technical knowledge (know-how), knowledge of the workforce, information technology, operational processes, relationships, trust and business culture (Andriessen, 2004; Asiaei and Jusoh, 2015). Previous studies have shown that IC has a direct impact on organizational outcomes (Clarke, et al., 2011; Asiaei and Jusoh, 2015).

Most of the literature uses a three-dimensional approach to study IC, differentiating between: human capital, structural capital and relational capital. Human capital comes from knowledge and skills, which are integrated and available through the members of the organization (Bontis, 1998; Inkinen, 2015). Structural capital is made up of the organizational factors that support the actions of human capital (Bollen et al., 2005; Chen et al., 2004), and relational capital is knowledge integrated into the company's external relationships (Cabrita and Bontis, 2008). Human capital is the base that supports the rest: human capital is required to establish structural capital (knowledge for the company) and structural capital to build relational capital with the environment (Jardon and Martos, 2012). Human capital brings together characteristics such as intelligence, values, attitudes, skills, know-how, abilities, individual relationships, creativity, education, experience, motivation, commitment, loyalty, proactive behavior, leadership skills, flexibility, learning skills, behavior, intellectual acuity and risk taking propensity (Bontis, 1998; Wu et al., 2007; Leitner, 2011; González-Loureiro and Dorrego, 2012).

Under this approach, cultural values – either the entrepreneurs' personal values or values shaping the culture of organizations – and attitudes can be considered elements of IC, in general, and of human capital, in particular, and they contribute to explaining the performance of companies (Jaén et al., 2013; Holland and Shepherd, 2013). Although part of the specialized literature has dealt with the study of the influence of IC in business innovation (Subramaniam and Youndt, 2005; Leitner, 2011; Wang and Chen, 2013), the effect of personal values and entrepreneurial attitudes as relevant aspects of companies' human capital has not been specifically considered.

However, personal values have been shown to act as predictors or moderators of business processes and results (Sagiv and Schwartz 2007; Dollinger et al., 2007). Personal values exert a strong influence in particular in small businesses, where the entrepreneurs' personal characteristics, their beliefs, attitudes and behavior largely determine the performance and business results, including innovation (Ajzen, 1991; Glew, 2009; Choe et al., 2013).

Organizational culture in small businesses, a key concept within IC (Bontis, 1999), is determined by the entrepreneurs' human capital, which in turn is influenced by their personal values and attitudes. The objective of this research is to study the influence of personal values and entrepreneurs' attitudes, as elements of the company's IC, on innovative results. The analysis is made from a sample of small companies in Paraguay.

1. Theoretical framework and literature review

Some works in the IC field have shown that intangible factors and their management drive innovation in companies (Kong and Thomson, 2009; Budiarti, 2017). Yet, the literature in this field has paid little attention to the personal values and attitudes of entrepreneurs and

their influence on firm performance (Terziovski, 2010; Carmelo-Ordaz et al., 2012; Saunila and Ukko, 2014).

1.1. Entrepreneurial attitude and innovation in small businesses

The importance of IC has been manifested in innovation and creativity as key factors for organizational performance and the company's competitiveness. One of the dimensions of IC is human capital, which is reflected in knowledge, human skills, competence, attitudes, behaviors and personal experiences (Kong and Thomson, 2009; Škare and Lacmanović, 2016). Entrepreneurs' entrepreneurial attitudes are an important component of human capital, acting as a background for decision-making processes (Suar and Khuntia, 2010; Holland and Shepherd, 2013). Entrepreneurial attitudes would be shaped by personal preferences toward autonomy, risk taking or the implementation of new ideas, among other aspects, that drive entrepreneurial behaviors (Rauch and Frese, 2007; Romero and Martínez-Román, 2015; Angulo-Guerrero et al., 2017).

Some studies have found a relationship between the entrepreneur's attitudes (such as proactivity or risk taking) and business results (Choe et al., 2013; Garavan et al., 2016; Fernández-Serrano and Romero, 2013). Nevertheless, the effect of entrepreneurial attitudes, as a component of IC, on innovation has not been directly addressed. In this sense, according to Bontis (2004), human capital provides a series of silent characteristics, such as entrepreneurs' entrepreneurial attitudes, which potentially support the organization's routine activities. Budiarti (2017) states that these routine activities produce knowledge that remains in the organization. The entrepreneurial attitudes of entrepreneurs resulting from human capital, increase confidence, commitment, reputation and relationships (relational capital) (Jardon and Martos, 2012), which can favor the innovative practices of SMEs. In this regard, we propose the following hypothesis:

H1: The business owners' entrepreneurial attitude is an element of IC that exerts a positive influence on innovation in small businesses.

1.2. Personal values as a source of IC

Successful IC management involves creating, sharing, using and managing an organization's knowledge and information; that is, implementing an optimal knowledge management (Marr et al., 2003). Several studies indicate that the most important obstacle for an efficient management of knowledge is related to organizational culture (Gold et al., 2001). In small businesses, the entrepreneur's personal values represent the fundamental basis of the company's organizational culture. Therefore, these values can facilitate, promote and correct the management of knowledge within the organization (Nonaka and Konno, 1998), driving innovation.

In this regard, personal value theories serve to establish relationships between the value priorities and the behaviors of individuals or groups (Ros, 2001). One of the most interesting theories is that of Schwartz (1999) who integrates and links cultural and individual values. Schwartz's Theory of Basic Human Values has been validated for a large number of nations and offers both external and convergent validity (Watson et al., 2002).

Schwartz (1992) proposed a structured order for the identification of personal values according to which the values are differentiated based on the motivational goal that they express (Cohen, 2009). Schwartz (1992) distinguishes ten basic values (figure no. 1) and defines them as goals that serve as guiding principles in a person's or a group's life. The Schwartz value system represents a complete set of fundamental values of cultures around the world (Dollinger et al., 2007).

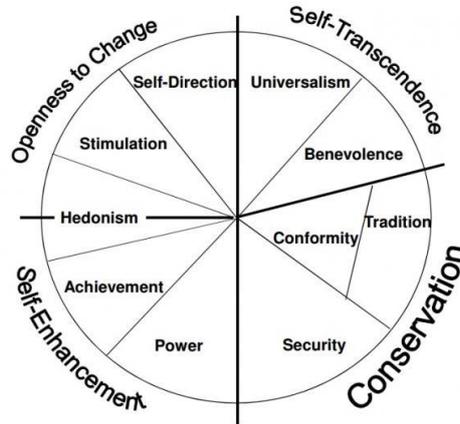


Figure no. 1: Definition of the types of personal values

Source: Schwartz, 1992

Schwartz (2006) proposed a circular scheme by comparing two large bipolar dimensions that present the relations of compatibility and conflict between the prioritized values. The first dimension is shaped by the "openness to change" values in one pole versus "conservation" values at the opposite pole. The second dimension is delimited by the values of "self-enhancement" and "self-transcendence".

1.3. Personal values as predictors of the entrepreneurial attitude

In recent decades, research linking individual values as antecedents for entrepreneurial attitudes and behavior has emerged (Corraliza and Berenguer, 2000; Liñán et al., 2011; Jaén et al., 2013). Although, according to these works, personal values directly affect attitudes and behaviors, the evidence is not yet conclusive (Hayton and Cacciotti, 2013).

Following Rokeach (1973), values guide attitudes, intentions and behaviors and, therefore, they are relevant to understand an entrepreneur's value system. From this perspective, values become key elements that sustain people's decisions and shape attitudes toward behavior. Ajzen (1991) states that beliefs would explain attitudes, while values would explain behaviors. Thus, Holland and Shepherd (2013) showed that the attitude of persistence shown by entrepreneurs can be attributed in part to their personal values.

In this regard, Jaén et al. (2013) and Campos (2014) showed that the values included in the dimensions of "openness to change", "self-transcendence" and "self-enhancement" have a positive relationship with attitudes for entrepreneurship. Notwithstanding, some studies

have found a negative relationship between the values of "self-enhancement" and creative attitudes (Dollinger et al., 2007) and the attitude toward new experiences (Olver and Mooradian, 2003), which suggests that values of power and achievement could limit certain entrepreneurial attitudes.

From the literature analyzed, we propose the following hypotheses:

H2: The openness to change dimension, as a personal value of business owners, exerts a positive influence on their entrepreneurial attitude.

H3: The self-transcendence dimension, as a personal value of business owners, exerts a positive influence on their entrepreneurial attitude.

H4: The self-enhancement dimension, as a personal value of business owners, exerts a negative influence on their entrepreneurial attitude.

H5: The conservation dimension, as a personal value of business owners, exerts a negative influence on their entrepreneurial attitude.

1.4. The influence of personal values on innovation in SMEs

According to the hypotheses postulated, values can affect the intention to follow a specific behavior indirectly, via attitudes (figure no. 2). Nonetheless, they can also condition it directly (De Groot and Steg, 2010; Jaén et al., 2013). Values determine the decision making and behavior of people and organizations (Verplanken and Holland, 2002; Suar and Khuntia, 2010) and they can influence innovation in companies (Amabile, 1988). In small businesses, the entrepreneur usually assumes a strong leadership (Guzmán, 1994). The leader's personal value system plays a central role in the culture of the organization and its development (Schein, 1992). Therefore, the motivational values that leaders prioritize can have a direct impact on the innovative results of their companies (Berson et al., 2008). Martins and Terblanche (2003) argued that the values and beliefs of the owners form the basis for the development of innovations, especially in small businesses. The business owners transmit their values to employees through their strategic decisions, shaping their behavior (Schein, 1992). Thus, Tomczyk et al. (2013) showed that the performance of high growth companies is closely related to the entrepreneurs' values.

There are few studies that address innovation and its links to the Schwartz scale of values and none of them has a focus on small business owners. Berson et al. (2008) observed that the values of self-direction – which are part of the "openness to change" dimension – of CEOs in large companies showed a positive relationship with the culture of innovation, while safety values – which are part of the "conservation" dimension – exerted a negative influence. Also, according to Eva et al. (2017), the values of self-direction of the employees of medium-sized companies have a positive influence on innovation, this effect being stronger in less formalized companies. In this sense, we propose the following hypotheses:

H6: The openness to change dimension, as a personal value of business owners, exerts a positive influence on innovation in small businesses.

H7: The conservation dimension, as a personal value of business owners, exerts a negative influence on innovation in small businesses.

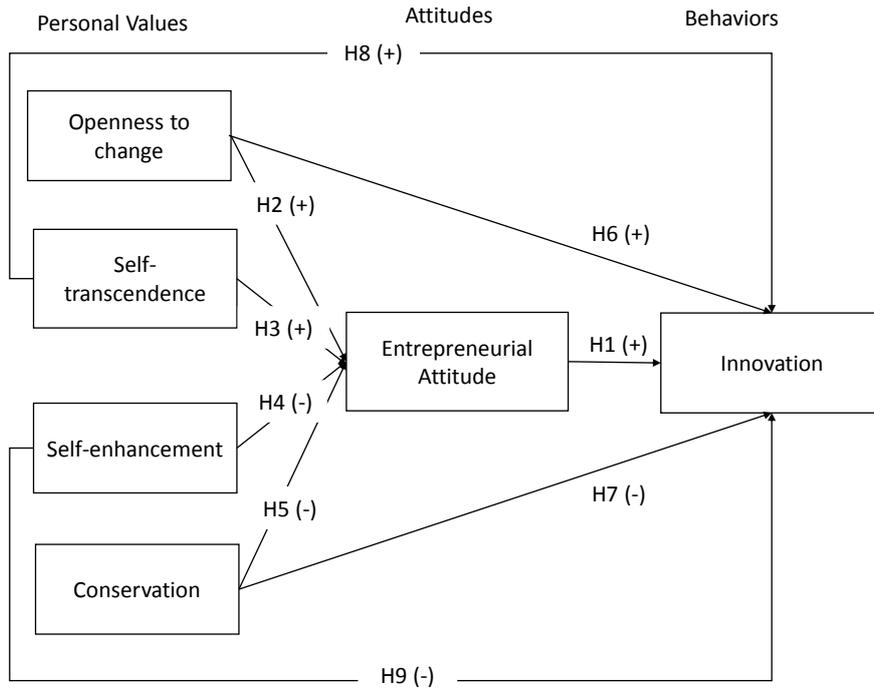


Figure no. 2: Theoretical model and research hypotheses

As previously mentioned, the second dimension in Schwartz’s (2006) model is made up of ”self-transcendence” versus ”self-enhancement”. According to Cohen (2009), ”self-transcendence” includes values that promote tolerance and social concern, favoring teamwork, cooperation and creativity, and these practices can foster innovation (Berson et al., 2008). On the contrary, the dimension of ”self-enhancement” is related to values that emphasize the search for one’s own success and mastery over people and resources. Those leaders who prioritize these values could hinder individual initiatives of creativity and improvement in organizations (Dollinger et al., 2007). In this regard, the following hypotheses are proposed in this work:

H8: The self-transcendence dimension, as a personal value of business owners, exerts a positive influence on innovation in small businesses.

H9: The self-enhancement dimension, as a personal value of business owners, exerts a negative influence on innovation in small businesses.

The theoretical framework of this research is, therefore, summarized in figure no. 2. The proposed model suggests that the personal values of entrepreneurs are elements of the IC that condition innovation in small businesses. This influence is manifested directly and indirectly, through the formation of entrepreneurial attitudes in the business owners, which act as a mediating factor between values and business innovation.

2. Methodology and measures

2.1. Sample design and field work

The data has been obtained from a survey of small businesses in Paraguay. In each small business, an owner or co-owner who also carries our management functions in the company was interviewed. The stratified probabilistic sampling technique was used with segments by size, sectors and geographic zones. The target population included small businesses with up to 50 employees in the Asunción area (capital) and the Central Department (central region of the country). The final sample of 345 companies is representative of that population with a sample error of 5% and a 95% confidence level. The companies were chosen randomly and non-response biases were not observed. The collection of the information was carried out using a structured questionnaire in 191 personal interviews between the months of September 2015 and January 2016 (response rate of 63%).

2.2. Measures and statistical methodology

The dependent variable in this analysis is innovation. The business owners were asked if their company had introduced any type of innovation in the last three years, differentiating between product, process, marketing and organizational innovation, according to the Oslo Manual for innovation studies (OECD/EC, 2005). Based on this information, the variable "innovation" was created, which takes values from 0 to 4 based on the number of categories in which the company innovated (0 when the company did not innovate in any category and 4 when it innovated in all the categories).

The personal values of the business owners were measured through the Portrait Values Questionnaire (PVQ) proposed by Schwartz (2006) and widely validated by the specialized literature (Sagiv and Schwartz, 2007; Dollinger et al., 2007; Cohen, 2009). The PVQ includes 40 items that describe the different profiles of people from which measurements can be obtained for the ten individual values proposed by Schwartz's theory (1992).

Finally, the entrepreneurial attitude was measured by the degree of agreement with the following statement: "Being an entrepreneur is important for him/her. He/she likes to take risks and start up his/her own projects and ideas". The responses were coded using a Likert scale from 0 ("completely disagree") to 5 ("completely agree"). Table no. 1 shows the descriptive indicators of the variables.

To evaluate the hypotheses proposed, a model of structural equations using the partial least squares (PLS) technique based on variance has been applied (Chin, 1998; Roldán and Sánchez-Franco, 2012; Hair et al., 2016). The present study uses the SmartPLS 3 software (Ringle et al., 2015).

Table no. 1: Descriptive indicators of the sample

Indicators	Mean	S.D
PERSONAL VALUES – IC		
Conformity	15.93	2.96
Tradition	13.33	3.36
Benevolence	16.00	2.74
Universalism	24.47	3.85
Self-Direction	16.54	2.39
Stimulation	10.37	2.82
Hedonism	10.64	2.90
Achievement	14.70	3.24
Power	10.45	2.82
Security	20.48	3.57
ATTITUDES – IC		
Entrepreneurial Attitude	4.32	0.94
BEHAVIORS		
Innovation	2.71	1.47

Note: S.D.= Standard deviation

3. Results

Statistical analysis in structural equation models is presented in two stages: the evaluation of the measurement model and the structural model.

3.1. Measurement model

The measurement model defines the latent variables that are used and assigns manifest variables (indicators) to each one. The evaluation of the measurement model for the reflective indicators in PLS is based on the reliability of each item, the reliability of the construct (CR), the convergent validity and the discriminant validity (Roldán and Sánchez-Franco, 2012).

As shown in table no. 2, the reliability of the individual items is considered adequate because all the indicators and dimensions have loadings above 0.708 (Carmines and Zeller, 1979). All the constructs also satisfy the requirements for Dijkstra-Henseler’s indicator (ρ_A) (ρ_A) and the Cronbach alpha values are greater than 0.7. All the constructs meet the reliability requirements, since the composite reliabilities (CR) are greater than 0.7 (Hair et al., 2010). Likewise, all the latent variables achieve a convergent validity, given that their average extracted variances (AVEs) exceed the 0.5 level (Hair et al., 2010).

All the constructs attain discriminant validity following both the Fornell-Larcker and the HTMT criteria. Likewise, consistent results for the HTMT criterion are obtained (Gold et al., 2001) with values below the threshold 0.90 (HTMT90). The HTMT inference tests show that none of the confidence intervals contains the value one. Therefore, all the constructs achieve discriminant validity and are empirically different (Henseler et al., 2015).

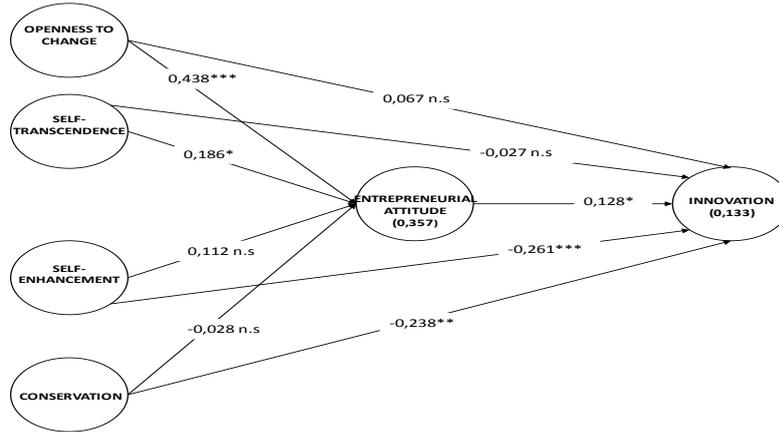
Table no. 2: Evaluation of the measurement model

Construct	Loading	CR	AVE
OPENNESS TO CHANGE		0.863	0.679
Self-Direction	0.766		
Stimulation	0.880		
Hedonism	0.822		
CONSERVATION		0.846	0.648
Security	0.746		
Tradition	0.828		
Conformity	0.838		
SELF-TRANSCENDENCE		0.921	0.853
Universalism	0.925		
Benevolence	0.922		
SELF-ENHANCEMENT		0.881	0.787
Achievement	0.866		
Power	0.908		
ENTREPRENEURIAL ATTIT.	1.000	1.000	1.000
INNOVATION	1.000	1.000	1.000

3.2. Structural model

The structural model defines and evaluates the relationships between latent variables. Table no. 3 shows the sign, the size and the significance of the structural path coefficients, the R² values and the Q² test for predictive relevance. In accordance with Roldán and Sánchez-Franco (2012) and Hair et al. (2016), the bootstrapping procedure (5000 subsamples) has been applied to generate statistics and confidence intervals and evaluate the significance of the path coefficients. The estimated SRMR is 0.084, below the 0.1 level (Ringle et al., 2013). No problems of multicollinearity were detected.

In the first place, it is observed (figure no. 3, table no. 3 and table no. 4) that the cultural dimensions "conservation" and "self-enhancement" are negatively and significantly related to the variable "innovation". On the other hand, it is observed that the cultural dimensions of "openness to change" and "self-transcendence" are positively related to the "entrepreneurial attitude". Finally, the "entrepreneurial attitude" is positively related to the "innovation" variable with a level of significance of $p < 0.05$. Accordingly, the hypotheses H1, H2, H3, H7 and H9 are confirmed, while H4, H5, H6 and H8 are rejected.



*** p < 0.001; ** p < 0.01; * p < 0.05; ns = non-significant (based on t(4999) with one tail).

Figure no. 3: Model of personal values – entrepreneurial attitude –innovation

Table no. 3: Results of the structural model

Hypothesis Testing	Path Coeff.	S.D.	P-Values	Confidence interval		Supp.
				5%	95%	
H1: Entrep. Attit. -> Innovation	0.128	0.074	*	0.001	0.251	Yes
H2: Op. to Chang. ->Entrep. Attit	0.438	0.077	***	0.306	0.562	Yes
H6: Op. to Chang. -> Innovation	0.067	0.098	n.s	-0.091	0.230	No
H3: Self-transcend. ->Entrep. Attit	0.186	0.104	*	0.028	0.362	Yes
H8: Self-transcend. -> Innovation	-0.027	0.097	n.s	-0.185	0.131	No
H5: Conserv. ->Entrep. Attit.	-0.028	0.094	n.s	-0.181	0.126	No
H7: Conserv. -> Innovation	-0.238	0.102	**	-0.392	-0.056	Yes
H4: Self-enhanc. ->Entrep. Attit.	0.112	0.076	n.s	-0.008	0.242	No
H9: Self-enhanc. -> Innovation	-0.261	0.084	***	-0.386	-0.109	Yes
R² Entrepreneurial Attitude	0.357					
R² Innovation	0.133					

Notes: S.D.=Standard Deviation. *** p < 0.001; ** p < 0.01; * p < 0.05; ns = non-significant (based on t(4999) with one tail)

The model indicates the presence of two values ("conservation" and "self-enhancement") with a direct and negative impact on the variable "innovation". On the other hand, the "entrepreneurial attitude" acts as an intermediate variable that allows "openness to change" and "self-transcendence" to act indirectly and positively on the variable "innovation".

Table no. 4: Total and indirect effects on innovation

Effects on innovation	Path Coeff.	S.D.	O/STDEV	P-Values	Confidence interval	
					5.0%	95.0%
<i>TOTAL EFFECTS</i>						
Op. to Chang. ->Innovation	0.123	0.090	1.362	n.s	-0.022	0.273
Self-transcend. ->Innovation	-0.003	0.098	0.034	n.s	-0.166	0.153
Conservation ->Innovation	-0.241	0.105	2.293	* 0.011	-0.406	-0.061
Self-enhancem. ->Innovation	-0.247	0.085	2.908	** 0.002	-0.385	-0.107
<i>INDIRECT EFFECTS</i>						
Op. to Change ->Entrep. Attit. ->Innovation	0.056	0.035	1.585	* 0.047	0.004	0.121
Self-transcend. ->Entrep. Attit. ->Innovation	0.024	0.020	1.172	* 0.089	0.001	0.075
Conserv. ->Entrep. Attit. ->Innovation	-0.004	0.014	0.261	n.s	-0.034	0.012
Self-enhancem. ->->Entrep. Attit. ->Innovation	0.014	0.014	1.048	n.s	0.000	0.047

Notes: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ns = non-significant (based on $t(4999)$ with one tail).

4. Discussion

This work provides empirical evidence of the effect generated by IC on the innovative behavior of small businesses. Specifically, it is verified that Schwartz's personal values dimensions (1992) influence the entrepreneurial attitude of the business owners and the innovation in small businesses. Similar studies, mostly for developed countries, have shown that certain personal values are linked to the entrepreneurial attitudes of potential entrepreneurs (Corraliza and Berenguer, 2000; Jaén et al., 2013; Liñán et al., 2013). However, the current study extends these results, considering the values and attitudes of active entrepreneurs as IC elements of their companies and analyzing their impact on innovation.

The positive influence of the entrepreneurial attitude (defined as the risk orientation, autonomy and the creativity of the entrepreneurs) on innovation confirms H1. This result is consistent with previous evidence (Fernández-Serrano and Romero, 2013). It can be said that entrepreneurial attitudes are part of human capital, stimulating the creation of new businesses, new products, new techniques, changes in the organization of production and even the creation of new markets (Wennekers et al., 2002). In small companies in Paraguay, a developing country where human, financial and even knowledge resources are scarce, the innovative results seem to depend significantly on business owners' entrepreneurial attitudes.

The results presented here are also consistent with the hypothesis that the cultural values of the members of a society play an important role in the determination of personal attitudes, in accordance with Schwartz's theory of personal values (1992). In this regard, H2, which proposes a positive relationship between the personal values of the dimension "openness to

change” and the ”entrepreneurial attitude”, has also been accepted. The values associated with this dimension are linked to motivation, risk decisions, independent thinking, creativity and the pursuit of exploratory objectives (Dollinger et al., 2007).

Likewise, as postulated in H3, the cultural dimension of ”self-transcendence” is also positively associated with entrepreneurial attitudes. There are some studies that have shown that the values linked with this dimension are present in certain types of entrepreneurs (Peris-Ortiz et al., 2011). In this regard, we can see how some collectivist values are congruent with the entrepreneurial orientation, since they articulate certain behaviors considered relevant for entrepreneurship, such as tolerance, open-mindedness, the well-being of people, loyalty and honesty.

On the other hand, the results obtained show the relationship between business owners’ personal values and innovation in small businesses. In this regard, there are two direct negative effects on innovation associated with the values of ”conservation” and ”self-enhancement” and two positive indirect effects linked to ”openness to change” and ”self-transcendence”.

According to what was proposed in H7, the negative direct impact of the values of ”conservation” (security, conformity and tradition) on innovation could be due to the fact that these values share some common motivational objectives with traditional practices, rooting, self-restraint, order and harmony in relationships. In developing countries, there is still a high degree of attachment to these values (Dollinger et al., 2007), which could act as inhibitors of innovation (Berson et al., 2008), prioritizing the status quo in the organizations instead of creativity and risk taking. In Paraguay, specifically, the population has suffered a strong and long political dictatorship that has left a heritage of values associated with ”conservation”, which could be reflected in a negative way in its business management.

Likewise, the cultural dimension of ”self-enhancement”, which groups the values of power and achievement, exerts a direct negative effect on innovation, as stated in H9. These results suggest that innovative behaviors do not derive from the search for personal recognition and success (Dollinger et al., 2007). Power is a value that emphasizes the control or domination of people or resources (Cohen, 2009) and, given its nature, could lead to internal conflicts in companies, with negative consequences for organizational performance. The results presented here support this hypothesis. Yet, other research has found that personal power and achievement can be desirable values to develop creative initiatives and stimulate entrepreneurial intentions (Cohen, 2009; Moriano et al., 2012), depending on the context. In this regard, additional evidence is required to confirm this conclusion with other results.

On the other hand, the analysis carried out also shows the existence of an indirect effect of the values of ”openness to change” and ”self-transcendence” on innovation through the ”entrepreneurial attitude”. This result implies that the entrepreneurs’ values of ”openness to change” and ”self-transcendence” in small businesses favor innovative behavior, but only to the extent that these values can generate certain entrepreneurial attitudes.

Conclusions

This work confirms the influence of the business owners’ personal values, as a form of IC, on innovation in small businesses and contributes to the explanation of the mechanisms through which this influence takes place. To this end, we have analyzed the mediating role

that the entrepreneurial attitude – another form of IC- plays between the personal values of the entrepreneur and business innovation.

According to the results presented here, the influence of IC, expressed through the business owners' personal values, on innovation in small businesses is manifested in a double way. On the one hand, there is a direct negative effect of the dimensions of "conservation" and "self-enhancement" on business innovation. On the other hand, there is a positive indirect effect of the dimensions of "openness to change" and "self-transcendence", which is manifested through the formation of entrepreneurial attitudes, on the business owners influenced by these cultural dimensions.

In this sense, the work shows that certain elements of IC, such as the entrepreneurs' personal values and their entrepreneurial attitudes, can jointly boost innovative results in SMEs. The presence of personal values linked to "openness to change" and "self-transcendence" can drive innovation to the extent that they are translated into an entrepreneurial culture, associated with the ability to take risks and the predisposition to develop personal projects and ideas.

In this regard, public authorities must be aware of the convenience of stimulating processes of cultural change that may contribute to the establishment of a business culture more inclined to innovation. These processes of change, which can be fostered throughout the educational system, can mitigate the values associated with conservation and self-enhancement. Nevertheless, as the results of this work show, the influence of cultural values is manifested largely through the conformation of the entrepreneurial attitudes. Therefore, the development of entrepreneurial education initiatives can be useful in order to transform the personal values of business owners into entrepreneurial attitudes that favor innovation (Romero et al., 2011). To this end, it is important to especially stimulate the value-oriented dimensions of openness to change and self-transcendence.

This study is not without limitations. On the one hand, one must be prudent regarding the generalization of the conclusions of this work, applying them to other geographical and cultural contexts. Likewise, it is important to complement these results with other research that deals with the role of IC in the configuration of the organizational culture and the innovative behavior of companies.

References

- Ajzen, I., 1991. Theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), pp. 179-211.
- Amabile, T.M., 1988. A model of creativity and innovation in organizations. *Research in Organizational Behavior*, 10(1), pp. 123-167.
- Andriessen, D., 2004. IC valuation and measurement: classifying the state of the art. *Journal of Intellectual Capital*, 5(2), pp. 230-242.
- Angulo-Guerrero, M.J., Pérez-Moreno, S. and Abad-Guerrero, I.M., 2017. Disparities in entrepreneurial activity and attitude across EU countries. *European Planning Studies*, 25(4), pp. 680-702.
- Asiaei, K. and Jusoh, R., 2015. A multidimensional view of intellectual capital: the impact on organizational performance. *Management Decision*, 53(3), pp. 668-697.

- Berson, Y., Oreg, S. and Dvir, T., 2008. CEO values, organizational culture and firm outcomes. *Journal of Management*, 29(5), pp. 615-633.
- Bollen, L., Vergauwen, P. and Schnieders, S., 2005. Linking intellectual capital and intellectual property to company performance. *Management Decision*, 43(9), pp. 1161-1185.
- Bontis, N., 1998. Intellectual capital: an exploratory study that develops measures and models. *Management Decision*, 36(2), pp. 63-76.
- Bontis, N., 1999. Managing organisational knowledge by diagnosing intellectual capital: framing and advancing the state of the field. *International Journal of Technology Management*, 18(5), pp. 433-462.
- Bontis, N., 2004. National intellectual capital index: a United Nations initiative for the Arab region. *Journal of Intellectual Capital*, 5(1), pp. 13-39.
- Budiarti, I., 2017. Knowledge Management and Intellectual Capital – A Theoretical Perspective of Human Resource Strategies and Practices. *European Journal of Economics and Business Studies*, 8(1), pp. 148-155.
- Cabrita, M.R. and Bontis, N., 2008. Intellectual capital and business performance in the Portuguese banking industry. *International Journal of Technology Management*, 43(1-3), pp. 212-237.
- Campos-Sánchez, A., 2014. *The Role of Personal Values in the Entrepreneurial Process*. Dissertation, Universidad de Barcelona.
- Carmelo-Ordaz, C., Fernández-Alles, M., Ruiz-Navarro, J. and Sousa-Ginel, E., 2012. The intrapreneur and innovation in creative firms. *International Small Business Journal*, 30(5), pp. 513-535.
- Carmines, E.G. and Zeller, R.A., 1979. *Reliability and Validity Assessment*. Beverly Hills: Sage.
- Chen, J., Zhu, Z. and Hong, Y.X., 2004. Measuring intellectual capital: a new model and empirical study. *Journal of Intellectual Capital*, 5(1), pp. 195-212.
- Chin, W.W., 1998. The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, 295(2), pp. 295-336.
- Choe, K.L., Loo, S.C. and Lau, T.C., 2013. Exploratory study on the relationship between entrepreneurial attitude and firm's performance. *Asian Social Science*, 9(4), pp. 144-149.
- Clarke, M., Seng, D. and Whiting, R.H., 2011. Intellectual capital and firm performance in Australia. *Journal of Intellectual Capital*, 12(4), pp. 505-530.
- Cohen, A., 2009. A value based perspective on commitment in the workplace: An examination of Schwartz's basic human values theory among bank employees in Israel. *International Journal of Intercultural Relations*, 33(4), pp. 332-345.
- Corraliza, J. and Berenguer, J., 2000. Environmental values, beliefs, and actions: A situational approach. *Environment and Behavior*, 32(6), pp. 832-848.
- De Groot, J.I. and Steg, L., 2010. Relationships between value orientations, self-determined motivational types and pro-environmental behavioral intentions. *Journal of Environmental Psychology*, 30(4), pp. 368-378.
- Dollinger, S.J., Burke, P.A. and Gump, N.W., 2007. Creativity and Values. *Creativity Research Journal*, 2(3), pp. 91-103.

- Eva, N., Prajogo, D., Prajogo, D., Cooper, B. and Cooper, B., 2017. The relationship between personal values, organizational formalization and employee work outcomes of compliance and innovation. *International Journal of Manpower*, 38(2), pp. 274-287.
- Fernández-Serrano, J. and Romero, I., 2013. Entrepreneurial quality and regional development: Characterizing SME sectors in low income areas. *Papers in Regional Science*, 92(3), pp. 495-513.
- Garavan, T., Watson, S., Carbery, R. and O'Brien, F., 2016. The antecedents of leadership development practices in SMEs: The influence of HRM strategy and practice. *International Small Business Journal*, 34(6), pp. 870-890.
- Glew, D.J., 2009. Personal values and performance in teams: and individual and team-level analysis. *Small Group Research*, 40(6), pp. 670-693.
- Gold, A.H., Malhotra, A. and Segars, A.H., 2001. Knowledge Management: An Organizational Perspective. *Journal Manag. Inform. Syst.*, 18(1), pp. 185-217.
- González-Loureiro, M. and Dorrego, P.F., 2012. Intellectual capital and system of innovation: what really matters at innovative SMEs. *Intangible Capital*, 8(2), pp. 239-274.
- Guzmán, J., 1994. Towards a taxonomy of entrepreneurial theories. *International Small Business Journal*, 12(4), pp. 77-88.
- Hair, J.F., Hult, G.T.M., Ringle, C. and Sarstedt, M., 2016. *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Los Angeles: Sage.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E., 2010. *Multivariate Data Analysis*. NJ: Pearson Education, Inc.
- Hayton, J.C. and Cacciotti, G., 2013. Is there an entrepreneurial culture? A review of empirical research. *Entrepreneurship & Regional Development*, 25(9-10), pp. 708-731.
- Henseler, J., Ringle, C.M. and Sarstedt, M., 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), pp. 115-135.
- Holland, D.V. and Shepherd, D.A., 2013. Deciding to persist: Adversity, values, and entrepreneurs' decision policies. *Entrepreneurship Theory and Practice*, 37(2), pp. 331-358.
- Inkinen, H., 2015. Review of empirical research on intellectual capital and firm performance. *Journal of Intellectual Capital*, 16(3), pp. 518-565.
- Jaén, I., Fernández-Serrano, J. and Liñán, F., 2013. Cultural Values, Income Level and Entrepreneurship. *Revista de Economía Mundial*, 35, pp. 35-52.
- Jardon, C.M. and Martos, M.S., 2012. Intellectual capital as competitive advantage in emerging clusters in Latin America. *Journal of Intellectual Capital*, 13(4), pp. 462-481.
- Kong, E. and Thomson, S.B., 2009. An Intellectual Capital Perspective of Human Resource Strategies and Practices. *A Journal of Knowledge Management Research & Practice*, 1(1), pp. 356-364.
- Leitner, K.H., 2011. The effect of intellectual capital on product innovativeness in SMEs. *International Journal of Technology Management*, 53(1), pp. 1-18.
- Liñán, F., Fernández-Serrano, J. and Romero, I., 2013. Necessity and Opportunity Entrepreneurship: The mediating effect of culture. *Revista de Economía Mundial*, 33, pp. 21-47.

- Liñán, F., Santos, F.J. and Fernández-Serrano, J., 2011. The influence of perceptions on potential entrepreneurs. *International Entrepreneurship and Management Journal*, 7(3), pp. 373-356.
- Marr, B., Gupta, O., Pike, S. and Roos, G., 2003. Intellectual capital and knowledge management effectiveness. *Management Decision*, 41(8), pp. 771-781.
- Moriano, J.A., Gorgievski, M., Laguna, M., Stephan, U. and Zarafshani, K., 2012. A cross-cultural approach to understanding entrepreneurial intention. *Journal of Career Development*, 39(2), pp. 162-185.
- Nonaka, I. and Konno, N., 1998. The concept of “ba”: building a foundation of knowledge creation. *California Management Review*, 40(3), pp. 40–54.
- OECD/European Communities, 2005. *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*. 3d. ed. Luxembourg: OECD/EC.
- Olver, J.M. and Mooradian, T.A., 2003. Personality traits and personal values: a conceptual and empirical integration. *Personality and Individual Differences*, 35(1), pp. 109-125.
- Peris-Ortiz, M., Rueda-Armengot, C. and Osorio, D.B., 2011. Women in business: entrepreneurship, ethics and efficiency. *International Entrepreneurship and Management Journal*, 8(3), pp. 343-354.
- Rauch, A. and Frese, M., 2007. Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology*, 16(4), pp. 353-385.
- Ringle, C.M., Sarstedt, M., Schlittgen, R. and Taylor, C.R., 2013. PLS path modeling and evolutionary segmentation. *Journal of Business Research*, 66(9), pp. 1318-1324.
- Ringle, C.M., Wende, S. and Becker, J.M. 2015. *SmartPLS 3.Boenningstedt: SmartPLS GmbH*. [online] Available at: <<http://www.smartpls.com>> [Accessed 15 April 2017]
- Rokeach, M., 1973. *The nature of Human Values*. NY: Free Press.
- Roldán, J.L., and Sánchez-Franco, M.J., 2012. Variance-based structural equation modeling: guidelines for using partial least squares. In: M. Mora, O. Gelman, A. Steenkamp and M.S. Raisinghani, eds. 2012. *Research methodologies, innovations and philosophies in software systems engineering and information systems*. Hershey PA: Information Science Reference, pp. 193-221.
- Romero, I. and Martínez-Román, J.A., 2012. Self-employment and innovation. Exploring the determinants of innovative behavior in small businesses. *Research Policy*, 41(1), pp. 178-189.
- Romero, I. and Martínez-Román, J.A., 2015. Determinants of technology adoption in the retail trade industry – The case of SMEs in Spain. *Amfiteatru Economic*, 17(39), pp. 646-660.
- Romero, I., Petrescu, R. and Balalia, A.E., 2011. Universities As Suppliers of Entrepreneurship Education Services. The Cases of the University of Seville and the Academy of Economic Studies in Bucharest. *Amfiteatru Economic*, 13(30), pp. 347-361.
- Ros, M., 2002. Los valores culturales y el desarrollo socioeconómico: una comparación entre teorías culturales. *Reis – Revista Española de Investigaciones Sociológicas*, 99, pp. 9-33.

- Sagiv, L. and Schwartz, S.H., 2007. Cultural values in organisations: insights for Europe. *European Journal International Management*, 1(3), pp. 176-190.
- Saunila, M. and Ukko, J., 2014. Intangible aspects of innovation capability in SMEs: Impacts of size and industry. *Journal of Engineering and Technology Management*, 33, pp. 32-46.
- Schein, E.H., 1992. *Organizational culture and leadership*. 2nd ed. San Francisco: Jossey-Bass.
- Schwartz, S.H., 1992. Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, pp. 1-65.
- Schwartz, S.H., 2006. Les valeurs de base de la personne: théorie, mesures et applications. *Revue Française de Sociologie*, 47(4), pp. 929-68.
- Schwartz, S.H., Sagiv, L. and Boehnke, K., 2000. Worries and values. *Journal of Personality*, 68(2), pp. 309-346.
- Suar, D. and Khuntia, R., 2010. Influence of personal values and value congruence on unethical practices and work behavior. *Journal of Business Ethics*, 97(3), pp. 443-460.
- Subramaniam, M. and Youndt, M.A., 2005. The influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal*, 48(3), pp. 450-463.
- Terziovski, M., 2010. Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: a resource-based view. *Strategic Management Journal*, 31(8), pp. 892-902.
- Tomczyk, D., Lee, J. and Winslow, E., 2013. Entrepreneurs' personal values, compensation, and high growth firm performance. *Journal of Small Business Management*, 51(1), pp. 66-82.
- Verplanken, B. and Holland, R.W., 2002. Motivated decision making: effects of activation and self-centrality of values on choices and behavior. *Journal of Personality and Social Psychology*, 2(3), pp. 434-450.
- Wang, D. and Chen, S., 2013. Does intellectual capital matter? High-performance work systems and bilateral innovative capabilities. *International Journal of Manpower*, 34(8), pp. 861-879.
- Watson, W. E., Johnson, L. and Zgourides, G.D., 2002. The influence of ethnic diversity on leadership, group process, and performance: An examination of learning teams". *International Journal of Intercultural Relations*, 26(1), pp. 1-16.
- Wennekers, A.R.M., Uhlaner, L.M. and Thurik, A.R., 2002. Entrepreneurship and its Conditions: A Macro Perspective. *International Journal of Entrepreneurship Education*, 1(1), pp. 25-64.
- Wu, S.H., Lin, L.Y. and Hsu, M.Y., 2007. Intellectual capital, dynamic capabilities and innovative performance of organisations. *International Journal of Technology Management*, 39(3-4), pp. 279-296.