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Value generation and knowledge management in Peruvian microenterprises

Miguel Fernando Inga-Ávila^{a*}, Roberto Líder Churampi-Cangalaya^b, Miguel Angel Inga-Aliaga^c, Wagner Vicente-Ramos^c and Wiliam Rodríguez-Giráldez^c

^aSystems Engineering Faculty. Postgraduate Unit. Universidad Nacional del Centro del Perú (UNCP), Peru

ABSTRACT

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Over the last few years, knowledge has become part of the operations, both at the productive and service level; being considered as an important resource in companies, since it can generate competitive advantage. The objective was to determine the relationship between the activities developed by the companies from Nonaka & Takeuchi's (1995) approach and the creation of qualitative and quantitative value in 150 micro-entrepreneurs from different sectors. Partial least squares regression technique was used for data analysis and the results showed a direct relationship between socialization, combination and internalization and value creation; on the other hand, the relationship between externalization and value creation was inverse. For all relationships the pvalue ensured the significance of them; finally, the study proposes the generation of intra and interorganizational relationships for the creation, dissemination and use of knowledge in companies.

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1. Introduction

High competition contexts demand that companies not only compete through the quality of their products or services, but also through innovation and improvement of their processes and generation of knowledge for the continuous improvement of internal and external activities that allow them to better respond to market needs. According to Terranova (2022), micro and small companies that are not able to integrate technologies in the creation of value and production processes could jeopardize their permanence in the market. Consequently, it is important to conduct studies that allow small and micro enterprises to integrate knowledge and benefit from it (Edvardsson & Durst, 2013), given that knowledge is recognized as an important factor in business processes (Bodrow, 2006). Given their structure and concentration of functions, micro and small enterprises have a high adaptive capacity to market conditions. As a result of the covid19 pandemic, during 2020, the market and small businesses entered a recessionary phase; however, by 2021, they experienced an economic recovery from the previous year. By this 2022, it is expected that the relaxation of sanitary restrictions, the advance of digitalization and the incorporation of information technologies will generate development opportunities for this sector (López, 2022; Windsor, 2017). The study on how micro and small enterprises use knowledge in their respective productive or service units was addressed by Lim & Klobas (2000) who established that there are no marked differences in the practice of knowledge management between large and small enterprises; at the same time they analyzed the factors that determine an adequate management of business knowledge, these being: balance between the cost of knowledge acquisition or development and the need; the extent to which knowledge is created in the business environment; internal storage of generated knowledge, internal processing of knowledge; dissemination and use of knowledge within the company; and attention to collaborators.

* Corresponding author E-mail address miguelinga@uncp.edu.pe (M. F. Inga-Ávila)

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^bUniversidad Peruana Los Andes (UPLA), Perú

^cFaculty of Business Sciences. Universidad Continental. Perú

In most cases, the technological and productive development of small and micro enterprises, depends on the external scenario and knowledge before the internal (Nodari et al., 2014), so it is important to review the infrastructural capacity (technology, organizational structure and culture) and procedural capacity (acquisition, conversion, application and security) oriented to an adequate treatment of organizational knowledge (Chan & Chee-Kwong, 2008). In this sense, Inga et al. (2022) established the importance of processes, collaborators and the use of technology in the development of business strategies for the creation of competitive advantages; elements that at the same time, are part of the paradigm associated with Industry 4.0, the generation of knowledge and operational excellence in modern times (Bettiol et al., 2020). Subanidja & Hadiwidjojo (2017) indicate that much is said about knowledge management, but very little is implemented in the company; or in any case, the activities that are carried out, are performed unconsciously and as part of the daily managerial and operational practice, often becoming "bottlenecks" rather than elements that promote growth and development, so its study and deepening is important. Efforts to understand the influence of knowledge management on business performance also reach sectors and production chains; such is the case of the work of López et al. (2013), who propose that innovation in the various sectors goes beyond the development and transformation of new products, and should rather focus on generating added value. The focus of actions to create value is latent and becomes the basis for gaining an advantage over competitors. Therefore, it is proposed to know the dynamics of knowledge management in microenterprises in Huancayo, posing the following question: What is the relationship between the processes of knowledge management and the creation of value in microenterprises in Huancayo, aiming to determine the relationship between socialization, externalization, combination and internalization and the creation of value in these productive, commercial, extractive and service units. The study highlights the theory proposed by Nonaka and Takeuchi, and defines a methodological procedure to learn how companies create value from knowledge, design proposals for its management and be re-created in other sectors and places.

2. Literature review

2.1 Knowledge Management

King (2009) considers it as "justified personal beliefs" that are present in business processes, daily activities and the multiple links that organizations maintain with the internal and the environment. Consequently, there is knowledge in managers, employees, customers, suppliers, competitors, etc. that deserves to be exploited by organizations, generating strategies that allow the sustainability and development of the company; therefore, knowledge is considered an important asset for organizations (Harb & Abu-Shanab, 2020). The generation of knowledge is inherent to human beings, since they have experiences on a daily basis, making this resource an element of increasing recursive development; that is, the more knowledge is used, the more and better knowledge is available. From its own perspective, Knowledge Management (KM), would be to adequately manage the knowledge generated or acquired by the organization, in order to create value in it, whether at the level of processes, products or services. Since knowledge is developed from experience, it is important to promote intra- and inter-organizational knowledge generation spaces from activities promoted by the same management. On the other hand, it is equally important the acquired knowledge, which is the one that is found through the experiences, experiences or anecdotes of others and that is incorporated into the business praxis. Consequently, what is sought with KM is to acquire, process, store and distribute knowledge among the members of the organization so that they can make decisions and develop their work in a better way (Alavi & Leidner, 2001). Understanding knowledge management in organizations allows knowing how processes and their respective collaborative flows are developed (Anzures & Marques, 2022). Knowledge management should be a task inherent to management, otherwise the company would lose opportunities and positions in the market, so its implementation or development is synonymous with responsibility and strategic business practice. Tarí & García (2009) link knowledge management with organizational learning, which they define as a reiterative process from which data becomes information and this becomes knowledge through learning itself, making this process recursive and reiterative. The possession of knowledge grants ample possibilities of being successful (Pritchard, 2014), since the individual or group learning that develops within a company arises as a response to the complexity of the market (Carrol, 2008).

2.2 Nonaka and Takeuchi's SECI Model

Nonaka & Takeuchi (1995) presented a model through which organizations can promote KM (SECI Model); for this purpose, they identified two types of knowledge: tacit knowledge, which is linked to the practice and personal experience of the individual (André et al., 2002) and which, due to our own characteristics as human beings, is generated through daily experiences and at the same time is unconscious (Polanyi, 1966). On the other hand, there is explicit knowledge, whose nature is structured, based on procedures and follows an established logic; this is more formal and codified, and is therefore found in academic environments, since it is reusable (Smith, 2001). Whether the knowledge is tacit or explicit, it is used by people to make decisions and solve problems, so that adequate knowledge management becomes transcendent for organizational progress. The model developed by Nonaka & Takeuchi is shown in Fig. 1.

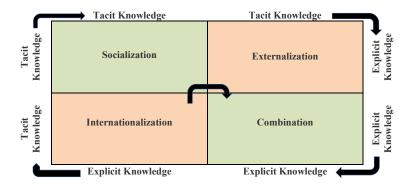


Fig. 1. The SECI Model of Knowledge Creation (Nonaka & Takeuchi, 1995)

Socialization

According to Checkland (2019), the operational, tactical and strategic members are the ones that define the being of the company through human action systems. Through the actions, processes and intra and inter-company relationships, the company shapes the products and services it offers to the market. Nonaka & Takeuchi (1995) indicate that socialization allows the diffusion of people's tacit knowledge and reaches them tacitly, so formal and spontaneous work meetings, exchange of ideas, debates, internships, etc. and everything associated with the free flow of experiences will favor this process. At the level of micro and small enterprises, socialization is much easier to carry out, since business practices are transmitted from parents to children, from generation to generation through observation, imitation, direct practical teaching and tradition.

Externalization

Considering that tacit knowledge is difficult to transmit, it is necessary to establish mechanisms that allow its adequate understanding, comprehension and assimilation (Nonaka & Takeuchi, 1995), so giving format or structure to the experience contained in people (tacit knowledge) becomes necessary and strategic. This process of construction of explicit knowledge is the externalization, from which people verbalize, conceptualize or express in a clear, orderly and structured way what they have accumulated from their own or other people's experiences. Organizational practices oriented to the development of externalization are: writing of manuals, determination of processes and procedures, memoirs or autobiography, expression of corporate values and ideology, etc., which will allow access to it whenever it is required, regardless of the source. It should be considered that information and knowledge is generated day after day by individual and collective experiences, inter and intra organizational interactions and process execution, so its updating in an explicit format is important.

At the level of micro and small companies, externalization is usually underdeveloped, since it requires processes to be previously organized and systematized, in order to express procedural practices in diagrams, flows, writings, etc.; a reality that is not precisely the one reflected in this type of companies.

Combination

Nonaka and Takeuchi (1995) indicate that it is necessary to give new format to what is already there, to update knowledge from systematization, summary and order, is fundamental; this new composition of knowledge will allow generating new ideas and elaborated concepts (Weerakoon et al., 2019). Summaries, documents and digests are part of the organizational vademecum and basis for the generation of new knowledge equally ordered and systematized, facilitating its dissemination and learning. Since externalization is limited in micro and small enterprises, and the practice of generating records is not frequent, the development of the combination is equally limited.

Internalization

In this sense, Nonaka and Takeuchi (1995) link internalization to the process of individual and collective learning, as does Senge (1992), who defines metanoia as the ability to learn to learn and develop adaptive capacity from it; therefore, making people aware of and internalize productive processes is a strategic practice. In micro and small enterprises, practices are internalized in a close, familiar, spontaneous and informal environment. In this regard, Chen et al. (2018) indicate that the leadership style established in organizational management tends to motivate or restrict the development of tacit knowledge; therefore, adequate managerial preparation and training at the level of these companies is necessary.

Value creation

Miller (2016) emphasizes the need to clarify the concepts referred to value creation, so he presents a multidimensional approach to value generation in organizations based on the integration of resources and alignment with the business strategy.

When we speak of value creation, we can indicate that it refers to processes in which the qualitative and quantitative value of the outputs is greater than the value given to the inputs. Thus, finished products are worth more than products in process or raw material, students in their last semesters are "worth more" than new entrants, just as the perception of the facilities as messy and dirty is negative compared to a tidy and clean place; therefore, concluding manufacturing, studying, ordering and cleaning are examples of processes that add value and in which knowledge (tacit and explicit) has been important. Consequently, it is the task of management to determine, execute and articulate the direct and complementary processes that generate value or qualitative and quantitative margin (Porter, 1985).

2. Materials and methods

2.1 Research model and hypotheses

The research uses a quantitative approach in order to contribute with experiences on how micro and small enterprises create value from knowledge management processes. The conceptual model used in the research is the one proposed by Nonaka & Takeuchi (1995), while the fundamentals of Porter (1985) were used for the evaluation of value creation. Based on these theoretical concepts, and according to Cupani (2012), four research hypotheses have been established, which are shown in Fig. 2.

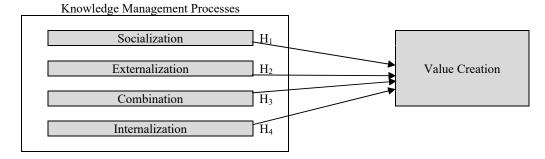


Fig. 2. Proposed research model and hypotheses

- Hypothesis 1 (H1): Socialization (S) processes have a significant effect on value creation (VC) in micro and small enterprises in Huancayo.
- Hypothesis 2 (H2): Outsourcing processes (E) have a significant effect on value creation (VC) in micro and small enterprises in Huancayo.
- Hypothesis 3 (H3): Combination processes (C) have a significant effect on value creation (VC) in micro and small enterprises in Huancayo.
- Hypothesis 3 (H4): Internalization processes (I) have a significant effect on value creation (VC) in micro and small enterprises in Huancayo.

2.2 Population and sample

The population is made up of owners, executives and collaborators of micro enterprises in diverses sectors in the province of Huancayo. The sample consists of 150 people, whose distribution is shown in Table 1. Reinartz et al. (2009) point out that the SEM-PLS technique is recommended for studies with small samples. In this regard, Hair et al. (2017) indicate that the number that makes up the sample size, should be at least >10 ten times the number of arrows pointing to the latent variables, a postulate that is met in the present research.

Table 1Distribution by labor position of the sample

Job position	Quantity	Percentage
Owner	44	29.33%
Executive	52	34.67%
Collaborator or employee	54	36%

The distribution shown in Table 1 is heterogeneous and allows us to gather the assessments regarding the value creation of the different hierarchical levels that make up the formal structure of the companies evaluated.

The distribution by sectoral activity of the companies included in the study is shown in Fig. 3.

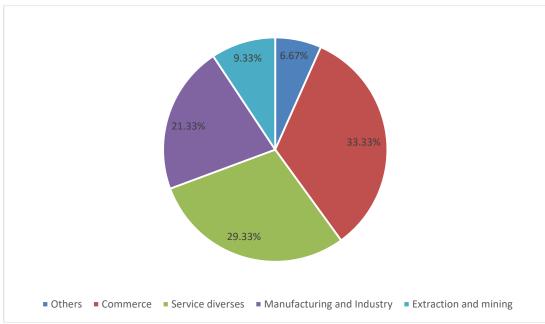


Fig. 3. Distribution by sector of the microenterprises evaluated.

2.3 Instrument and procedure

The instrument for the collection of information was a questionnaire prepared by the authors taking as a theoretical reference the criteria established by Nonaka & Takeuchi (1985) and Porter (1985) for the processes of knowledge management and value generation respectively, which support and justify the work, as shown in Table 2.

Table 2
Dimensions, items and questions

Dimensions	Items	Questions	
Socialization	S1, S2,	1.	The organization promotes spontaneous and social meetings in order to exchange ideas and experiences.
	S3, S4	2.	The organization promotes formal and scheduled meetings in order to exchange ideas and experiences.
		3.	When a new employee joins the organization, an internship or mentoring is encouraged so that he/she
			can share his/her ideas and experiences with others.
		4.	I feel that I have a lot to share with my colleagues regarding work experiences.
Exteriorization	E1, E2, E3, E4	1.	The organization promotes that any experience or way of solving problems is documented or made a procedure.
		2.	The organization conducts training with the purpose of subsequently preparing work guides or work panels.
		3.	They develop workshops in which employees show the results of their work experiences duly formalized.
		4.	Best practices from other organizations are identified and incorporated and translated into a manual or procedure.
Combination	C1, C2,	1.	ICT's are used to systematize the existing information in the organization.
	C3, C4	2.	Reports and properly structured reports are generated for decision making.
		3.	The organization carries out internal and external evaluations and then presents them in a report.
		4.	The organization systematizes information from the environment and communicates it in a timely manner.
Interiorization	I1, I2, I3, I4	1.	The organization encourages employees to know, learn and incorporate into daily practice the organizational philosophy and values.
		2.	The organization's culture is deeply rooted and unconscious in the employees.
		3.	It can be said that this is an organization that is constantly learning.
		4.	The organizational climate is pleasant and motivates to work in it.
Value Creation	VC1,	1.	The processes developed in the organization are oriented to the generation of internal and external value.
	VC2,	2.	This institution is better than others in terms of organization, management, service, etc.
	VC3,	3.	The organization is characterized by constant innovation in its processes, products and services.
	VC4,	4.	The products and services offered by the organization allow it to be competitive.
	VC5,	5.	The organization's name or brand is valued and associated with a quality product or service.
	VC6,	6.	The qualitative and quantitative assessment of the organization by customers, suppliers and external
	VC7		parties is positive and that it is a growing institution.
		7.	I consider that the organization is competitive because of the quality of the people who work in it.

This instrument was subjected to an expert test in order to ensure that its relevance, clarity and contents are valid (McMillan & Schumacher, 2005). The experts provided suggestions for improvement and subsequently gave a favorable opinion of the instrument.

The rating of the items was done through a Likert scale (1 - 5) from Strongly Disagree to Strongly Agree. The instrument was distributed virtually using Google Forms. Confidentiality of information and informed consent were assured. Data processing was done with SmartPLS Software v.4.0.6.9 (Ringle et al., 2022).

3. Results

3.1 Structural equation modeling

The use of Partial Least Square has become widespread in various areas of knowledge, so its study is of interest in recent research (Avkiran, 2018). The SEM-PLS allows to know the relationships and resulting effects from statistical models of multiple variables; facilitating the analysis of internal and external effects (Ruíz et al., 2010).

From the basic theory proposed, structural models (SEM) allow explaining in a didactic way, the existing relationships between independent and dependent variables, their magnitudes and respective meanings (Byrne, 2010).

3.2 Confirmation of the measurement model

From the methodological point of view, before testing the hypotheses formulated, it is necessary to evaluate the internal consistency - reliability of the reflective measurement model by calculating Cronbach's alpha and composite reliability. It is also necessary to ensure that the correlations between the items of the constructs are high, so it is necessary to calculate the convergent validity by means of the average variance extracted (AVE) and the discriminant validity in which the theoretical difference between the various constructs is measured, which must have a low correlation (Fornell & Larcker, 1981). Based on the above, considering the approaches expressed by Nunnally (1978) and that the result of the calculation of Cronbach's alpha value for all variables are in the range of 0.819 to 0.939, it is established that there is adequate internal consistency. In the evaluation of the composite reliability, it is observed that this is satisfactory, given that the values range from 0.880 to 0.950. The values of these calculations are shown in Table 3.

 Table 3

 Results for the confirmation of the measurement model

Constructs	Range of external factorial loading values	Reliability		Convergent validity	Discriminant validity (Fornell & Larcker)					
	-	Cronbach alpha	Composite reliability	Average Variance Extracted	С	E	I	S	VC	DV
Combination	0.827 - 0.894	0.894	0.926	0.759	0.871					Yes
Exteriorization	0.766 - 0.852	0.828	0.885	0.659	0.691	0.812				Yes
Interiorization	0.746 - 0.863	0.819	0.881	0.650	0.569	0.634	0.806			Yes
Socialization	0.745 - 0.863	0.839	0.892	0.674	0.465	0.766	0.539	0.821		Yes
Value creation	0.829 - 0.902	0.939	0.950	0.733	0.483	0.443	0.766	0.535	0.856	Yes

To test whether the relationship between the latent variables explains the model, it is necessary to calculate the convergent validity through Average Variance Extracted (AVE), establishing the degree to which the different items considered to measure a certain construct measure the same thing (Cepeda & Roldan, 2004) and its value must be greater than 0.50 (Hair et al., 2017). On the other hand, Fornell & Larcker (1981) indicate that discriminant validity ensures that a latent variable is measuring a single concept through its items; and its calculation involves the contrast between the square roots of the AVEs and the correlations between the latent variables; the roots of the AVEs must be greater than all the latent correlations. The range of values of the AVE are between 0.650 - 0.759, which according to Fornell & Larcker (1981) there is an adequate convergent validity. Similarly, it is observed that the roots of the AVE are greater than all the latent correlations, which ensures discriminant validity. Based on the results of Table 3, it is concluded that there is an adequate relationship between the constructs or latent variables and their respective indicators or empirical variables.

Taking into consideration what is shown in Table 4, the results express that the criterion of cross-loadings is met, since the indicators have the highest factor loadings on their own indicators and not on others (Hair et al, 2017); so discriminant validity is manifest once again.

Table 4
Cross-loadings

Combination	Exteriorization	Interiorization	Socialization	Value Creation
0.82703	0.64384	0.43173	0.49658	0.42235
0.89445	0.59476	0.55088	0.40914	0.38444
0.88783	0.53304	0.36486	0.32825	0.37537
0.87308	0.62013	0.60607	0.37753	0.48007
0.55459	0.82502	0.5199	0.61519	0.35757
0.65945	0.76661	0.41824	0.62223	0.2572
0.53287	0.79972	0.45651	0.59644	0.41269
0.53593	0.85233	0.64315	0.66216	0.3788
0.51566	0.58621	0.76904	0.3413	0.58562
0.35234	0.65654	0.74653	0.55342	0.54656
0.57403	0.49169	0.86385	0.47857	0.68793
0.3783	0.34413	0.83974	0.37746	0.63867
0.23742	0.63426	0.42763	0.85329	0.49305
0.46942	0.5863	0.45828	0.87979	0.49199
0.49844	0.72638	0.43813	0.74553	0.41606
0.32407	0.57347	0.45947	0.79895	0.31491
0.45651	0.47147	0.76075	0.53316	0.86648
0.38944	0.33288	0.61217	0.43932	0.85189
0.422	0.42444	0.64793	0.50547	0.8456
0.37629	0.34517	0.66539	0.37784	0.90206
0.44033	0.28877	0.6054	0.43269	0.82972
0.32806	0.25922	0.56771	0.37085	0.83221
0.46137	0.50624	0.70354	0.52468	0.86161
	0.82703 0.89445 0.88783 0.87308 0.55459 0.65945 0.53287 0.53593 0.51566 0.35234 0.57403 0.3783 0.23742 0.46942 0.49844 0.32407 0.45651 0.38944 0.422 0.37629 0.44033 0.32806	0.82703 0.64384 0.89445 0.59476 0.88783 0.53304 0.87308 0.62013 0.55459 0.82502 0.65945 0.76661 0.53287 0.79972 0.53593 0.85233 0.51566 0.58621 0.35234 0.65654 0.57403 0.49169 0.3783 0.34413 0.23742 0.63426 0.46942 0.5863 0.49844 0.72638 0.32407 0.57347 0.45651 0.47147 0.38944 0.33288 0.422 0.42444 0.37629 0.34517 0.44033 0.28877 0.32806 0.25922	0.82703 0.64384 0.43173 0.89445 0.59476 0.55088 0.88783 0.53304 0.36486 0.87308 0.62013 0.60607 0.55459 0.82502 0.5199 0.65945 0.76661 0.41824 0.53287 0.79972 0.45651 0.53593 0.85233 0.64315 0.51566 0.58621 0.76904 0.35234 0.65654 0.74653 0.57403 0.49169 0.86385 0.3783 0.34413 0.83974 0.23742 0.63426 0.42763 0.46942 0.5863 0.45828 0.49844 0.72638 0.43813 0.32407 0.57347 0.45947 0.45651 0.47147 0.76075 0.38944 0.33288 0.61217 0.422 0.42444 0.64793 0.37629 0.34517 0.66539 0.44033 0.28877 0.6054 0.32806 0.25922 0.567	0.82703 0.64384 0.43173 0.49658 0.89445 0.59476 0.55088 0.40914 0.88783 0.53304 0.36486 0.32825 0.87308 0.62013 0.60607 0.37753 0.55459 0.82502 0.5199 0.61519 0.65945 0.76661 0.41824 0.62223 0.53287 0.79972 0.45651 0.59644 0.53593 0.85233 0.64315 0.66216 0.51566 0.58621 0.76904 0.3413 0.35234 0.65654 0.74653 0.55342 0.57403 0.49169 0.86385 0.47857 0.3783 0.34413 0.83974 0.37746 0.23742 0.63426 0.42763 0.85329 0.46942 0.5863 0.45828 0.87979 0.49844 0.72638 0.43813 0.74553 0.32407 0.57347 0.45947 0.79895 0.45651 0.47147 0.76075 0.53316 0.38

3.3 Measurement and analysis of the structural model

According to the procedure proposed by Hair et al. (2017), first the collinearity test must be performed by means of the Variance Inflation Factor (VIF) value, which must be > 1 and < 10 for the latent variables under study. Table 5 shows that the VIF value of all the variables is < 10, which means that there is no collinearity in the research model.

Table 5
Results of the Coefficient of determination (R^2), effect size (f^2), predictive significance (Q^2) and collinearity test (VIF)

Constructs	\mathbb{R}^2	\mathbf{f}^2	\mathbf{Q}^2	Variance Inflation Factor (VIF)
Combination	-	0.06	-	2.083
Exteriorization	-	0.173	-	3.875
Interiorization	-	0.877	-	1.806
Socialization	-	0.199	-	2.52
Value creation	0.666	-	0.473	-

Subsequently, the R² is calculated, which is the fraction of variation explained by an equation of the model considered (Thakkar, 2020). In the research the value of 0.666 was obtained which indicates a strong relationship between value creation (VC) and its respective observed variables (C, E, I, S). The R² is also known as the predictive ability, a high value of R² indicates that the construct values can be predicted by the PLS path model (Hair et al., 2017). The effect size is given by the f² value, the same that indicates the relative importance of a construct or latent variable on the observed variable. In the research, the values obtained for f² are 0.060 for Combination, 0.173 for Exteriorization, 0.877 for Interiorization and 0.199 for Socialization; which according to Cohen (1998), means a small effect of Combination (C), a medium effect of Exteriorization (E) and Socialization (S), and a large effect of Interiorization (I) respectively on Value Creation (VC). Finally, the predictive relevance has been calculated, the same that is expressed through the Q² value that is used to measure how well is the generation of the observed values and the model parameter estimates; results above 0.00 indicate that the model allows predicting future results (Hair, 2017). Through the SmartPLS blindfolding, a Q² value of 0.473 was obtained taking for granted the predictive relevance.

3.4 Hypothesis testing

Cupani (2012) indicates that the structural model serves as a guiding model that seeks to relate the independent variables to the dependent variables. The purpose of this analysis is to test the validity of the theoretical research model that governs the present study.

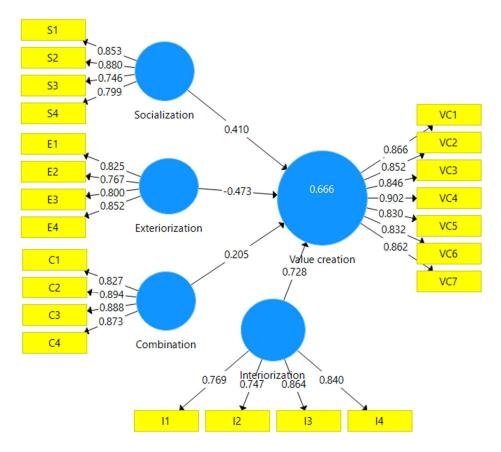


Fig. 4. Confirmatory structural model for knowledge management and value creation

With the results shown in Figure 4 and the bootstrapping of 5000 subsamples, the hypotheses raised are evaluated and the corresponding p-value is incorporated. Table 5 shows the decisions made based on the values obtained in the model.

Hypotheses	Mean sample	Standard deviation	Path beta value	Student's t statistic	<i>p</i> value	Adopted Decision	Determination Coefficient (R2)
H1: $S \rightarrow VC$	0.405	0.102	0.410	3.953	0.000	Accepted	
H2: $E \rightarrow VC$	-0.443	0.161	-0.473	2.853	0.004	Accepted	0.666
$H3: C \rightarrow VC$	0.192	0.102	0.205	1.996	0.046	Accepted	
H4: $I \rightarrow VC$	0.723	0.064	0.728	11.293	0.000	Accepted	

t > 1.96; p < 0.05

The hypotheses H1, H2, H3 and H4 are accepted (Table 5). The case of H2 will be discussed later. This verification is expressed through the t-statistics and p-value, for which the criterion that t > 1.96 and p-value < 0.05 has been taken. The resulting path coefficients (β) indicate the relationship between the variables; establishing that there are positive effects in H1, H3 and H4 and a negative effect in H2, so that:

- Socialization (S) has a positive and significant effect on value creation (VC) with a path coefficient (β) of 0.410 and p-value of 0.000.
- Externalization (E) has a negative and significant effect on value creation (VC) with a path coefficient (β) of -0.473 and p-value of 0.004.

- Combination (C) has a positive and significant effect on value creation (VC) with a path coefficient (β) of 0.205 and p-value of 0.046.
- Internalization (S) has a positive and significant effect on value creation (VC) with a path coefficient (β) of 0.728 and p-value of 0.000.

3.5 Model fit

In the eagerness to ensure that the variations between the observed data values and the predicted values of the same are minimal -without meaning bias or error- is that the model fit is performed (Hu & Bentler, 1999; Byrne, 2010). The values that ensure an adequate fit of the model are shown in Table 6.

Table 6Model of fit indices

Model of fit indices	Cutoff value	Model's value
SRMR (Standardized Root Mean Square Residual)	0 < SRMR < 0.08	0.045 Accepted
Normed Fit Index	> 0.90	0.915 Accepted

4. Discussion

4.1 In relation to Socialization and Value Creation

Ellis et al. (2015) indicate that socialization is a fundamental process for the development and growth of companies, even more so when new collaborators are incorporated, since they must learn the procedures, rules, norms and ways of being and acting according to the organizational policies and culture. In this research, the path coefficient of 0.410 indicates a positive and average relationship between socialization and value creation. This result is consistent with that obtained by Khodaee et al. (2016), in which socialization influences productivity. In microenterprises, the lack of an organizational structure and a formal system based on rules, norms or defined processes, makes them promote the spontaneous or informal system as an integration mechanism; these spontaneous activities -very typical in artisanal and weakly formalized microenterprises- are given by parties, celebrations, mentoring, social meetings, use of social networks and all those that promote learning and transmission of knowledge and experiences from generation to generation and from bosses to workers. The processes of procedural, product and innovation improvement occur through socialization (Gray, 2006).

4.2 In relation to Externalization and Value Creation

In the research, the relationship between externalization and value creation is negative (inverse) and average, with a path value of -0.473. The inverse relationship is explained by the low capacity of microenterprise collaborators to put "in black and white" everything that was generated through practice, experience or learned by some means, as well as by the high concentration on operational tasks; therefore, Saks & Gruman (2012) indicate that microenterprises are "black boxes" since it is known what they do, but not how they do it; both at the level of procedures and management. Exceptionally some EMS translate their operations into process map, procedures, rules and others.

4.3 In relation to Combination and Value Creation

It is necessary to remember that combination converts explicit knowledge into more complex explicit knowledge (Nonaka & Konno, 1998). In the research, the relationship between combination and value creation is positive and average with a path coefficient of 0.205; the value corresponds to the low information processing and document generation capacity manifested in the companies. In this regard, information technologies (IT) could help; however, the low IT culture of employees in microenterprises is a disadvantage.

4.4 In relation to Internalization and Value Creation

The relationship between these two variables is positive and strong, since the value of the path coefficient is 0.728. This indicates that the more employees learn tacitly, the better their job performance will be and therefore the better the creation of business value. Success or failure is a function of the ability to learn to learn, unlearn and relearn (Senge, 1992), an aspect that is deeply rooted at the microenterprise level, given that the differential elements are found at the level of tacit knowledge, with learning and innovation being fundamental for adaptation (Tamayo-Torres et al, 2016).

5. Conclusion of the research

The research has successfully shown how microenterprises create value from knowledge management processes, highlighting internalization and socialization as fundamental practices in companies, so it is important to promote spaces for inter- and intra-company coexistence in order to allow communication, knowledge and experience flows. These face-to-face or virtual spaces will allow strengthening interpersonal relationships, generating an adequate organizational climate and culture that will contribute to growth, learning and business competitiveness. As Nonaka (2005) indicates, knowledge is becoming a solid basis for value creation and a source of capital in companies.

6. Contribution of research

The research contributes with the provision of a reliable and validated scale to evaluate the influence of knowledge management processes from the perspective of Nonaka and Takeuchi (1995) in the creation of value in micro and small enterprises.

Likewise, it allows reflecting on different actions that can be implemented as part of knowledge management processes and orienting them towards the creation of qualitative and quantitative value in microenterprises.

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