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The Challenges of Organizational Sustainability with Social and Economic Development

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ABSTRACT

The article, which aims to analyze the challenges of organizational sustainability and technologies in social and economic development, investigated the problem: how do organizational sustainability and technologies impact sustainable social and economic development? As a matter of relevance and originality, organizational sustainability combined with management technologies, such as Integrated Sustainability Management and the dimensions of technological capacity, point to prospects for social and economic development in emerging economies. In the Methodology, bibliographic and field research in the universe of micro, small and medium-sized industrial and service companies, and public organizations, from 2012 to 2021. In the results, through analysis of the literature and empirical findings, it is suggested that organizational sustainability and technologies are relevant for social and economic development, increasing the Human Development Index of economies and reducing social inequality. The study provides academia with evidence of findings on organizational sustainability and management technologies, which broaden empirical debates within academia, organizations and society, with a focus on social and economic development. Among the social and management contributions, the continuity of organizational sustainability in productive economic sectors and management technologies point to significant advances in sustainable development in emerging economies and favor climate issues.

Keywords: Integrated Sustainability Management. Small and medium-sized companies. Sustainable Public Organizations. Technological capacity. Entrepreneurship.

INTRODUCTION

Sustainable social and economic development, stemming from organizational sustainability and technologies, emerge as one of the viable ways of balancing climate change. The organizational sustainability of productive economic sectors points to perspectives for evaluating the predominant characteristics of perennial and innovative organizations and their impact on sustainable economic development for society.

[1] Corresponding author email address: Ilmar Polary Pereira (i.polary@hotmail.com*)* author of the current research paper, certifies that the paper is an outcome of independent and original work. I have duly acknowledged all the sources from which the ideas and extracts have been taken and I are responsible for any errors that may be discovered.

For the success of contemporary administration, it suggests new management models and practices that favor the production of goods and services for society and overcome the challenges necessary to achieve sustainable social development.

Considering the ideas presented, the Integrated Sustainability Management - ISM model (Polary-Pereira, 2012, 2019, 2023), which integrates 03 dimensions, 05 components and 12 variables, and was based on Entrepreneurship Theory, management approaches (McClelland, 1970s), Organizational Theory (Lumpkin and Dess, 1966), and Economics (Schumpeter, 1934), and technological capacity in 04 components (Lall, 1992; Bell and Pavitt, 1995; Figueiredo, 2003), when properly applied, favor organizational sustainability. Kuzma, Doliveira and Silva (2017, p. 431), describe that organizations in the sustainability debate are looking for ways to develop new forms of production and management.

According to Triviños (2009), academic research starts with a research problem, followed by hypotheses. This study investigated the problem "how do organizational sustainability and technologies impact on sustainable social and economic development?". The hypothesis was "the organizational sustainability of productive economic sectors has a positive impact on sustainable social and economic development.

In the methodology (Marconi and Lakatos, 2021), the methods of approach, procedures and techniques were: in the literature, bibliographical research. In the field research, a universe of 1,758 industrial MSCs in 2012, according table 1.

Table 1. Population for stratification, according to municipalities by industry size

Nº	Municipal districts	Micro	Small	Average	TOTAL
		Quantity	Quantity	Quantity	
01	Alcântara	01	-		01
02	Bacabal	36	09	01	46
03	Balsas	59	21	02	82
04	Caxias	17	20	02	39
05	Cajapió	04	-	-	04
06	Imperatriz	192	97	04	293
07	Lago da Pedra	16	03	-	19
08	Paço do Lumiar	04	01	01	06
09	Raposa	02	-	-	02
10	Rosário	08	08	02	18
11	São João dos Patos	11	-	-	11
12	São José de Ribamar	21	09	-	30
13	São Luís	739	380	46	1165
14	Timon	32	10	-	42
	Total	1142	558	58	1758

Source: FIEMA (2006), adapted Polary-Pereira (2012)

Continuing with field research, 15,112 industrial and service MSCs in 2016, according table 2.

Table 2. Universe of active MEs and SCs for stratification in São Luís-MA by size

Nº	Municipal district	Size of Companies		TOTAL
		Size of Companies	Small business -SCS	
		Quantity	Quantity	
01	São Luís	14.183	929	15.112

Source: JUCEMA (2016), adapted Polary-Pereira et al. (2016)

Continuing with field research, 16,231 in 2021, according table 3.

Table 3. Universe of industrial and service MSCs in São Luis by size, branch of activities and quantitative percentage

N°	BRANCH OF ACTIVITIES	SIZE				
		MICRO	SMALL	TOTAL	%	% ACUM.
		Quant.	Quant.	Quant.	Quant.	Quant.
1	Industry	739	380	1.119	6,90%	6.90%
2	Service Provision	14.183	929	15.112	93,10%	100,00%
TOTAL		14.922	1.309	16.231	100,00%	100,00%

Source: FIEMA (2006) and JUCEMA (2016), adapted Polary-Pereira and Castro (2021)

Still in the field research, 16 Hospitals and 2 Public Universities in 2015, 01 Public Hospital in 2020 (Polary-Pereira and Oliveira, 2020), according Table 4.

Table 4. The universe of Public Hospitals and Public Universities of São Luís-MA

Public Hospitals and Public Universities in São Luís-MA	
Public Hospitals	**Public EIS**
1. Djalma Marques Socorrão I Hospital	1. Federal University of Maranhão – UFMA
2. Socorrão II Hospital	2. State University of Maranhão – UEMA
3. Presidente Dutra Universitary Hospital	
4. Aquiles Lisboa Hospital	
5. Sarah Locomotor System Hospital	
6. Tarquínio Lopes Filho General Hospital	
7. Children's Hospital Infirmary	
8. Nina Rodrigues Hospital	
9. Dr. Juvêncio Mattos Children's Hospital	
10. Pam Filipinho Hospital	
11. Pam Diamante Hospital	
12. Dr. Adelson Sousa Lopes Hospital	
13. Getúlio Vargas Hospital	
14. Pro-Health Charitable and Social Association	
15. Aldenora Belo Hospital	
16. Women's Hospital	

Total 18

Source: Polary-Pereira and Oliveira (2020). www.google.com.br/hospitaispublicosdesaoluis, with author updates www.google.com.br/universidadespublicasdesaoluis

A representative sample was extracted from each universe. The data received statistical treatment, with exploratory analysis, Levene's test for homogeneity of variances, ANOVA, correlation test, regression and multiple correlation.

The study considered two aspects: the analysis of the "literature review and theoretical model", to support the theme of organizational sustainability as a viable path for the development of productive sectors, and the "professional performance of private and public managers" in the analysis of the results of field research when applying the Integrated Sustainability Management - ISM model and the use of technologies aimed at social and economic development, and their challenges.

The study aimed to analyze the challenges of organizational sustainability and technologies in social and economic development.

LITERATURE REVIEW

The term "sustainability", from John Elkington's 1980 "bottom line", which points out that there is a balance between the economic, environmental and social vertices (https://ideiasustentavel.com.br/o-que-e-sustentabilidade/), is still the most widespread in the literature, even though there are other studies that debate the dimension of organizational sustainability, focusing on sustainable organizations and management aspects.
Thus, when the term "sustainability" appears in the literature, there is a certain ambiguity of understanding in its different academic dimensions. This study focuses on sustainability in the organizational dimension but also addresses variables in the environmental dimension. Organizations involved in the sustainability debate, as described by Kuzma, Doliveira and Silva (2017, p. 431), "constantly seek to identify ways in which they can develop new forms of production and resource management", requiring individual or group competencies for organizational sustainability.

In organizational sustainability, organizations, through management technologies, entrepreneurship and the dimensions and components of technological capacity, tend to follow the path of success and perpetuity, favoring sustainable economic development. (Polary-Pereira, 2022). For economies to achieve social and economic development, it suggests that organizational sustainability prevails in public and private organizations on a permanent basis.

From this perspective, we highlight Integrated Public Management (IPM) and Entrepreneurial Public Management (EPM), developed in the academic and professional fields of public administration and industrial organizations. In the academic world, one of the reasons for good training is to improve the way organizations are managed, because when they are well managed with the application of IPM and EPM, they develop consistency, growth and prosperity, and when they are poorly managed, they decline and often die (Polary-Pereira, 2019, 2020).

The author also stresses the importance of managers and entrepreneurs in their management practices understanding the meaning and interaction between the phases of creation, maintenance, perennial maintenance, growth and perpetuity, and the processes of success, planned decline,

failure and mortality. This understanding broadens the prospects for a management approach that is conducive to organizations achieving organizational sustainability.

Sustainable social and economic development depends on the results obtained by private and public organizations. Hence, Hood (1995) recommends bringing the management model of public organizations closer to the management practices of the private sector, such as the concepts of performance evaluation, efficiency and responsibility. The two currents of thought that guide the constitution of the new public administration model must also be considered in managerial action: neoliberal thinking and the theory of public choice (Paes-Paula, 2005, 2020), aimed at an innovative public administration model.

In the managerial movement in Brazil, in which the Ministry of Administration and State Reform - MARE - was created, managerial public administration is based on concepts of "administration and efficiency", focused on results, being decentralized so that it can reach the citizen who, in a democratic society, is the one who gives legitimacy to institutions (Brasil, 1995, p. 1). From this point of view, it is up to entrepreneurs and managers to understand the "trajectory of Administrative Reforms, Administrative Modernization and State Reforms in Brazil" (Matias-Pereira, 2010, p. 96).

It is observed that the sustainable development of the country and the addition of public value depend on this process of professionalization, in order to provide agility, competence, and accountability of public management agents and structures. To the entrepreneurial public manager (Polary-Pereira, 2020, p.13), it is necessary to understand and consider the principles of legality, bureaucracy, and knowing how to deal with the power structure.

Another relevant aspect is how to prepare for a professional career that will provide the strong foundations of a Professional Manager. Aspects such as a predisposition for a career (self-motivation), qualifications, self-discipline, an academy with the quality parameters required by the Brazilian Ministry of Education and Culture (MEC) and the job market, are important for knowing, understanding, mastering, criticizing and applying administrative theory in organizations, in a process of reconciling theory with organizational practice. (Polary-Pereira, 2019).

The sustainable development of a state, a region, and/or a country, resulting from economic and social advances and perennial and sustainable organizations, favors the increase of the Human Development Index - HDI. Countries with a high HDI, between 0.700 - 0.799, and a very high HDI, between 0.800 and 1 (IPEA, 2015), favor the reduction of social inequalities.

THEORETICAL MODEL

The theoretical model is based on studies and research into organizational sustainability, the components of technological capacity at the organizational level, management technologies, the Integrated Sustainability Management (ISM) model, and the theory of entrepreneurship from the economic and managerial approaches used.

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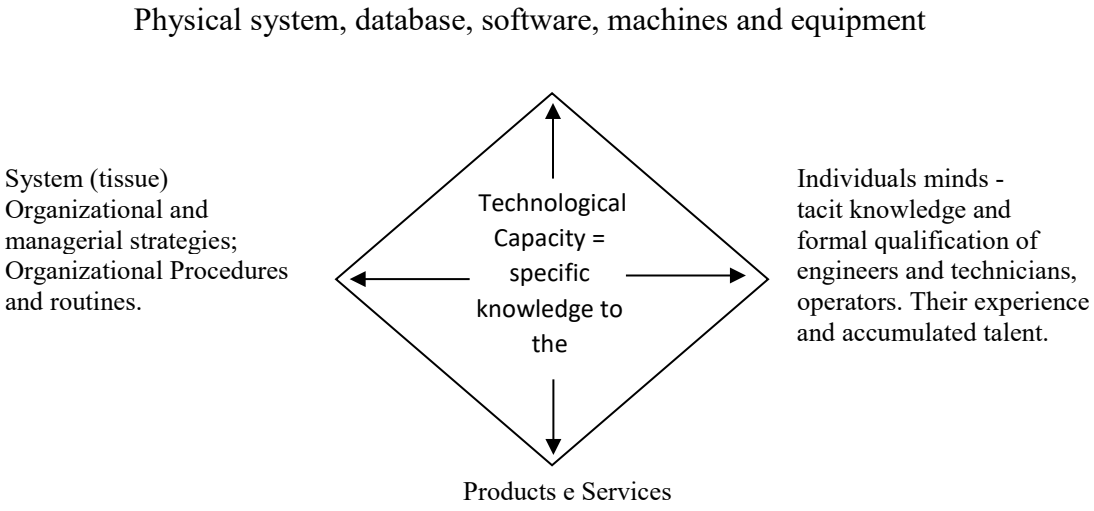
In corporate sustainability, Milach, Meirino and Barros (2017) emphasize that companies must participate in sustainable development. "The Vision 2050 project, by the World Business Council for Sustainable Development (WBCSD), agrees that a world on the path to sustainability will require fundamental changes in structures, such as governance and economic frameworks. For Yin and Chang (2020), organizational sustainability is productive as the result of a congruent ideology of economic, social and ecological concerns.

Technological capability at the organizational level, as described by Lall (1992), Bell and Pavitt (1995) and Figueiredo (2003), is stored in at least 4 components of the technological trajectory of companies in developing economies, according figure 1.

Figure 1: Visualization of the technological trajectory of companies in the developing economy.



Source: based in Lall (1992), Bell & Pavitt (1995), and Figueiredo (2003).

Integrated Sustainability Management (ISM) is an alternative model of Professional Management for Administration, which requires the manager to have a professional personal awareness to manage with an Entrepreneurial Orientation (EO) and Integrative Vision (VI), in view of its variables, components and dimensions, to favor the management, success and continuity of the company (Polary-Pereira, 2012, 2019). ISM, as a management technology, is applicable in private organizations, according figure 2.

Figure 2. The Integrated Sustainability Management Model - ISM (Industry, Commerce and Services)

MODEL	DIMENSIONS	COMPONENTS	VARIABLES
ISM	Technological Administrative	Administration	Management Competencies and Abilities. Entrepreneurial Vision.
			Feasibility studies: technical, economic and financial.
		Technology	Technological Support (machines and equipment; systems and working methods).

			Level of industrial, commercial and service efficiency.
	Institutional Politician	Policies	Public Policies of Governments: Federal, State and Municipal
			Legal, tax and labor aspects. Ethic.
		Strategies	Strategies and Partnerships: Institutional Policy, Industrial Segment, Commercial, Services and Civil Society.
			Plano de Desenvolvimento: Industrial, Comercial e Serviços.
	Economic Social	Economic and Social Indicators	Qualified labor.
			Investment attractions: internal, external and local government.
			Preservation of the environment by the organization.
			Business location.

Source: Polary-Pereira (2023), adapted from Polary-Pereira (2012)

ISM, as a management technology, is applicable in public organizations, according figure 3.

Figure 3. The Integrated Sustainability Management Model - ISM (Public Organizations)

MODEL	DIMENSIONS	COMPONENTS	VARIABLES
ISM	Administrative Technological	Management	Managerial Competencies and Skills. Entrepreneurial Public Management
			Feasibility studies: technical, political, social and financial.
		Technology	Technological support: technology and innovation; work processes and methods; equipment.
			Level of efficiency and effectiveness of results.
	Political Institutional	Policies	Public Policies of the Federal, State and Municipal Government.
			Legality, control and transparency. Ethic.
		Strategies	Partnerships: Institutional Politician, Public-Private and Civil Society.
			Institutional and Managerial Public Development.
	Economic Social	Economic and Social Indicators	Qualification, performance and results of civil servants.
			Capture and/or generation of resources: internal and external
			Environmental Sustainability.
			Relevance to society.

Source: Polary-Pereira (2023), adapted from Polary-Pereira (2014)

The ISM model was based on Entrepreneurship Theory in the approaches of Management Literature (McClelland, 1970s), then Organizational and Management Theories, from the perspective of Company Strategies and Strategic Management Modes (Lumpkin and Dess, 1966); and Economic Theory (Schumpeter, 1934), introduced in the Social Sciences.

The teaching of entrepreneurship, which began in 1947 at the Harvard School of Management, has advanced in its academic and business approaches, and with importance for the economy of countries (Katz, 2003).

Therefore, in terms of the countries' levels of development, the highest initial entrepreneurship rates - REA - are concentrated in the group of factor-driven countries, and the lowest rates in the innovation-driven ones. It should be noted that in 2015, it was found that “there is a negative

correlation between the level of development of countries (by factors, efficiency and innovation) and the rates of initial entrepreneurship - REA (GEM, 2016).

This finding suggests careful analysis of the REA variables when making investment decisions in the productive sectors, to minimize possible negative impacts on the Established Entrepreneurship Rate - EER. According to the GEM data (2019), REA (start-ups and new ones) surpassed EER and reached its highest mark (23.3%). EER fell (16.2%) but returned to the values obtained in 2016 (16.9%) and 2017 (16.5%), and in 2018, it was 20.2%.

In the area of professional performance, examples, experiences and results of empirical research into the application of management models that reflect the reality of management in Brazilian organizations are considered. In the research on the application of the ISM model in 2012, 2016 and 2021, the analysis of the phases and processes for the success and continuity of the Micro, Small, Medium and Large - MSMLCs surveyed was considered, according table 5.

Table 5. Cycle of phases and processes analyzed in industrial organizations

Nº	**PHASES**	**DEFINITIONS**
01	Creation	It is the legal formalization of MSMLCs, via a social contract and / or constitution document, in which the company is created to operate and meet a market demand.
02	Maintenance	It is to fulfill the mission of creating the business, and keep working until leaving the phase of "loss" (recovery of capital invested in the creation phase), and from there, to remain in the market with the generation of own resources and operating at a profit.
03	Perennial Maintenance	The company remains stable, successful in business, but without structural and physical growth. Staying alive successfully in business, and consciously avoiding expansion.
04	Growth	It is to grow the business in its structural and physical aspects, with the increase of the number of employees, greater market share and expansion of the clientele, increase of financial gains, among others.
05	Perennity	It is to remain alive in the market, long-lived and succeeding generations, with constant feedbacks from the creation, maintenance and perennial maintenance phases, with the capacity to maintain structural growth, the market, the clientele, and acquire financial stability, prioritizing the development of management technologies and of the workforce that guarantees professional maturity and can fulfill its political, economic and social function in the face of its mission.
Nº	**PROCESSES**	**DEFINITIONS**
01	Success	MSMLCs presents good administrative, operational and financial results, generating capacity for its continuity, providing the necessary conditions for the company to reach the remaining phases and achieve longevity, thus fulfilling its political, economic and social mission in the environment in which it operates.

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02	Low Planned	Closing of the activities of the MSMLCs in the market, in which it operates, carried out in a manner planned by the owner, after complying with its legal, fiscal and labor obligations. It is a professional decision not to want to continue in the business, regardless of the reason.
03	Failure	It is the poor result of MSMLCs, and its inability to continue operating in the market in a viable way to administrative, technical, operational and financial matters, being compromised the relation with the employees, clients and the results of financial profit.
04	Mortality	Insolvency of MSMLCS, ceasing the normal operation of its administrative, technical and operational activities, for not achieving economic and financial success. It ceases to exist functionally with an active organization, reflecting negatively on the economic and social development of the environment in which it operates.

Source: Polary-Pereira (2012, 2019)

These studies and research indicate that the components of technological capacity at the organizational level and management technologies, when applied in line with the strategies of private and public organizations, favor the achievement of organizational sustainability in production and service sectors, generating a strong impact on social and economic development.

EMPIRICAL FINDINGS

The survey of the MSMLCs in the sample found that the dimensions, components and variables of the Integrated Sustainability Management (ISM) model favor "management, success and sustainability" (table 6); and "the Sustainability of MSMLCs has a positive impact on Industrial Development" (Polary-Pereira, 2012, 2019).

These results are in line with studies and research by Arruda et al., 2007; Silva, Jesus and Melo, 2009; Souza, 2009; and Oliveira, 2009.

Table 6, The ISM Model: averages and percentages of dimensions, components and variables that positively influence the management, success and sustainability of industrial MSMLCs, from the managers' perspective

MODEL	DIMENSIONS	AVE-RAGE	%	COMPO-NENTS	AVE-RAGE	%	VARIABLES	AVE-RAGE	%

ISM	Technological Administrative	8,8	37,3	Administra-tion	8,8	18,8	Management Competencies and Abilities - Professional Management - ISM, based on Entrepreneurship… Feasibility studies: technical, economic and financial…….	8,9 8,7	9,5 9,3
				Technology	8,7	18,5	Technological Support (machines and equipment; systems and working methods)…… Industrial efficiency level……	8,8 8,6	9,4 9,1
ISM	Institutional Politician	6,7	28,4	Policies	6,8	14,5	Public Policies of the Federal, State and Municipal Government…… Legal, tax and labor aspects……	5,8 7,7	6,2 8,3
				Strategies	6,5	13,9	Local Strategies and Partnerships Institutional Policy, Industrial Segment and Civil Society…. Industrial Development Plan - PDI-2020…….....	6,1 6,8	6,6 7,3
	Economic Social	8,1	34,3	Economic and Social Indicators	8,1	34,3	Qualified industrial workforce…… Investment attractions: internal, external and local government… Preservation of the industry's local environment…… Business location…	8,6 6,6 8,5 8,6	9,1 7,0 9,1 9,1

Source: Polary-Pereira (2012, 2019)

From the results of the Regression and Multiple Correlation of the variables that most positively influence management, success and longevity (Independent) and those that are most important for success in the longevity phase (Dependent) in MSMLCs, it was found that the variable "Carry out feasibility studies: technical, economic and financial" showed a substantial positive correlation, being the one that most explains the variation in Y (Dependent). according table 7.

Table 7. Multiple linear regression between the variables that most positively influence management, success and perpetuity (independent) and prioritize the qualification of labor and maintain the levels of efficiency and productivity required by the sector (dependent) in MSMLCs

Independent variables (Peditoras)	**Partial regression coefficient**	**T**	**P**
Constant (Intercept)	3.8049(a)	-	-
Managerial skills and abilities of the partners who manage and those who administer or advise the business combined with Professional Management (AIS) and Entrepreneurship.	0.2754(b1)	0.5073	0.6129
Technological support (machinery and equipment; systems and working methods)	-0.2903(b2)	-0.4825	0.6303
To do feasibility studies: technical, economic and financial	**0.3366(b3)**	**0.6936**	**0.4892**
Industrial efficiency level	-0.0479(b4)	-0.0834	0.9337
Qualified industrial labor	0.1720(b5)	0.4547	0.6502
Companies location	0.2479(b6)	0.6920	0.4902

Source: Polary-Pereira (2012)

Conclusion: F is significant for $p < 0.0001$, at least one of the Independent variables (Peddlers) influences the Dependent variable; The coefficient of determination means that 1.63% of the variation in Y can be explained by the model, the rest (98.37%) is unexplained and is due to other factors or chance; The variable with the lowest p-value is the variable **Doing feasibility studies: technical, economic and financial**, so it is the one that explains the most of the variation in Y.

Continuing this analysis of the results of other variables in the ISM model were: “Level of industrial efficiency”, with a substantial positive correlation; “Qualified industrial workforce” and “Business location”, with a moderate positive correlation; and “Preservation of the industry's local environment”, with a positive but low correlation.

In another study on the use of contemporary management technologies, with the application of variables from the ISM model and their correlation with the sustainability of micro-enterprises-MEs and small companies - SCs in the industrial and service sectors in São Luís (Polary-Pereira et al., 2016), the results were as follows: with regard to the relevance of the variables in the ISM model, the one with the highest average in the MEs was Preservation of the environment (8.18); and in the SCs it was Business location (8,68). Regarding the relevance of the variables of the ISM model, the one with the highest average in the MEs was Preservation of the environment (8.18); and in the SCs it was Location of the business (8.68).

Regarding the ISM model technology variables present in MEs and SCs that contribute most to sustainability, “Products and services” predominated, with averages of 8.75 and 8.36; and with regard to the “importance of managers having ‘knowledge and experience in the area in which they work and seeking its development’ to work in MEs and SCs”, the results showed averages of 8.27 in MEs and 9.06 in SCs.

As for the length of time they have been in the market, 64% of MEs are between 1 and 4 years old; 9% between 5 and 8 years old; 18% between 9 and 12; and 9% over 12 years old; in SCs, 25% are up to 4 years old; 19% between 5 and 8 years old; 6% between 9 and 12 years old; and 50% are over 12 years old. Only 9% of MEs have been in business for more than 12 years, i.e. they have a

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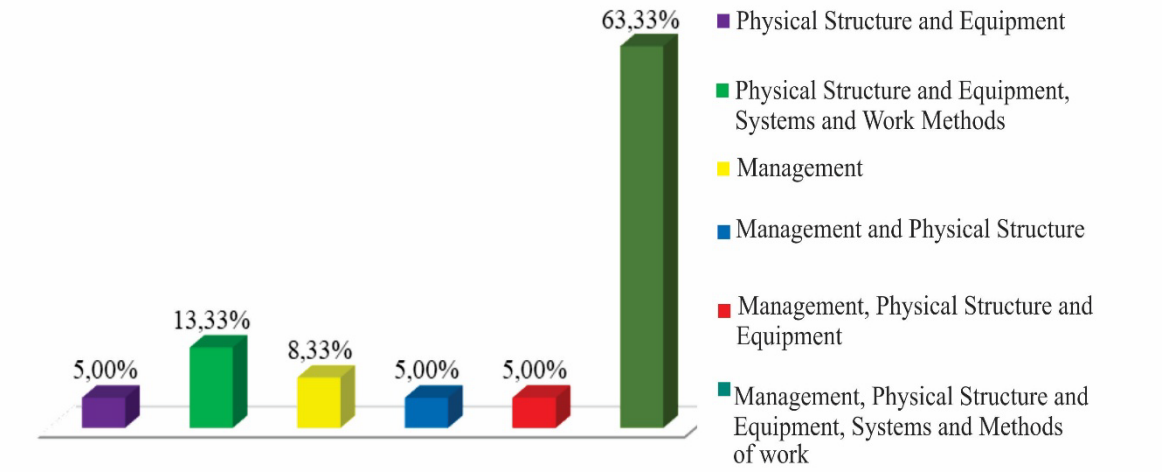
higher perpetuity rate. SCs., on the other hand, have a higher continuity rate, with 50% having been in business for more than 12 years.

And as for the time of existence on the market, 64% of MEs are in the range of 1 to 4 years; 9% between 5 and 8 years; 18% between 9 and 12; and 9% over 12 years old; in SCs, 25% up to 4 years; 19% between 5 and 8 years old; 6% between 9 and 12 years old; and 50% are over 12 years old. It appears that in MEs, only 9% are over 12 years old, that is, with a higher perennial rate. SCs, on the other hand, have a higher perennial rate, with 50% over 12 years old.

The 2021 survey of 60 industrial and service MSCs on technological innovation, sustainability and management technologies, including the ISM model, among the results, it was found that technological innovations are aimed at predominantly for "physical structure and equipment" (63.33%), followed by: "physical structure, equipment, systems and work methods" (13.33%); management (8.33%); and "management and physical structure", "management, physical structure and equipment", and "management, physical structure, equipment, systems and work methods", all with 5.00%, according figure 4.

Figure 4. What are the innovations and technologies of industrial and service-providing MSCs aimed at?



Source: Polary-Pereira e Castro (2021)

It is possible to verify through these studies in private industrial and service sectors how much the dimensions, components and variables of the ISM model and other management technologies have had a favorable impact on the sustainability of these organizations, making it one of the viable paths to organizational sustainability.

Thus, with the favorable results of the application of the ISM model for the sustainability of industrial organizations and the development of the industrial sector in 2012, it was adapted for public organizations in 2014 (figure 3), and applied to public hospitals and universities, with the

aim of verifying, in addition to the effectiveness of the variables of the ISM model, the relevance of these organizations to society, the satisfaction of their employees and external customers and the organizational excellence of the services.

The results are shown in table 8.

Table 8. Variables that most favorably influence the organizational excellence of the institutions surveyed

Variables	Average	Minimum	Maximum	DP
Managerial skills and abilities of Managers. Professional Management (ISM) Management (ISM)	9	7	10	1,195229
Feasibility Study: technical, political, social and financial. financial	7,625	7	8	0,517549
Technology and innovation	7,375	6	10	1,407886
Level of efficiency and effectiveness of results	8,625	8	10	0,744024
Public Policies of the Federal, State and Municipal Government.	7,375	5	10	1,505941
Legality, control and transparency	8,625	6	10	1,59799
Partnerships: Political-Institutional; Public-Private and Civil Society.	8,625	6	10	1,407886
Institutional and managerial public development	8,375	6	10	1,30247
Qualification, performance and results of civil servants.	8	6	10	1,511858
Internal and external fundraising	7,25	6	8	1,035098
Environmental Sustainability	7,875	5	10	1,642081
Relevance to Society	9,125	8	10	0,991031

Source: Polary-Pereira and Silva (2015)

Continuing with the analysis of the relevance of public organizations to society and the organizational excellence of services, the results are shown in figure 5.

Figure 5. Major Contributions of Public Institutions to the fulfillment of the mission in Maranhao

The CYRUS Global Business Perspectives (CGBP), Volume V9, p17-36:2025
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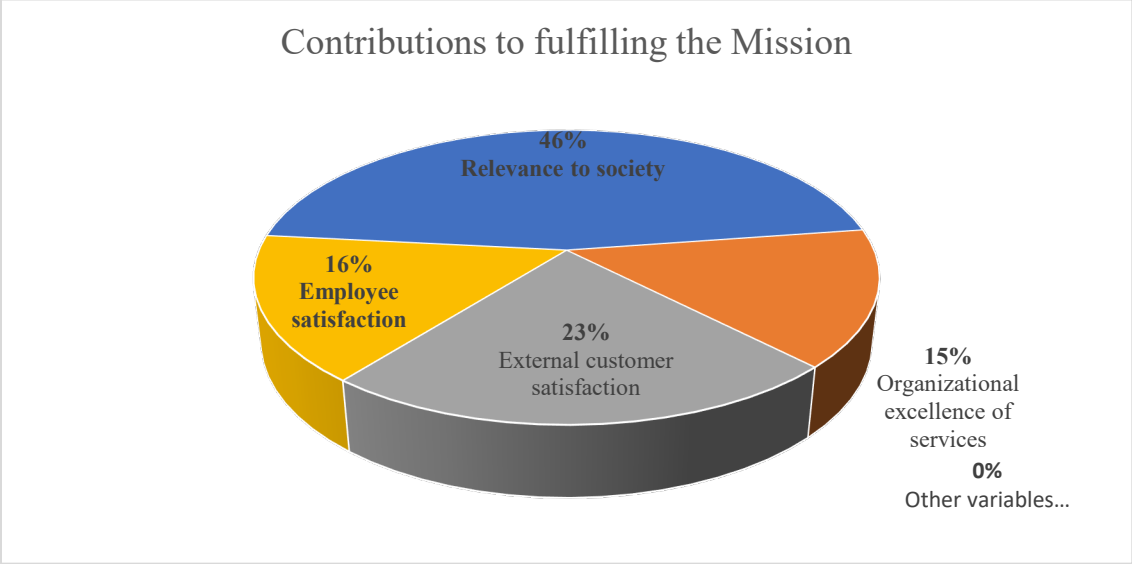

Source: Polary-Pereira e Silva (2015).

It was found that the relevance of the public institutions surveyed, in the view of the managers, is of great importance to society, in which this variable corresponds to 46% for the fulfillment of the mission; 23% in relation to the satisfaction of its external customers; 16% refers to employee satisfaction and 15% related to the organizational excellence of the services. The results pointed to the need for a development program on management technologies that favors the development of projects in the economic, social and environmental dimensions, and encourages scientific publication in areas that can have an impact on organizational sustainability and social and economic development.

Continuing this analysis, in 2020 another study in a public hospital aimed to "assess the relevance of management technologies as sustainable alternatives for Brazilian public administration and their impact on society." The results of the impact of the dimensions, components and variables of the ISM model are described in table 3.

The results described in Table 3 show that the results obtained on a scale of 1 to 10 have high averages and few differences between them. The analysis of each dimension and its respective components and variables of the ISM model and other conclusions of the research suggest that the technologies applied in the hospital have worked as a viable alternative to public management in organizations that aim to obtain perennial, sustainable results with a relevant social impact.

The results obtained in the survey of the public children's hospital in 2020, the importance of the "technological contribution" variable was noted in the technology and innovation items of the ISM model, but the need for improvement in software, machinery, equipment and some innovation in work processes was highlighted to achieve the organization's sustainability (Polary-Pereira and Oliveira, 2020), according table 9.

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Table 9. Means and percentages of the dimensions, components and variables of the ISM model applied at the Public Children's Hospital.

CONCEPT	DIMENSIONS	AVE	%	COMPONENTS	AVE	%	VARIABLES	AVE	%
ISM	Administrative Technology	8,405	33,72	Management	8,647	20,82	Managerial competencies and skills - Professional Management (ISM).	8,908	8,93
							Feasibility studies: technical, political, social and financial.	8,386	8,41
				Technology	8,170	19,68	Technological support: technology and innovation; work processes and methods; equipment.	8,278	8,31
							Level of efficiency and effectiveness of results.	8,063	8,08
	Institutional Politics	8,175	32,79	Policies	8,186	19,71	Public Policies of the Federal, State and Municipal Governments.	8,217	8,24
							Legality, control and transparency.	8,156	8,18
				Strategies	8,171	19,68	Partnerships: Political Institutional, Public-Private and Civil Society.	8,208	8,23
							Institutional and Managerial Public Development.	8,134	8,15
	Social Economic	8,350	33,49	Economic and Social Indicators	8,350	20,11	Qualification, performance and results of civil servants.	8,108	8,12
							Fundraising: internal and external.	8,113	8,13
							Environmental sustainability.	8,186	8,21
							Relevance to society.	8,991	9,01

Source: Polary-Pereira and Oliveira (2020)

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CONCLUSION

Through the analysis of the literature, it can be concluded that the term sustainability is still disseminated predominantly from the point of view of the "environmental dimension", but there is a growing evolution of studies focused on sustainability in the "organizational dimension", its challenges and perspectives for the development of economic and social businesses.

In this direction, we consider technological capacity at the organizational level Lall (1992), Bell and Pavitt (1995) and Figueiredo (2003); innovative, sustainable and long-lasting organizations (Barbieri, 2007), and Arruda et al. (2007); management technologies and the Integrated Sustainability Management (ISM) model (Polary-Pereira, 2023), and (Polary-Pereira and Costa, 2023); entrepreneurship in impact businesses in Brazil and internationally (Maciel, 2020), (Barki, Rodrigues and Comini, 2020) and Barki (2022); and the relationship between the initial entrepreneurship rate - REA and the Established Entrepreneurship Rate - EER (GEM, 2019), in the management of organizations aimed at organizational sustainability and sustainable development.

Studies and empirical findings in the private sector and public organizations have shown that the organizational sustainability of private industrial sectors and public organizations providing health and education services, when combined with the dimensions and components of technological capacity and management technologies, are relevant factors in raising the Human Development Index (HDI) of economies, reducing social inequality and promoting social and economic development,

In conclusions of the research carried out on MSMLCs in the industrial sector, the evidence of the effectiveness of the dimensions, components and variables of the ISM model, that management technologies favor their continuity and organizational sustainability, generates prospects for these organizations to become more competitive and effective, reflecting the sustainable economic development of the environment in which they operate.

Following on from the conclusions, the 2015 survey of public sector hospitals and universities, institutions in which society demands transparency, trustworthiness and ethics in addition to the provision of quality services, suggests that managers take a systemic view of the macro-environment, considering aspects of legality, responsibility in the use of public resources and citizen satisfaction, to achieve social profit and organizational excellence.

As a limitation of the research, the scarcity of literature and empirical work on "sustainability in the organizational dimension" in the public and private sectors and its correlation with sustainable social and economic development, which makes studies and research focused on organizational sustainability relevant and challenging.

As a recommendation for further studies, research should continue in the field of sustainability in the organizational dimension, considering the actions of managers and entrepreneurs in perennial, sustainable organizations in terms of the use of technological capacity at the organizational level,

management technologies, entrepreneurial management and their impact on the HDI and economic and social development.

The conclusions point to an answer to the problem investigated, the confirmation of the hypothesis and the achievement of the objective. It is hoped that this study will broaden the discussion in the academic community and in private and public organizations about organizational sustainability and its impact on the economic and social sectors.

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