



INTERNATIONAL UNIVERSITY LIAISON INDONESIA

Assignment Letter/Surat Tugas

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From /Dari : Head of Department of International Business Administration / Kepala Program Studi **Page** : 1 of 1
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Duty Assignment / Tugas melaksanakan kegiatan

Assignment At **INTERNATIONAL UNIVERSITY LIAISON INDONESIA** **Penugasan di** **UNIVERSITAS LINTAS INTERNASIONAL INDONESIA**

Head of Department of IBA of International University Liaison Indonesia

Kepala Program Studi IBA Universitas Lintas Internasional Indonesia

In consideration of:

His appointment as the Head of Department of IBA of International University Liaison Indonesia under agreement Nomor SK/REC/0671/IULI/XI/2021

Mengingat:

Pengangkatannya sebagai Kepala Program Studi IBA Universitas Lintas Internasional Indonesia dibawah perjanjian Nomor SK/REC/0671/IULI/XI/2021

Herewith gives the task to:

Dengan ini menugaskan kepada:

Name: **Dr. Samuel PD Anantadjaya**
Position: **Lecturer**

Nama: **Dr. Samuel PD Anantadjaya**
Jabatan: **Dosen**

To provide the following activity:

Untuk mengikuti kegiatan:

No	Task/Tugas	Article/Artikel	SKS	Period/Periode	Journal/Jurnal
1.	Article Reviewer	Manuscript ID MBE-12-2021-0151 entitled "Sustainable value creation and organizational performance in industrial manufacturing companies"	1	1-26 January 2022	Invited by Dr. Jos van Iwaarden Editor, Measuring Business Excellence Measuring Business Excellence (Scopus-Indexed Journal) ISSN: 1368-3047
Total SKS			1		

* 1 SKS activity = 50 hour/ 1SKS Kegiatan = 50 Jam

Contoh/ Example:

If the fasilitator full for 3 day activity, the calculation of SKS is 3 day x 8 hour= 24 hour, plus preparation ± 12 hour, then the workload is $\{[(3 \text{ day} \times 8 \text{ hour}) + (12 \text{ hour})] / 50 \text{ hour}\} * 1 \text{ SKS} = 0.72 \text{ SKS}$

Jika fasilitator penuh untuk satu kegiatan selama 3 hari, maka perhitungannya menjadi 3 hari x 8jam, ditambah dengan persiapan ± 12jam maka beban kerja menjadi $\{[(3 \text{ hari} * 8 \text{ jam}) + (12 \text{ hari})] / 50 \text{ jam}\} * 1 \text{ SKS} = 0.72 \text{ SKS}$

The assignee shall accomplish the duty and responsible in line with the related guidelines and other regulation valid in IULI.

Penerima tugas harus menyelesaikan tugas dan tanggung jawab sesuai dengan petunjuk dan peraturan yang berlaku di IULI.

Assignor/Pemberi Tugas:

Ida Bagus Putu Aditya, ST., MM.
Kepala Program Studi IBA / Head of Department of IBA of International University Liaison Indonesia

Journal's Signature & Chop/Tanda tangan & Stempel Jurnal:

done with the review
January 2022



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MBE-12-2021-0151 - [View Abstract](#)

Sustainable value creation and organizational performance in industrial manufacturing companies

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 Yes No*** 1. Originality: Does the paper contain new and significant information adequate to justify publication?**

it appears original with the data taken from the Columbian manufacturing industrial sector & analyzing from the perspective of sustainability and organizational performance

*** 2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?**

it appears that this manuscript has shown the relevancy between the underlying theories and the analysis

some of the old references used may have to be accompanied by newer ones to maintain the updated underlying theories/concepts

*** 3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?**

this manuscript appears to have used the relevant research method by incorporating a total of 1,572 samples of companies

*** 4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?**

the results have been presented clearly and well for the readers' readability

*** 5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?**

the implication of research may have to be added with more information and organizational solution, particularly in terms of the use of raw materials, reduction in electricity, water consumptions, waste utilization and all the economic indicators mentioned. Preferably, the managerial implications must be tied into the term "sustainability value creation" to provide organizational closures

*** 6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.**

the quality of communication appears to be sufficiently good to relay the issues discussed and analysis

* Recommendation

- Accept
- Minor Revision
- Major Revision
- Reject

Confidential Comments to the Co-Editor

ΩSpecial Characters

*Comments to the Author

ΩSpecial Characters

- add references to any of the old sources used in the manuscript - add managerial implications, particularly on the "how-to" and preferably any estimations of potential costs in doing so



**Sustainable value creation and organizational performance
in industrial manufacturing companies**

Journal:	<i>Measuring Business Excellence</i>
Manuscript ID	MBE-12-2021-0151
Manuscript Type:	Research Paper
Keywords:	Sustainable Value Creation, Organizational Performance, Value Capture Mechanisms, Sustainable Development, PLS-SEM

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Sustainable value creation and organizational performance in industrial manufacturing companies

Abstract

Purpose – The study objective was to analyze the influence of sustainable value creation (composed of social, economic, and environmental dimensions) on organizational performance in Colombian industrial manufacturing companies.

Design/methodology/approach – The study had a sample of 1,572 companies belonging to the Colombian manufacturing industrial sector. These companies were consulted by the survey of Technological Development and Innovation in the Manufacturing Industry EDIT IX. For the study purpose, a model was developed from a variance-based structural equation modeling or partial least squares, PLS-SEM.

Findings – The results indicated that the associated mechanisms of the social, economic, and environmental dimensions contribute in a significant, positive, and large way to the creation of sustainable value for the companies studied. The findings show the importance of the social, economic, and environmental dimensions in the creation of sustainable value and, in turn, their influence on organizational performance.

Social implications – The findings obtained provide industrial companies and society with resources to understand that economic development can respond to business logic different from those imposed by current neoliberal models.

Originality – This study provides an understanding of the value capture mechanisms of small and medium-sized companies considering the environmental needs of the territory and the community where the business activities take place while generating economic profitability for the other stakeholders.

Keywords – Sustainable Value Creation; Organizational Performance; Value Capture Mechanisms; Sustainable Development; PLS-SEM

Paper type – Research paper

Introduction

The problems derived from the business-consumption-environmental crisis relationship are expressed in the overexploitation of fossil energy, excessive consumption of water and vegetation for extensive livestock farming, causing excessive greenhouse gases, deforestation and loss of biodiversity (Cacheda, 2016). It is therefore remarkable that, given the scientific evidence of the leading role of the company regarding its responsibility in the global environmental crisis, specific strategies have not been developed so that its financial and strategic objectives can be reconciled with its natural environment (territories,

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3 communities, and markets) and mechanisms for action are consolidated, incorporating all
4 business management into its context (Latan *et al.*, 2018).
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6 It should be recognized that there have been theoretical and practical initiatives such as the
7 so-called Corporate Social Responsibility, which, although they have put the environmental
8 issue on the organizational agenda, have been insufficient to deal with the scope of the
9 problem (Latapí *et al.*, 2019). However, among the current efforts to ensure the permanence
10 and growth of the company, as well as the conservation and protection of its environment,
11 there is the possibility of creating sustainable value as a mechanism for action. Sustainable
12 value creation refers to the generation of value within an adequate balance between
13 economic, social, and environmental interests (Piñeiro and Romero, 2010). Sustainable
14 value creation is the real possibility of integrating the business into sustainable
15 development through organizational performance. The application of these concepts is one
16 of the main problems that may arise in the implementation of sustainable value creation in
17 small and medium enterprises, since the business and strategic structure is still under linear
18 planning schemes oriented by the profitability of the owner, affecting environmental
19 sustainability (Lahti *et al.*, 2018).
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25 The problems of management of environmental impacts caused by companies, compared to
26 the possibility of sustainable value creation as a mitigation and care strategy, are constituent
27 elements of the same solution and have a direct impact on organizational performance. This
28 should be addressed not only from the perspective of the components of the business model
29 but seeking sustainable balance in the so-called triple bottom line, social, environmental,
30 and economic (Azadnia *et al.*, 2017). Sustainable value creation has an impact on
31 organizational performance (Epstein and Mantilla, 2009; Vidal and Asuaga, 2021),
32 allowing the creation of social, economic, and environmental value in the territories and
33 communities where the company has influence, contributing to sustainable development.
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38 Based on the above, the objective of this study is to analyze the influence of sustainable
39 value creation on organizational performance in Colombian industrial manufacturing
40 companies. The achievement of this objective allows answering the following research
41 question: What is the influence of sustainable value creation on organizational performance
42 in Colombian industrial manufacturing companies?
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45 **Literature Review**

46 ***Sustainable Value Creation***

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48 Sustainable value creation has implicit in its business concept and practices, sustainable
49 development as a transversal axis in the corporate strategy. Each of the Sustainable
50 Development Goals (SDGs) are integrated into the value capture mechanisms of the social,
51 economic, and environmental dimensions (Figge and Hahn, 2004). In this sense,
52 sustainable value has a dual perspective (Piñeiro and Romero, 2010). On the one hand, the
53 generation of a value that lasts over time, maintaining a balance between social, economic,
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3 and environmental interests (Evans et al., 2017). In addition, it refers to the impacts
4 generated by the company and its value network (Laukkanen and Tura, 2020; Yang *et al.*,
5 2017), in these three approaches (Hart and Milstein, 2003) and affecting other stakeholders.
6 This perspective emerges as a response to the environmental problems generated by the
7 company within the current economic system.
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10 Economic value capture processes occur through transactions (value paid by customers) or
11 as exchange value (access to markets). In other words, all transactions that suggest
12 monetary exchange or access to direct or potential markets are considered value captures
13 (Bocken *et al.*, 2014; Laukkanen and Tura, 2020). Now, economic value is also related to
14 greater profitability, from energy efficiency, reduction in material consumption, reducing
15 costs, and improving the financial cost-benefit ratio (Ambec and Lanoie, 2008; Laukkanen
16 and Tura, 2020). In addition, sustainability within the company's value chain can generate
17 new sources of income, cover other markets and increase competitiveness (Engert *et al.*,
18 2016).
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23 Environmental value is composed of the impacts of the company on nature, the
24 environment, and natural capital, in terms of emissions, discharges, exposed particulate
25 matter, landscape transformations, and impacts on biodiversity (Laukkanen and Tura, 2020;
26 Stubbs and Cocklin, 2008). In this sense, companies create environmental value by
27 increasing efficiency in the use and consumption of resources (raw materials, energy, and
28 water). In addition, they perform these actions by respecting and caring for ecosystems,
29 people, and animals (Rosca *et al.*, 2017), and managing renewable resources (Bocken *et al.*,
30 2014). Finally, for authors such as Geissdoerfer *et al.* (2017), the reuse of materials,
31 recycling, and waste reduction are also mechanisms for creating environmental value.
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36 In terms of social value generation, companies consider the welfare in terms of health,
37 economy, education, health, and safety of their employees, customers, and the communities
38 where they are located (Bocken *et al.*, 2014; Dempsey *et al.*, 2011; Evans *et al.*, 2017;
39 Sabogal-De La Pava *et al.*, 2021). In addition, social parameters such as regulatory
40 compliance, tax payments, profit sharing, and risk mitigation in the community also capture
41 social value. Likewise, social value creation is captured through community development,
42 cluster strengthening, to improve social cohesion, and fair and ethical treatment of
43 employees, customers, and suppliers (Dempsey *et al.*, 2011).
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47 ***Organizational Performance***

48 Organizational performance fulfills strategic objectives of measuring results. In this sense,
49 Pérez and Cortés (2009) define the scope of organizational performance as valued
50 compliance, or in terms of Bernardes (2007), as efficiency and effectiveness of
51 organizational goals, or as a metric of the financial situation derived from administrative
52 decisions (Carton, 2004). Other authors (Doran *et al.*, 2003; Flamholtz and Kannan-
53 Narasimhan, 2005; Galvao *et al.*, 2019; Han, 2012; Wilderom *et al.*, 2012), share a
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unidimensional stance of organizational performance, are based solely on the maximization of financial utility and profitability. This approach considers the objectives of the owners of the capital, ignoring the existence of various stakeholders in the organization with their objectives (Cantillo, 2013).

Organizational performance and its measurement and valuation methodologies are considered important in management theory (Cantillo, 2013). Among the most widely used models in studies related to organizational performance is the balanced scorecard, developed by Kaplan and Norton (2001), and applied in various studies such as those conducted by Galvao *et al.* (2019), and Shahzad *et al.* (2012). This model describes four perspectives, both quantitative and qualitative (multidimensional): financial, customer (external-type perspectives), processes, and strategic capabilities (internal-type perspectives), in which, once the strategic objectives have been identified, they must be related by cause and effect (Cantillo, 2013; Sánchez and De la Garza, 2018).

For this research, organizational performance should be understood as the set of multidimensional results achieved by administrative management that encompass: the measurement of financial goals, quality programs, innovation, human talent development, and the implications of these results in relations with stakeholders. While business performance has traditionally been measured based on financial results expressed in indicators, the current perspective suggests a greater and better integration of quantitative and qualitative variables, where social, environmental, and economic interests permeate the entire strategic structure of the company and capture value in these three dimensions.

Sustainability and Organizational Performance

Since the 1990s, there has been increasing concern about the role that companies should play in the environmental impacts generated in manufacturing, marketing, and service delivery processes (Epstein and Mantilla, 2009; Yang and Evans, 2019). In turn, there has been growing interest in developing research on how private companies incorporate sustainable development into their corporate strategies and policies (Ramos *et al.*, 2021). Currently, it is not possible to imagine an organization without a sustainability strategy, without stakeholders demanding the need for it: customers demanding products and services derived from an adequate environmental management, employees expecting fair remuneration and training, a society demanding compliance with standards and agreements and a natural environment without damages or efforts in mitigating them.

The relationship between organizational performance and sustainability is direct, systemic and complex, in terms of recognizing the interconnections between society, the environment, and organizational performance (Evans *et al.*, 2017). In market economies, the improvement in financial indicators may generate improvements in society but may affect the relationship between the company and the environment. In this sense, the

business strategy must be aimed at caring for the natural environment and social development while increasing shareholder value.

Sustainable organizational performance is equivalent to the relationship between social, environmental, and economic performance (Epstein and Mantilla, 2009), following the objectives of stakeholders both internal and external to the organization. Environmental and social performance objectives are generally less tangible than economic ones but are more or equally important for the various stakeholders, which requires the development of measurement mechanisms that can support evaluative and trend analysis for decision making or the design of strategic improvement plans.

Method

Design

The study is explanatory since by determining how sustainable value creation influences organizational performance, it is possible to explain in detail the relationship between both variables through a structural theoretical model. A partial least squares or variance-based structural equation design (PLS-SEM) was used to evaluate both the internal measurement of the model, as well as the external structural model (Martínez and Fierro, 2018).

Sample

The study had a sample of 1,572 companies belonging to the Colombian manufacturing industrial sector between 2017 and 2018. These companies were consulted by the survey of Technological Development and Innovation in the Manufacturing Industry EDIT IX (Departamento Administrativo Nacional de Estadística, 2017) and that are cataloged according to the international classification of economic activities ISIC Rev. 4 A.C. The EDIT IX was applied to 8,062 companies, from which data were obtained from 7,529, presenting variations by questions applied and answered (Departamento Administrativo Nacional de Estadística, 2017).

Instrument

The instrument used in this research was the survey of Technological Development and Innovation in the Manufacturing Industry EDIT IX (Departamento Administrativo Nacional de Estadística, 2017). This survey meets the methodological guidelines oriented by the Organization for Economic Cooperation and Development (OECD), specifically the Oslo manual and by the Ibero-American Network of Science and Technology Indicators, RICYT (Departamento Administrativo Nacional de Estadística, 2017). This survey is the main source of statistical information on the processes of transformation or changes at the technical and organizational level in the Colombian manufacturing industry and of the methods of articulation of economic activity and knowledge as fundamental elements of production (Departamento Administrativo Nacional de Estadística, 2017). The survey

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3 defined 16 value capture mechanisms for the sustainable value creation and four
4 organizational performance indicators (Table I).
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6 INSERT TABLE I ABOUT HERE
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8 ***Data analysis***

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10 Statistical analysis was performed utilizing variance-based structural equation modeling or
11 partial least squares (PLS-SEM). These models are composed of two parts, a measurement
12 model and a structural model. The measurement model employed was a formative one for
13 sustainable value creation and a reflective one for organizational performance. In the
14 structural model, sustainable value creation is treated as an exogenous variable, while
15 organizational performance is an endogenous variable. All analyses were performed using
16 the SmartPLS 3.3.3 program (Ringle *et al.*, 2015).
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20 A higher-order model was used to test a structure containing two levels of variables.
21 Specifically, a hierarchical formative-formative component model was used, where first-
22 and second-order relationships are reflective (Hair *et al.*, 2019). The specification of
23 higher-order variables was performed using the disjoint two-stage approach (Agarwal and
24 Karahanna, 2000; Becker *et al.*, 2012). From this approach, scores on the lower-order
25 components were obtained in the first stage and the second stage, these scores were used to
26 measure the higher-order variables.
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30 The PLS-SEM results were assessed from the measurement and structural model (Hair *et*
31 *al.*, 2019). For the measurement model, reliability was estimated through Cronbach's alpha
32 (α), Dijkstra-Henseler's rho, and composite reliability (CR) coefficients. Convergent
33 validity was assessed through outer loadings and average variance extracted (AVE).
34 Likewise, discriminant validity was assessed through Fornell and Larcker (1981) criterion
35 and cross-loadings. The variance inflation factor (VIF) and the statistical significance of the
36 outer weights were evaluated for the formative variables. Finally, the structural model was
37 assessed through the R^2 (variance explained), f^2 (effect size), Q^2_{predict} (predictive
38 performance), as well as the magnitude and statistical significance of the path coefficients.
39 As a complementary analysis, an importance-performance map analysis (IPMA) was
40 performed at the level of latent variables and indicators (Höck *et al.*, 2010).
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46 **Findings**

47 ***Evaluation of the lower-order measurement model***

48 Regarding the evaluation of the lower-order measurement model for organizational
49 performance (Table II), reliability, convergent validity, and discriminant validity were
50 analyzed. The organizational performance showed adequate levels of reliability, both
51 Cronbach's alpha coefficient, Dijkstra-Henseler's rho, and composite reliability obtained
52 values above 0.70 (Nunnally and Bernstein, 1994), concluding that the organizational
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3 performance is reliable (Table II). To estimate the convergent validity of the organizational
4 performance, the AVE was used, where values greater than 0.50 indicate a good level of
5 convergent validity (Moral, 2019). At the indicator level, external loadings were used,
6 considering values above 0.708 as appropriate, although values above 0.40 were also
7 accepted if the indicator did not significantly decrease reliability (Fornell and Larcker,
8 1981). The results indicated that the organizational performance and its indicators have
9 convergent validity (Table II).
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13 INSERT TABLE II ABOUT HERE
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15 On the other hand, the environmental, economic, and social dimensions were evaluated
16 differently because they are formative variables. Statistically significant outer weights or
17 outer loadings above 0.50 were considered appropriate (Table II). Thus, all the indicators
18 met one or more of the above criteria. In addition, collinearity was evaluated through the
19 VIF, where values less than 3 showed the absence of this problem. The results indicated
20 that none of the indicators showed collinearity problems (Table II).
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23 About the discriminant validity of the organizational performance, the criterion usually
24 used is the one proposed by Fornell and Larcker (1981), where the square root of the AVE
25 must be greater than the correlations between the organizational performance and the
26 remaining variables. Additionally, the cross-loadings of the indicators were evaluated,
27 where the loadings must have a greater value with their variable than with the others. The
28 results of these two procedures meet the established criteria and, therefore, the
29 organizational performance has discriminant validity (Table III).
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36 *Evaluation of the high-order measurement model*

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38 Regarding the evaluation of the higher-order measurement model (Table IV), the
39 organizational performance showed good levels of reliability, the three reliability
40 coefficients obtained values greater than 0.70 (Nunnally and Bernstein, 1994), concluding
41 that the variable is reliable (Table IV). Regarding the convergent validity of the
42 organizational performance, the AVE was greater than 0.50. The organizational
43 performance indicators, all outer loadings indicated values above 0.708 (only ORP 4 was
44 lower than this criterion but higher than 0.40 and its presence did not affect the reliability of
45 the variable), these being appropriate (Fornell and Larcker, 1981). The results showed that
46 the organizational performance and its respective indicators have convergent validity
47 (Table IV). On the other hand, the dimensions of the sustainable value creation showed
48 statistically significant outer weights and VIF less than 3, indicating a good quality of the
49 indicators and absence of collinearity (Table IV).
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Regarding the discriminant validity of organizational performance, the Fornell and Larcker (1981) criterion indicated that the square root of the AVE was greater than the correlation between sustainable value creation and organizational performance (Table V). Likewise, cross-loadings showed that the indicators had a higher loading on the variables to which they theoretically belonged (Table V). The results of these two procedures meet the established criteria that allow us to conclude that the higher-order variables have discriminant validity (Table V).

INSERT TABLE V ABOUT HERE

Evaluation of the structural model

Regarding the direct influence of sustainable value creation on organizational performance, a path coefficient equal to 0.505 was observed, being this result statistically significant ($p < 0.001$) and of a large magnitude (Cohen, 1988). The variance explained, sustainable value creation explained 25.5% of the variability in organizational performance ($R^2 = 0.255$), which means a small level of explanation of the endogenous variable (Chin, 1998; Hair *et al.*, 2017). The effect size indicated a moderate influence ($f^2 = 0.342$) of sustainable value creation on organizational performance (Cohen, 1988). This indicator allows assessing whether an omitted variable has a substantial impact on organizational performance (Martínez and Fierro, 2018).

Finally, the evaluation of predictive performance (Q^2_{predict}) was performed both at the indicator level and for the latent variable organizational performance (Table V). Values of 0.01, 0.25 and 0.50, indicate small, moderate, and large model relevance, respectively (Hair *et al.*, 2019). Thus, the model presents moderate predictive power for organizational performance and small predictive power for the organizational performance indicators.

Importance-Performance Map Analysis (IPMA)

Finally, an IPMA analysis was performed to extend the PLS-SEM results (Höck *et al.*, 2010). This analysis aimed to identify antecedent variables that have relatively high importance on the target construct (organizational performance) but relatively low returns. Regarding the latent variable sustainable value creation, this variable is of great importance for the organizational performance (Table V). Likewise, the performance of this variable was good (62.414). On the other hand, at the indicator level, the results show that the economic and social dimensions are of greater importance for organizational performance. However, of the two dimensions mentioned, the social dimension is the one with the lowest performance. Therefore, it is necessary to consider improvement actions for this variable and to include it in future intervention plans to achieve greater organizational performance.

Discussion and conclusions

The present study sought to analyze the influence of sustainable value creation on organizational performance in Colombian industrial manufacturing companies. The findings revealed that sustainable value creation has a positive, large and significant influence on organizational performance. This means that the mechanisms associated with the social, economic, and environmental dimensions oriented to sustainable value creation have a positive influence on the organizational performance of Colombian industrial manufacturing firms. In this way, these mechanisms can contribute to improving the strategies of the business sector in sustainable practices that are increasingly demanded by society.

The environmental dimension is linked to the reduction in the use of raw materials, reduction in electricity consumption, reduction in water consumption, and waste utilization in the company's processes (Badurdeen *et al.*, 2014; Evans *et al.*, 2017; Sabogal-De La Pava *et al.*, 2021; Yang *et al.*, 2017). The social dimension involved improvement in regulatory compliance and difficulty in regulatory compliance (Evans *et al.*, 2017; Li, Li, Song, and Fan, 2021; Yang *et al.*, 2017). For its part, the economic dimension showed seven indicators: increased productivity, reduced labor costs, associated with communications, transportation, maintenance, and repairs, decreased tax payments, and unattractive financing or co-financing conditions (Badurdeen *et al.*, 2014; Evans *et al.*, 2017; Li *et al.*, 2021; Yang *et al.*, 2017).

Capture mechanisms for sustainable value creation are directly related to the objectives of sustainable development from the improvement of both internal factors (organizational capabilities, technical capabilities, and capacities) and external factors (competitors, state, and community) to the organization (El-Haddadeh *et al.*, 2021). The results obtained represent a valuable input that can be used by the Colombian industrial sector and by the governmental entities responsible for public policy, both for sustainable development and business development, specifically industrial development. Specifically, the integration of the sustainable value creation capture mechanisms with the organizational performance, allows the associations, the State, and the academic community to elaborate business development strategies oriented to environmental protection and social progress while creating economic value.

In the environmental dimension, it is necessary to generate incentives for companies to reduce the use of raw materials, reduce electricity consumption, reduce water consumption and use waste in business processes. In the social dimension, the State or local or regional authorities could contribute with activities for compliance with regulations (especially social and environmental), with the support of the possibilities of cooperation with other companies and reduce the difficulty that is generated for compliance with rules and regulations concerning paperwork, bureaucratic processes, and disproportionate costs. Finally, to take better advantage of the economic dimension, the business sector must create

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3 strategies and investments in innovation programs. Likewise, public policy must be
4 coordinated to promote innovative sustainable practices that embrace the business interest
5 while caring for the natural environment.
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8 The theoretical value of this research contributes, from a critical perspective to the analysis
9 of the influence of sustainable value creation on the organizational performance of
10 industrial companies. The theoretical proposal is based on the in-depth study of the
11 proposed variables. Although there is extensive literature on the mechanisms of value
12 creation, there are few studies aimed at industries that involve the social, economic, and
13 environmental dimensions under a model towards the achievement of strategic objectives
14 from a systemic perspective. The practical implications of the study materialize in the
15 business strategy of industrial companies, facilitating value capture mechanisms under
16 logics different from modern development. The findings obtained provide industrial
17 companies and society with resources to understand that economic development can
18 respond to business logic different from those imposed by current neoliberal models. In
19 practical terms, this suggests opportunities for social development, environmental care, and
20 economic growth for the different sectors that support the productive and commercial
21 activity of the companies.
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27 The influence that the sustainable value creation has on organizational results is an
28 important step in the business integration to environmental care, a necessary element if it is
29 to contribute to the solutions to global environmental problems and that every day is more
30 urgent. The integration of sustainable value creation captures mechanisms and
31 organizational performance indicators have a positive relationship that facilitates the
32 implementation of policies, plans and objectives transversal to all stakeholders of the
33 company, considering that the mitigation or protection of environmental damage. In
34 addition, social development can constitute forms of economic value creation, not as a
35 means of the organization but as an end towards the environmental care so necessary
36 nowadays.
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41 **References**

- 42
43 Agarwal, R. and Karahanna, E. (2000), "Time Flies When You're Having Fun: Cognitive
44 Absorption and Beliefs about Information Technology Usage", *MIS Quarterly*, Vol.
45 24 No. 4, pp. 665–694.
46
47 Ambec, S. and Lanoie, P. (2008), "Does it pay to be green? A systematic overview",
48 *Academy of Management Perspectives*, Vol. 22 No. 4, pp. 45–62.
49
50 Azadnia, M., Zahedi, S., Majjedin, A. and Reza, M. (2017), "Analysis of the impact of ICT
51 on sustainable development using sustainability indicators", *International Journal of*
52 *Computer Applications*, Vol. 169 No. 6, pp. 13–24.
53
54
55 Badurdeen, F., Shuaib, M.A., Lu, T. and Jawahir, I.S. (2014), "Sustainable value creation
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2
3 in manufacturing at product and process levels: A metrics-based evaluation”, in Nee,
4 A. (Ed.), *Handbook of Manufacturing Engineering and Technology*, Springer,
5 London, pp. 1–28.

6
7
8 Becker, J.-M., Klein, K. and Wetzels, M. (2012), “Hierarchical Latent Variable Models in
9 PLS-SEM: Guidelines for Using Reflective-Formative Type Models”, *Long Range*
10 *Planning*, Vol. 45 No. 5, pp. 359–394.

11
12 Bernardez, M.L. (2007), *Desempeño Organizacional: Mejora, Creación e Incubación de*
13 *Nuevas Organizaciones*, AuthorHouse, Bloomington, IN.

14
15
16 Bocken, N.M.P., Short, S.W., Rana, P. and Evans, S. (2014), “A literature and practice
17 review to develop sustainable business model archetypes”, *Journal of Cleaner*
18 *Production*, Vol. 65, pp. 42–56.

19
20
21 CACHED, M. (2016), “Ganadería intensiva y contaminación ambiental”, available at:
22 [https://www.bioecoactual.com/2016/05/18/ganaderia-intensiva-y-contaminacion-](https://www.bioecoactual.com/2016/05/18/ganaderia-intensiva-y-contaminacion-ambiental-por-maria-cached/)
23 [ambiental-por-maria-cached/](https://www.bioecoactual.com/2016/05/18/ganaderia-intensiva-y-contaminacion-ambiental-por-maria-cached/) (accessed 18 November 2021).

24
25 Cantillo, J.C. (2013), “Incidencia de la cultura organizacional en el desempeño”, *Revista*
26 *Económicas Cuc*, Vol. 34 No. 1, pp. 131–152.

27
28
29 Carton, R.B. (2004), *Measuring Organizational Performance: An Exploratory Study*,
30 University of Georgia, Athens, GA, available at:
31 https://getd.libs.uga.edu/pdfs/carton_robert_b_200405_phd.pdf.

32
33 Chin, W.W. (1998), “The partial least squares approach for structural equation modeling”,
34 in Marcoulides, G.A. (Ed.), *Modern Methods for Business Research*, Lawrence
35 Erlbaum Associates, Mahwah, NJ, pp. 295–336.

36
37
38 Cohen, J. (1988), *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed.,
39 Lawrence Erlbaum Associates, Hillsdale, NJ, USA.

40
41 Dempsey, N., Bramley, G., Power, S. and Brown, C. (2011), “The social dimension of
42 sustainable development: Defining urban social sustainability”, *Sustainable*
43 *Development*, Vol. 19 No. 5, pp. 289–300.

44
45
46 Departamento Administrativo Nacional de Estadística. (2017), “Metodología general
47 encuesta de desarrollo e innovación tecnología en la industria manufacturera —
48 EDIT”, available at: [https://www.dane.gov.co/index.php/estadisticas-por-](https://www.dane.gov.co/index.php/estadisticas-por-tema/tecnologia-e-innovacion/encuesta-de-desarrollo-e-innovacion-tecnologica-edit)
49 [tema/tecnologia-e-innovacion/encuesta-de-desarrollo-e-innovacion-tecnologica-edit](https://www.dane.gov.co/index.php/estadisticas-por-tema/tecnologia-e-innovacion/encuesta-de-desarrollo-e-innovacion-tecnologica-edit)
50 (accessed 18 November 2021).

51
52
53 Doran, M.S., Haddad, K.M. and Chow, C.W. (2003), “The relationship between corporate
54 culture and performance in Bahrain hotels”, *International Journal of Hospitality &*
55 *Tourism Administration*, Vol. 4 No. 3, pp. 65–80.

- 1
2
3 El-Haddadeh, R., Osmani, M., Hindi, N. and Fadlalla, A. (2021), “Value creation for
4 realising the sustainable development goals: Fostering organisational adoption of big
5 data analytics”, *Journal of Business Research*, Vol. 131, pp. 402–410.
6
7
8 Engert, S., Rauter, R. and Baumgartner, R.J. (2016), “Exploring the integration of corporate
9 sustainability into strategic management: A literature review”, *Journal of Cleaner
10 Production*, Vol. 112, pp. 2833–2850.
11
12 Epstein, M.J. and Mantilla, S.A. (2009), *Sostenibilidad Empresarial: Administración y
13 Medición de Los Impactos Sociales, Ambientales y Económicos*, ECOE Ediciones,
14 Bogota.
15
16
17 Evans, S., Fernando, L. and Yang, M. (2017), “Sustainable value creation—from concept
18 towards implementation”, in Stark, R., Seliger, G. and Bonvoisin, J. (Eds.),
19 *Sustainable Manufacturing: Challenges, Solutions and Implementation Perspectives*,
20 Springer, Cham, pp. 203–220.
21
22
23 Evans, S., Vladimirova, D., Holgado, M., Van Fossen, K., Yang, M., Silva, E.A. and
24 Barlow, C.Y. (2017), “Business model innovation for sustainability: Towards a
25 unified perspective for creation of sustainable business models”, *Business Strategy
26 and the Environment*, Vol. 26 No. 5, pp. 597–608.
27
28
29 Figge, F. and Hahn, T. (2004), “Sustainable value added—measuring corporate
30 contributions to sustainability beyond eco-efficiency”, *Ecological Economics*, Vol. 48
31 No. 2, pp. 173–187.
32
33
34 Flamholtz, E. and Kannan-Narasimhan, R. (2005), “Differential impact of cultural elements
35 on financial performance”, *European Management Journal*, Vol. 23 No. 1, pp. 50–64.
36
37
38 Fornell, C. and Larcker, D.F. (1981), “Evaluating structural equation models with
39 unobservable variables and measurement error”, *Journal of Marketing Research*, Vol.
40 18 No. 1, pp. 39–50.
41
42 Galvao, A., Mascarenhas, C., Marques, C., Ferreira, J. and Ratten, V. (2019), “Triple helix
43 and its evolution: A systematic literature review”, *Journal of Science and Technology
44 Policy Management*, Emerald Publishing Limited, Vol. 10 No. 3, pp. 812–833.
45
46
47 Geissdoerfer, M., Savaget, P., Bocken, N.M.P. and Hultink, E.J. (2017), “The circular
48 economy – A new sustainability paradigm?”, *Journal of Cleaner Production*, Vol.
49 143, pp. 757–768.
50
51
52 Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2017), *A Primer on Partial Least
53 Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed., Sage, Thousand Oaks,
54 CA.
55
56
57 Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), “When to use and how to
58
59
60

- report the results of PLS-SEM”, *European Business Review*, Vol. 31 No. 1, pp. 2–24.
- Han, H.S. (2012), “The relationship among corporate culture, strategic orientation, and financial performance”, *Cornell Hospitality Quarterly*, Vol. 53 No. 3, pp. 207–219.
- Hart, S.L. and Milstein, M.B. (2003), “Creating sustainable value”, *Academy of Management Perspectives*, Vol. 17 No. 2, pp. 56–67.
- Höck, C., Ringle, C.M. and Sarstedt, M. (2010), “Management of multi-purpose stadiums: Importance and performance measurement of service interfaces”, *International Journal of Services, Technology and Management*, Vol. 14 No. 2–3, pp. 188–207.
- Kaplan, R.S. and Norton, D.P. (2001), “Transforming the balanced scorecard from performance measurement to strategic management: Part I”, *Accounting Horizons*, Vol. 15 No. 1, pp. 87–104.
- Lahti, T., Wincent, J. and Parida, V. (2018), “A definition and theoretical review of the circular economy, value creation, and sustainable business models: Where are we now and where should research move in the future?”, *Sustainability*.
- Latan, H., Chiappetta, C.J., Lopes de Sousa, A.B., Wamba, S.F. and Shahbaz, M. (2018), “Effects of environmental strategy, environmental uncertainty and top management’s commitment on corporate environmental performance: The role of environmental management accounting”, *Journal of Cleaner Production*, Vol. 180, pp. 297–306.
- Latapí, M.A., Jóhannsdóttir, L. and Davídsdóttir, B. (2019), “A literature review of the history and evolution of corporate social responsibility”, *International Journal of Corporate Social Responsibility*, Vol. 4 No. 1, p. 1.
- Laukkanen, M. and Tura, N. (2020), “The potential of sharing economy business models for sustainable value creation”, *Journal of Cleaner Production*, Vol. 253, p. 120004.
- Li, J., Li, Y., Song, H. and Fan, C. (2021), “Sustainable value creation from a capability perspective: How to achieve sustainable product design”, *Journal of Cleaner Production*, Vol. 312, p. 127552.
- Martínez, M. and Fierro, E. (2018), “Aplicación de la técnica PLS-SEM en la gestión del conocimiento: un enfoque técnico práctico”, *RIDE Revista Iberoamericana Para La Investigación y El Desarrollo Educativo*, Vol. 8 No. 16, pp. 130–164.
- Moral, J. (2019), “Revisión de los criterios para validez convergente estimada a través de la varianza media extraída”, *Psychologia*, Vol. 13 No. 2, pp. 25–41.
- Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric Theory*, 3rd ed., McGraw-Hill, New York, NY.
- Pérez, J. and Cortés, J.A. (2009), “Medición y validación del desempeño organizacional

1
2
3 como resultado de acciones de aprendizaje”, *Revista Ciencias Estratégicas*, Vol. 17
4 No. 22, pp. 251–271.
5

6 Piñeiro, J.R. and Romero, N.M. (2010), “Metodología de creación de valor sostenible para
7 proyectos de energías renovables”, *Nimbus*, No. 25–26, pp. 187–204.
8

9 Ramos, T.B., Domingues, A.R., Caeiro, S., Cartaxo, J., Painho, M., Antunes, P., Santos, R.,
10 *et al.* (2021), “Co-creating a sustainability performance assessment tool for public
11 sector organisations”, *Journal of Cleaner Production*, Vol. 320, p. 128738.
12
13

14 Ringle, C.M., Wende, S. and Becker, J.-M. (2015), “SmartPLS 3”, SmartPLS GmbH,
15 Boenningstedt.
16

17 Rosca, E., Arnold, M. and Bendul, J.C. (2017), “Business models for sustainable
18 innovation – an empirical analysis of frugal products and services”, *Journal of
19 Cleaner Production*, Vol. 162, pp. S133–S145.
20
21

22 Sabogal-De La Pava, M.L., Vidal-Holguín, C.J., Manotas-Duque, D.F. and Bravo-Bastidas,
23 J.J. (2021), “Sustainable supply chain design considering indicators of value creation”,
24 *Computers & Industrial Engineering*, Vol. 157, p. 107294.
25
26

27 Sánchez, M.L. and De la Garza, M.H. (2018), “Tecnologías de información y desempeño
28 organizacional de las pymes del noreste de México”, *Revista Venezolana de Gerencia*,
29 Vol. 23 No. 82, pp. 298–313.
30

31 Shahzad, F., Luqman, R.A., Khan, A.R. and Shabbir, L. (2012), “Impact of organizational
32 culture on organizational performance: An overview”, *Interdisciplinary Journal of
33 Contemporary Research in Business*, Vol. 3 No. 9, pp. 975–985.
34
35

36 Stubbs, W. and Cocklin, C. (2008), “Conceptualizing a ‘sustainability business model’”,
37 *Organization & Environment*, Vol. 21 No. 2, pp. 103–127.
38

39 Vidal, A. and Asuaga, C. (2021), “Gestión ambiental en las organizaciones: una revisión de
40 la literatura”, *Revista Del Instituto Internacional de Costos*, No. 18, pp. 84–122.
41
42

43 Wilderom, C.P.M., van den Berg, P.T. and Wiersma, U.J. (2012), “A longitudinal study of
44 the effects of charismatic leadership and organizational culture on objective and
45 perceived corporate performance”, *The Leadership Quarterly*, Vol. 23 No. 5, pp. 835–
46 848.
47
48

49 Yang, M. and Evans, S. (2019), “Product-service system business model archetypes and
50 sustainability”, *Journal of Cleaner Production*, Vol. 220, pp. 1156–1166.
51

52 Yang, M., Evans, S., Vladimirova, D. and Rana, P. (2017), “Value uncaptured perspective
53 for sustainable business model innovation”, *Journal of Cleaner Production*, Vol. 140,
54 pp. 1794–1804.
55
56
57
58
59
60

Table I
EDIT IX Questionnaire Indicators

Code	Indicator	Author
Environmental Dimension		
ENV 1	Reduction in raw material use.	Badurdeen, Shuaib, Lu, and Jawahir (2014); Evans et al. (2017); Yang et al. (2017).
ENV 2	Reduction in electricity consumption.	
ENV 3	Reduced water consumption.	
ENV 4	Use of waste in the company's processes.	
Economic Dimension		
ECO 1	Increased productivity.	Badurdeen et al. (2014); Li, Li, Song, and Fan (2021); Sabogal-De La Pava et al. (2021).
ECO 2	Reduction of labor costs.	
ECO 3	Reduction of costs associated with communications.	
ECO 4	Reduction of transportation costs.	
ECO 5	Reduced maintenance and repair costs.	
ECO 6	Decrease in tax payments.	
ECO 7	Shortage of own resources.	
ECO 8	Difficulty in accessing external financing.	
ECO 9	Unattractive financing or co-financing conditions.	
Social Dimension		
SOC 1	Improved regulatory compliance.	Badurdeen et al. (2014); Li et al. (2021); Yang et al. (2017)
SOC 2	Difficulty in complying with regulations.	
SOC 3	Possibilities of cooperation with other companies.	
Organizational Performance		
ORP 1	Improvement in the quality of goods and services.	Badurdeen et al. (2014); Epstein and Mantilla (2009); Evans et al. (2017); Li et al. (2021); Yang et al. (2017).
ORP 2	Expansion of the range of goods and services.	
ORP 3	Participation in the company's geographic market.	
ORP 4	Entry into a new market.	

Table II
Measurement Model of the Lower-Order Structure

Variable	Outer loadings	Outer weights	VIF	α	ρ_A	CR	AVE
Environmental					1.000		
ENV 1	0.723***	0.312***	1.463				
ENV 2	0.699***	0.192*	1.889				
ENV 3	0.701***	0.190*	1.815				
ENV 4	0.864***	0.587***	1.314				
Economic					1.000		
ECO 1	0.837***	0.679***	1.317				
ECO 2	0.535***	-0.037	1.498				
ECO 3	0.587***	0.198**	1.715				
ECO 4	0.617***	0.124	1.964				
ECO 5	0.602***	0.136*	1.620				
ECO 6	0.569***	0.283***	1.311				
ECO 9	0.136**	0.111**	1.003				
Social					1.000		
SOC 1	0.989***	0.968***	1.021				
SOC 2	0.288***	0.149*	1.021				
Organizational Performance				0.722	0.734	0.826	0.543
ORP 1	0.766***	0.415***					
ORP 2	0.713***	0.272***					
ORP 3	0.777***	0.354***					
ORP 4	0.688***	0.310***					

*p < 0.05; **p < 0.01; ***p < 0.001.

Table III

Discriminant Validity (Cross Loadings and Fornell-Larcker Criterion)

Variable	Environmental	Economic	Social	Organizational Performance
ENV 1	0.723	0.506	0.336	0.283
ENV 2	0.699	0.531	0.343	0.274
ENV 3	0.701	0.522	0.405	0.275
ENV 4	0.864	0.459	0.554	0.339
ECO 1	0.386	0.837	0.287	0.381
ECO 2	0.475	0.535	0.227	0.243
ECO 3	0.507	0.587	0.301	0.267
ECO 4	0.538	0.617	0.305	0.281
ECO 5	0.575	0.602	0.374	0.274
ECO 6	0.473	0.569	0.305	0.259
ECO 9	0.034	0.136	0.036	0.062
SOC 1	0.566	0.421	0.989	0.382
SOC 2	0.172	0.123	0.288	0.111
ORP 1	0.349	0.401	0.348	0.766
ORP 2	0.242	0.268	0.215	0.713
ORP 3	0.289	0.339	0.303	0.777
ORP 4	0.255	0.311	0.244	0.688
Environmental	—			
Economic	0.628	—		
Social	0.573	0.426	—	
Organizational Performance	0.392	0.455	0.386	0.737 [†]

[†]the square root of the AVE.

Table IV
Measurement Model of the Higher-Order Structure

Variable	Outer loadings	Outer weights	VIF	α	ρ_A	CR	AVE
Sustainable Value Creation					1.000		
Environmental	0.776***	0.137*	2.036				
Economic	0.902***	0.639***	1.670				
Social	0.765***	0.414***	1.505				
Organizational Performance				0.722	0.734	0.826	0.543
ORP 1	0.766***	0.415***					
ORP 2	0.713***	0.272***					
ORP 3	0.777***	0.354***					
ORP 4	0.688***	0.310***					

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table V

Discriminant Validity (Cross Loadings and Fornell-Larcker Criterion), Importance-Performance Map Analysis (IPMA), and Predictive Performance

Variable	Sustainable Value Creation	Organizational Performance	Importance-Performance Map Analysis (IPMA)		Q ² _{predict}
			Importance	Performance	
Environmental	0.776	0.392	0.038	65.336	
Economic	0.902	0.455	0.176	66.946	
Social	0.765	0.386	0.114	54.449	
ORP 1	0.448	0.766			0.195
ORP 2	0.294	0.713			0.080
ORP 3	0.382	0.777			0.144
ORP 4	0.335	0.688			0.111
Sustainable Value Creation	—		0.328	62.414	
Organizational Performance	0.505	0.737 [†]			0.251

[†]the square root of the AVE.