Chapter 11
Sustainable Environmental and Social Practices in Companies in the State of Santa Catarina, Brazil

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Abstract Current research, comprising a questionnaire answered by 50 companies, identifies the introduction and implementation of sustainable and social practices by the companies, their motives for implementing them, the difficulties they face, and the benefits they receive. Results reveal that environmental practices fully implemented by 68% of the companies comprise the monitoring of risks and opportunities for the organizations' activity due to climatic changes, 56% of the firms under analysis separate wastes, and 52% of the firms train personnel in health and safety procedures on work. Non-implemented practices include incineration (burning of mass) by 80% of the firms, hiring of indigenous and tribal workers by 68%, composting by 64%, and use of surface water in processing.

Keywords Sustainability • Sustainable practices • Environmental and social practices

11.1 Introduction

Sustainable entrepreneurship is the exploitation of opportunities that provide economic profits and enhance social or environmental improvement (Hockerts and Wüstenhagen 2010; Shepherd and Patzelt 2011). It may be implemented by eco-innovations, while entrepreneurs may be called strategic eco-innovators, strategic eco-implementing agents, passive eco-innovators, or non-eco-innovators (Kemp and Pearson 2008).

Coupled to commitment with environmental improvement, entrepreneur activity is relevant for economic and social development (Leitão and Alves 2016).

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Consequently, the results of entrepreneur activity increase its relevance when social, economic, and environmental aspects are incorporated to the companies' strategies and practices.

Social and environmental practices are associated to the idea of life quality which, in itself, is a multidimensional concept which represents the individuals' material and subjective conditions of life within a specific context (Leitão and Alves 2016). According to Schlesinger et al. (2016), one dimension for assessing life quality is the perception of the environment's quality. The abovementioned authors evaluated life quality in cities from the residents' point of view.

The current chapter provides results of a research work which assessed administrators' perspective on the implementation of social and sustainable practices. Research was undertaken with 50 companies from different sectors to identify the introduction and implementation of sustainable and social practices by firms, their motivations, difficulties faced, and benefits received.

The southern Brazilian state of Santa Catarina was the context of current research. The policy of the state enhances sustainable development executed by the Office of the Environment and Sustainable Development and by a Foundation for the Environment.

11.2 Sustainable Social and Environmental Practices and Quality of Life

The integration of sustainable practices has become a common event in supply networks, underscoring decrease in energy consumption, introduction of innovatory packaging and mechanization, and development of laboratory processes, triggered by challenges in energy intake that provide insights with regard to increasing firms' commitment for sustainable practices (Glover et al. 2014).

Consequently, small and big companies vie for improvement in their use of natural resources, valorization of people, and economic returns which make viable the firms' survival. Sustainable practices are, consequently, validated within the organizational context (Suchman 1995).

According to Mathew and John (2016), technological progress and ecological awareness are daily on the rise. In fact, the twentieth century witnessed the development of a culture that gradually affected emerging nations and developing countries, with several consequences to the environment. Environmentalists' and conservationists' efforts in the twenty-first century have contributed toward society's awareness on the consequences of lack of care and bad use of natural resources which will surely reduce people's lifestyle and quality (Schlesinger et al. 2016).

The Global Reporting Initiative's guidelines (2013), edition n. 4, provide a series of procedures for sustainability reports through indexes of environmental, social, and economic performance and their impacts. The guidelines have been developed through a process that involves several stakeholders, comprising firms, workers,

civil society, financial markets, auditors, and other experts in several subjects. They also involve dialogues with regulating and government agents hailing from different countries (GRI 4 2013).

OECD (2011) provides another parameter to measure people's life quality. In fact, a Life Quality Index may be established by a set of welfare and follow-up indicators. It also establishes a series of methodological and investigation projects to improve the welfare measurement base (Durand 2015). Welfare is measured by results achieved within life's material conditions which comprise earnings, richness, employment, incomes, and housing conditions. Life quality includes health, equilibrium between labor and living, schooling and skills, social connections, involvement and empowerment, environmental quality, personal safety, and satisfaction with life. Future welfare is assessed by taking into account the main resources that trigger well-being throughout time and which are influenced by current activities, such as economic, natural, human, and social capital (Durand 2015).

The above parameters evaluating the level of life quality encompass objective and subjective aspects. Durand (2015) subdivides the assessment of material and life quality conditions into 11 dimensions: income and richness, employment and salaries, housing, health, equilibrium between labor and life, social connections, civil involvement, environmental conditions, personal safety, and subjective well-being. In other words, life quality is assessed by discarding a multidimensional construct and comprises economic, social, psychological (Leitão and Alves 2016), and environmental aspects (Schlesinger et al. 2016).

Environmental assessment in current research has been undertaken through environmental practices suggested by Goulet (2002), Elkington (2001), GRI 4 (2013), and Dias (2014) and includes reverse logistics, cleaner production, separation of wastes, 5Rs (Reduce, Recycle, Reuse, Recover, and Reintegrate), treatment of industrial effluents, water recycling, water reuse, pollution control, eco-efficiency, eco-innovation, biotechnology, a system of environmental management, clean energies, eco-design, composting, incineration, sustainable consumption, zero wastes, integrated prevention and control of pollution, green chemistry, use of ecological packaging, auditing of suppliers, environmental auditing in production processes and in the referencing of effluents and wastes, use of surface water in industrial processes, use of underground water in industrial processes, healthy environmental management of dangerous wastes, technologies in energy reduction and consumption processes, water reduction and consumption technologies, waste reduction technologies, mitigation of environmental impacts produced, use of fuel from renewable sources, gas emission reduction technologies, evaluation of products' life span, and voluntary environmental treaties.

Several dimensions were suggested by other authors, such as Goulet (2002), Elkington (2001), GRI 4 (2013), and Dias (2014), and added to social practices. They involve social responsibility; labor practices based on internationally acknowledged norms; quota-based hiring of employees; regular provision of benefits to employees; monitoring and reporting of lesions, labor-caused diseases, absenteeism, training on matters of health, and safety on work; training on handling dangerous wastes; training in ergonomics on work; training on the prevention of accidents on

work; training on human rights relevant to the organization's activities; report of formal processes and complaints by the local community; report on corruption risks identified by risk assessments; information of anticorruption policies and procedures adopted by the organization; monitoring of clients' and suppliers' complaints; observation of ergonomic aspects in the labor process (GRI, n. 4 2013); communication of sustainable performance by specific reports; green marketing; and information of the firm's ethic principles and values (GRI, n. 4 2013; Dias 2014).

Data were collected by a questionnaire with eight sections:

(a) The company's features, activity, number of employees, town or city, and implemented guidelines
(b) Profile of the questionnaire respondent, occupation, and time period at the company
(c) Environmental practices within the production process
(d) Social practices implemented by the firm
(e) Implemented economic practices
(f) Difficulties for the establishment of sustainable practices
(g) Motives for the establishment of sustainable practices
(h) Benefits from sustainable practices

Likert-type scales, between 1 and 5 (1=low; 5=high), were employed so that environmental practices established within the production process and social practices established by the firms could be identified. Data were tabulated, and a descriptive analysis was provided to pinpoint sustainable and social practices established by firms in the state of Santa Catarina, Brazil.

11.3 Sustainable Social and Environmental Practices Established by Firms in the State of Santa Catarina, Brazil

The participating firms' profiles are provided by data in Tables 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, and 11.8. Tables 11.1 and 11.2 give the activities of the *firms* under analysis.

Current research mapped firms from different industrial sectors, underscoring food products, civil construction, and metallurgy. Table 11.2 lists the firms under the heading "Other types of activity."

Table 11.3 shows companies' size, with number of employees.

Firms with up to 50 employees are predominant among the companies analyzed (36%), followed by firms with over 500 employees (30%). Table 11.4 provides the time period of the employees in the firms under analysis.

Note that 64% of participants have worked in the firm for 10 years and 22% have worked between 10.1 and 20 years. Only two participants have worked for more than 40 years.

Table 11.1 Activity

Activity	Abs. Freq.
Food products	13
Civil engineering	4
Metallurgy	4
Textile industry	3
Printing presses	2
Furniture-making	2
Paper and cardboard	2
Plastic products	2
Clothes, footwear, and cloths	2
Soft-drink industry	1
Rubberware	1
Mechanics	1
Other types of activity	13
Total	50

Source: Data collected from research

Table 11.2 Other types of activity

Activity	Abs. Freq.
Frame-making	1
Agricultural and livestock (animal rations)	1
Car industry	1
Aluminum gutters and conduits	1
Equipment for aviculture, swine culture, and livestock	1
Equipment for abattoirs	1
Sports industry	1
Manufacture and assembly of prefabricated concrete structures	1
Financial	1
Technical advice in civil engineering, agronomy, and social and environmental marketing	1
Services	1
Public works	1
Supermarkets	1
Total	13

Source: Data collected from research

Data in Table 11.5 demonstrate the variety of careers of the participants, most of whom are owners and managers. Note the number of managers, supervisors, and analysts, respectively, with relative frequency 18%, 10%, and 8%. Table 11.6 shows the geographic dispersion of the research participants.

Table 11.3 Number of employees

Number of employees	Freq. Abs.	Rel. Freq.
Up to 50	18	36%
Over 501	15	30%
Between 51 and 100	7	14%
Between 101 and 150	3	6%
Between 151 and 200	2	4%
Between 251 and 300	2	4%
Between 201 and 250	1	2%
Between 351 and 400	1	2%
Between 451 and 500	1	2%
Total	50	100%

Source: Data collected from research

Table 11.4 Time period of employees in the company

Time period of employees	Abs. Freq.
Up to 10 years	32
Between 10.1 and 20 years	11
Between 20.1 and 30 years	4
Between 30.1 and 40 years	0
Between 40.1 and 50 years	2
No reply	1
Total	50

Source: Data collected from research

Table 11.6 shows that the companies analyzed lie in 27 different municipalities, of which one is nationwide. Chapecó, São Miguel do Oeste, and Blumenau are conspicuous for having seven, four, and four firms under analysis, respectively, per municipality.

Tables 11.7 and 11.8 exhibit Certification Programs and Quality Improvement to which the companies are committed.

Table 11.7 demonstrates that 5S and Certificate ISO 9.001 are the most underscored guidelines. Only six companies emphasize practices associated to the environmental management system, with Certificate ISO 14.001. Two companies established minimum requirements for improvement practices in health and occupational safety management through Certificate Occupational Health and Safety Assessment Series (OHSAS 18.001). Table 11.8 reveals other guidelines with norms and specific tools for the companies' activities.

Table 11.5 Occupation of respondents of the questionnaire

Career	Freq. Abs.	Freq. Rel.
Manager	9	18%
Supervisor	5	10%
Analyst	4	8%
Administration officer	4	8%
Administration director	3	6%
Engineer	3	6%
Management partner	3	6%
Director of human resources	2	4%
Administrative officer	1	2%
Quality assistant	1	2%
Commercial officer	1	2%
Internal counselor	1	2%
Accountant	1	2%
Director of manufacture	1	2%
Production manager	1	2%
Financial manager	1	2%
Environmental quality manager	1	2%
President	1	2%
Owner	1	2%
Receptionist/telephone operator	1	2%
Technician	1	2%
No reply	4	8%
Total	50	100%

Source: Data collected from research

11.3.1 Environmental Practices

Although few companies have environmental certification (ISO 14.001), all environmental practices at levels 5 and 1 were mentioned by the companies.

According to Table 11.9, 54% of researches under analysis have an advanced stage in reverse logistic practices, with only 10% failing to adopt such practice. Further, 26% lie in the initial stages for eventual use of reverse logistics (level 2). Cleaner production is fully practiced in 18% of the companies under analysis, with 24% of firms at level 4. This boils down to the fact that most companies underscore the continuous application of an integrated environmental and prevention strategy for processes, products, and services.

Standard deviation for these practices ranges between 1.58 for environmental management system and 16.81 for incineration (burning of mass). Composting is another practice with high standard deviation (12.49), followed by a standard deviation of 12

Table 11.6 Municipalities of the companies under analysis

Municipalities	Freq. Abs.	Freq. Rel.
Chapecó	7	14%
São Miguel do Oeste	4	8%
Blumenau	4	8%
Videira	3	6%
Itajaí	3	6%
Xanxerê	2	4%
Not cited	2	4%
Joinville	2	4%
Concórdia	2	4%
Brusque	2	4%
Vargem Bonita	1	2%
Brazil	1	2%
São Bento do Sul	1	2%
States RS, SC, PR, and MS	1	2%
Pinhalzinho	1	2%
Palmitos	1	2%
Maravilha	1	2%
Machadinho	1	2%
Joaçaba	1	2%
Jaraguá do Sul	1	2%
Gaurama	1	2%
Faxinal dos Guedes	1	2%
Erechim	1	2%
Cunha Porã	1	2%
Catanduvas	1	2%
Campos Novos	1	2%
Braço do Norte	1	2%
Arvoredo	1	2%
Arroio Trinta	1	2%
Total	50	100%

Source: Data collected from research

for item use of surface waters in processes, and 11.29 for item separation of wastes. Practices with the lowest standard deviation comprised clean energy (s/d = 2.35), environmentally healthy management of hazard wastes (s/d = 3.08), water consumption reduction technologies (s/d = 3.54), pollution control (3.54), and reverse logistics (3.81). Fully adopted practices by the companies under analysis, at level 5, include separation of wastes, with 56% of firms, followed by treatment of industrial effluents (38%), auditing of internal processes (34%), and reverse logistics (30%). At level 4, eco-efficiency practices have been established by 34% of companies, eco-innovation by 32%, and technologies for waste reduction by 30%.

Table 11.7 Guidelines adopted by companies

Guidelines	Abs. Freq.	Rel. Freq.
Program 5S	21	36.84%
ISO 9.001	14	24.56%
ISO 14.001	6	10.53%
OHSAS 18.001	2	3.51%
None	14	24.56%
Total	57[a]	100%

Source: Data collected from research
[a]Since each company may adhere to more than 1 guideline, the number was higher than the 50 companies analyzed

Table 11.8 Other guidelines

Guidelines	Abs. Freq.	Rel. Freq.
ABVTEX–Brazilian Association of Textile Retail	1	9.09%
BPS and APPCC[a]	1	9.09%
5S in progress	1	9.09%
Quality and prevention maintenance management	1	9.09%
GMP/HACCP[b]	1	9.09%
NBR 14789	1	9.09%
ISO in progress	1	9.09%
Kaizen	1	9.09%
Inmetro legal norms	1	9.09%
Toyota quality programs	1	9.09%
Certificate IN 04 and IN 65	1	9.09%
Total	11	100%

Source: Data collected from research
[a]Hazard analysis and critical control point
[b]Good manufacturing practice and hazard analysis and critical control points

Practices which have not been established by the companies under analysis comprise incineration (burning of mass) (80%), composting (64%), use of surface waters in processes (62%), green chemistry (54%), use of underground water in processes (54%), and environmental audits in production and management processes of effluents and wastes (54%). At level 2, zero wastes (internal recycling) did not occur in 26% of companies, sustainable consumption in 24%, clean energy in 22%, and environmental management system in 22%.

Several other companies analyzed mention other practices. Recycling of electronic apparatuses, building of supply sites for sprayers, collection of hospital residues, containers in car washes, use of energy generator, and 100% of well water used by the company should be underscored.

Table 11.9 Introduction of environmental practices

Practices	1		2		3		4		5		Standard deviation
	F.A	F.R.%	F.A.	F.R.	F.A.	F.R.	F.A.	F.R.	F.A	F.R	
Reverse logistics	5	10%	8	16%	10	20%	12	24%	15	30%	3.81
Cleaner production	5	10%	5	10%	19	38%	12	24%	9	18%	5.83
Separation of wastes	1	2%	0	0	9	18%	12	24%	28	56%	11.29
5Rs[a]	3	6%	8	16%	16	32%	11	22%	12	24%	4.85
Treatment of industrial effluents	10	20%	5	10%	4	8%	12	24%	19	38%	6.04
Water recycling	21	42%	4	8%	9	18%	8	16%	8	16%	6.44
Water reuse	20	40%	6	12%	4	4%	11	22%	9	18%	6.20
Pollution control	11	22%	4	8%	12	24%	13	26%	10	20%	3.54
Eco-efficiency	14	28%	5	10%	10	20%	17	34%	4	8%	5.61
Eco-innovation	8	16%	6	12%	16	32%	16	32%	4	8%	5.66
Biotechnology	26	52%	8	16%	8	16%	6	12%	2	4%	9.27
Environmental management system	10	20%	11	22%	12	24%	9	18%	8	16%	1.58
Clean energies	12	24%	11	22%	10	20%	6	12%	11	22%	2.35
Eco-design	16	32%	10	20%	11		10	20%	3	6%	4.64
Composting	32	64%	7	14%	5	10%	1	2%	5	10%	12.49
Incineration (burning of mass)	40	80%	3	6%	4	8%	1	2%	2	4%	16.81
Sustainable consumption	5	10%	12	24%	20	40%	10	20%	3	6%	6.67
Zero wastes (internal recycling)	11	22%	13	26%	13	26%	12	24%	1	2%	5.10
Integrated prevention and control of pollution	20	40%	5	10%	15	30%	8	16%	2	4%	7.38
Green chemistry	27	54%	6	12%	11	22%	3	6%	3	6%	10.05
Use of ecological packaging	16	32%	9	18%	10	20%	11	22%	4	8%	4.30
Auditing of suppliers	22	44%	6	12%	8	16%	4	8%	10	20%	7.07
Auditing in internal processing	13	26%	4	8%	8	16%	8	16%	17	34%	5.05
Environmental auditing in production processes and in the referencing of effluents and wastes	26	54%	0	0	11	22%	6	12%	7	14%	9.77

Use of surface water in industrial processes	31	62%	3	6%	3	6%	4	8%	9	18%	12
Use of underground water in industrial processes	27	54%	5	10%	6	12%	7	14%	5	10%	9.54
Healthy environmental management of dangerous wastes	13	26%	6	12%	10	20%	13	26%	8	16%	3.08
Technologies in energy reduction and consumption processes	8	16%	8	16%	20	40%	10	20%	4	8%	6
Water reduction and consumption technologies	11	22%	8	16%	14	28%	12	24%	5	10%	3.54
Waste reduction technologies	4	8%	10	20%	12	24%	15	30%	9	18%	9.75
Mitigation of environmental impacts produced	20	40%	6	12%	9	18%	9	18%	6	12%	5.79
Use of fuel from renewable sources	23	46%	8	16%	6	12%	7	14%	6	12%	7.31
Gas emission reduction technologies	20	40%	6	12%	10	20%	7	14%	7	14%	5.79
Evaluation of products' life span	17	34%	7	14%	11	22%	11	22%	4	8%	4.90
Voluntary environmental treaties	23	46%	6	12%	12	24%	4	8%	5	10%	7.91

Source: Data collected from research

[a]Reduce, Recycle, Reuse, Recover and Reintegrate

Table 11.10 Establishment of environmental practices

Practices	1.00	2.00	3.00	4.00	5.00	Means
Reverse logistics	5.00	8.00	10.00	12.00	15.00	3.48
Cleaner production	5.00	5.00	19.00	12.00	9.00	3.30
Separation of wastes	1.00	0.00	9.00	12.00	28.00	4.32
5Rs	3.00	8.00	16.00	11.00	12.00	3.42
Treatment of industrial effluents	10.00	5.00	4.00	12.00	19.00	3.50
Water recycling	21.00	4.00	9.00	8.00	8.00	2.56
Water reuse	20.00	6.00	4.00	11.00	9.00	2.66
Pollution control	11.00	4.00	12.00	13.00	10.00	3.14
Eco-efficiency	14.00	5.00	10.00	17.00	4.00	2.84
Eco-innovation	8.00	6.00	16.00	16.00	4.00	3.04
Biotechnology	26.00	8.00	8.00	6.00	2.00	2.00
Environmental management system	10.00	11.00	12.00	9.00	8.00	2.88
Clean energies	12.00	11.00	10.00	6.00	11.00	2.86
Eco-design	16.00	10.00	11.00	10.00	3.00	2.48
Composting	32.00	7.00	5.00	1.00	5.00	1.80
Incineration (burning of mass)	40.00	3.00	4.00	1.00	2.00	1.44
Sustainable consumption	5.00	12.00	20.00	10.00	3.00	2.88
Zero wastes (internal recycling)	11.00	13.00	13.00	12.00	1.00	2.58
Integrated prevention and control of pollution	20.00	5.00	15.00	8.00	2.00	2.34
Green chemistry	27.00	6.00	11.00	3.00	3.00	1.98
Ecological packaging	16.00	9.00	10.00	11.00	4.00	2.56
Audits for suppliers	22.00	6.00	8.00	4.00	10.00	2.48
Audits for internal processes	13.00	4.00	8.00	8.00	17.00	3.24
Environmental audit in production and management processes of effluents and wastes	26.00	0.00	11.00	6.00	7.00	2.36
Use of surface waters in processes	31.00	3.00	3.00	4.00	9.00	2.14
Use of underground waters in processes	27.00	5.00	6.00	7.00	5.00	2.16
Environmentally healthy management of hazardous wastes	13.00	6.00	10.00	13.00	8.00	2.94
Technologies that reduce energy consumption	8.00	8.00	20.00	10.00	4.00	2.88
Technologies that reduce water consumption	11.00	8.00	14.00	12.00	5.00	2.84
Technologies that reduce waste levels	4.00	10.00	12.00	15.00	9.00	3.30
Mitigation of generated environmental impacts	20.00	6.00	9.00	9.00	6.00	2.50
Use of fuel from renewable sources	23.00	8.00	6.00	7.00	6.00	2.30
Use of technologies in the reduction of gas emissions	20.00	6.00	10.00	7.00	7.00	2.50
Assessment of products' life cycle	17.00	7.00	11.00	11.00	4.00	2.56
Voluntary environmental treaties	23.00	6.00	12.00	4.00	5.00	2.24

Table 11.10 shows that, by weighed means, waste separation was the most relevant environmental practice and green chemistry the least important. On average, effluent treatment, reverse logistics, 5Rs, and cleaner production were also relevant.

Other environmental practices comprised an apparatus for solar light and wind, the use of recycled material, environmental education program, selective collection, motivation for workers and society for forest recovery by distributing native plants, environmental education, projects for environmental preservation, protection of stream and river sources, collection of used batteries from cell phones and home appliances, collection of packages of fertilizers, selective collection of garbage, recycling, use of recycled paper and separation of garbage, water reuse, costs with waste management, rules for environmental organizations, proper consumption of water in production processes, eco-emission, environmental objectives and chronograms, set of practices for the reduction of the occurrence of dengue, priority in the separation of wastes, reprocessing, the engineering of the use of surplus in prime matter, policies of minimum wastes, education and conferences on proper consumption and disposition of wastes, use of chicken manure as fertilizer, use of firewood exclusively from renewable sources, correct disposal of materials, Six Sigma project with special emphasis on the environment (a methodology based on continuous quality improvement of the processes involved in the production of services and objects while taking into account all the important aspects of the business and aimed at excellence in competitiveness, with zero deficit), environmental education project for the local community and partnerships, monitoring of water consumption to reduce the consumption of their important resource, reuse of effluents, recycling of industrialized products, reuse of water, maintenance and improvement of the environment, treatment of the sewage system, and monitoring of consumption.

11.3.2 Social Practices

Table 11.11 shows social practices identified in the companies under analysis.

Data in Table 11.11 show that training on health and work safety lies at full level (level 5) for 52% of the companies. Monitoring and reporting of types of lesions, rate of lesions, rate of occupational diseases, loss of working days, rate of absenteeism, and number of deaths related to labor as a ratio to the totality of workers were adopted by 48% of the companies under analysis, whereas trainings on the prevention of accidents in the work milieu were reported in 46% of firms analyzed. Moreover, monitoring of the number of complaints by clients and suppliers was practiced by 44% of firms.

Level 4 comprises social responsibility (36% of the companies), compliance to the ergonomic aspects in the processes (30%), information on anticorruption policies and procedures employed by the organization (26%), and information on

Table 11.11 Introduction of social practices

Practices	1		2		3		4		5		Standard deviation
	F.A	F.R.	F.A.	F.R.	F.A.	F.R.	F.A.	F.R.	F.A	F.R	
Social responsibility	6	12%	6	12%	13	26%	18	36%	7	14%	5.34
Labor practices based on internationally acknowledged norms	14	28%	7	14%	10	20%	12	24%	7	14%	3.08
Hiring of quota-discriminated workers	19	38%	7	14%	12	24%	3	6%	9	18%	6
Regular benefits to full-time workers	3	6%	5	10%	12	24%	11	22%	19	38%	6.32
Monitoring and registration of any type of lesion, rates of lesion, rates of occupational diseases, loss of a day's work, rate of absenteeism, and number of deaths as a ratio to total number of workers	7	14%	5	10%	6	12%	8	16%	24	48%	7.91
Training on health and work safety	4	8%	4	8%	5	10%	11	22%	26	52%	9.41
Training on handling dangerous wastes	11	22%	6	12%	8	16%	10	20%	15	30%	3.39
Training in ergonomics in the work milieu	8	16%	7	14%	8	16%	9	18%	18	36%	4.53
Training on accident prevention in the work milieu	3	6%	6	12%	8	16%	10	20%	23	46%	7.71
Training on human rights relevant to the company's activities	14	28%	6	12%	12	24%	10	20%	8	16%	3.16
Hiring of tribal and indigene laborers	34	68%	5	10%	4	8%	3	6%	4	8%	13.44
Report on formal processes on complaints by local communities	17	34%	10	20%	10	20%	6	12%	7	14%	4.30
Report on significant risks related to corruption identified by risk evaluations	19	38%	9	18%	7	14%	9	18%	6	12%	5.20
Information on anticorruption policies and procedures employed by the company	17	34%	6	12%	7	14%	13	26%	7	14%	4.80
Monitoring of the number of complaints by clients and suppliers	7	14%	3	6%	9	18%	9	18%	22	44%	7.14
Observation of ergonomic aspects of the processes	10	20%	5	10%	7	14%	15	30%	13	26%	4.12
Information to people on the firm's sustainability performance by means of specific reports (report on sustainability and social balance)	22	44%	5	10%	3	6%	10	20%	10	20%	7.38
Green marketing	15	30%	11	22%	10	20%	10	20%	4	8%	3.94
Information on the company's ethical principles and values in internal processes and in negotiations with interested parties (clients, suppliers, society, and shareholders)	8	16%	6	12%	8	16%	13	26%	15	30%	3.81

Source: Data collected from research

ethical principles and values of the firm in internal processes and in negotiations with interested parties (clients, suppliers, society, and shareholders) (26%).

Non-implemented social practices include the hiring of indigene and tribal workers (68%), information to interested parties on sustainable performance through specific reports (reports on sustainability and social balance) in 44% of the companies, report on significant risks related to corruption which have been identified by risk assessments (38%), and hiring of quota-discriminated employees (38%).

Standard deviation ranged between 3.08 for work practices based on internationally acknowledged norms and 13.44 for the hiring of indigene and tribal workers. Weighted averages of social practices (Table 11.12) corroborate the above results.

There were several social practices involving workers and their family, such as, internal trainings; member meetings; prize-giving to outstanding workers; relaxing break; ludic activities outside the company's working hours; family integration; conferences on health in the workshops; labor gymnastics; admittance of families in conferences on safety, principally during the Week for the Prevention of Accidents during Work (SIPAT); prizes for full attendance; financial subsidies in schooling; visits to newly born children with guidance for the parents; program for medical assistance on the spot, featuring a gynecologist; and schooling of young people and adults in the firm. Other practices for the local community were also identified: support for the community; social investment fund; program involving voluntary personnel; visits by the community; projects in schools; junior entrepreneurships; environmental education in public schools; accountability toward the community; social organization to access public policies for housing; employing people with deficiencies; donations to the community to enhance health and safety; voluntary activities; employment of foreigners; monthly distribution of ration baskets; admittance of the general community in conferences on safety, mainly during the Week for the Prevention of Accidents on Work (SIPAT); subsidizing social work; donation of products to charities; Program Future Athlete; service to the community; investment in a foundation for minors and elderly people; and support for local health schemes and donations of products.

11.3.3 Difficulties for the Deployment of Sustainable Practices

Table 11.13 reveals that investment of capital is a major difficulty to establish sustainable practices, followed by corporative culture and measuring. Other difficulties underscored by employees comprised the firm's size, with branches nationwide, impairing new activities, legislation, lack of investments, bureaucracy of public policies, lack of knowledge and of commitment to implement sustainable actions, necessity of hiring specialized consulting team, and lack of awareness by the administration on the importance of implementing sustainable practices.

In spite of the above difficulties, participants mentioned several motivations to proceed in sustainable practices as commented below.

Table 11.12 Average of social practices

Practices	1	2	3	4	5	Means
Social responsibility	6.00	6.00	13.00	18.00	7.00	3.28
Labor practices based on internationally acknowledged norms	14.00	7.00	10.00	12.00	7.00	2.82
Hiring of quota-discriminated employees	19.00	7.00	12.00	3.00	9.00	2.52
Benefits to full-time employees	3.00	5.00	12.00	11.00	19.00	3.76
Monitoring and reporting of types of lesions, rate of lesions, rate of occupational diseases, loss of working days, rate of absenteeism and number of deaths related to labor as a ratio of totality of workers	7.00	5.00	6.00	8.00	24.00	3.74
Training on health and safety on work	4.00	4.00	5.00	11.00	26.00	4.02
Training on handling of hazardous wastes	11.00	6.00	8.00	10.00	15.00	3.24
Training in ergonomics in the work milieu	8.00	7.00	8.00	9.00	18.00	3.44
Training on the prevention of accidents on the work milieu	3.00	6.00	8.00	10.00	23.00	3.88
Training on human rights relevant for the firm's activities	14.00	6.00	12.00	10.00	8.00	2.84
Hiring of indigene and tribal employees	34.00	5.00	4.00	3.00	4.00	1.76
Report formal process on complaints by the local community	17.00	10.00	10.00	6.00	7.00	2.52
Report on significant risks related to corruption based on risk assessments	19.00	9.00	7.00	9.00	6.00	2.48
Information on anticorruption policies and procedures by the firm	17.00	6.00	7.00	13.00	7.00	2.74
Monitoring of number of complaints by clients and suppliers	7.00	3.00	9.00	9.00	22.00	3.72
Compliance to ergonomic aspects in the processes	10.00	5.00	7.00	15.00	13.00	3.32
Information to interested parties on the sustainable performance through specific reports (reports on sustainability and social balance)	22.00	5.00	3.00	10.00	10.00	2.62
Green marketing	15.00	11.00	10.00	10.00	4.00	2.54
Information on the firm's ethical principles and values in internal processes and in negotiations with interested parties (clients, suppliers, society, and shareholders)	8.00	6.00	8.00	13.00	15.00	3.42

11.3.4 Motivations and Benefits for the Implementation of Sustainable Practices

Tables 11.14 and 11.15 show results of current research with regard to motives and benefits in the implementation of sustainable practices.

The main motives for the implementation of environmental practices by companies were the awareness of managers on their necessity and importance, corporative

Table 11.13 Difficulties in the deployment of the firm's sustainable practices

Practices	F.A	F.R.
Investing in capital (new machines and equipments)	19	38%
Corporation culture	9	18%
Difficulty in measuring	7	14%
Practices are unknown	5	10%
Lack of commitment by the management to implement sustainable activities	4	8%
Monitoring by suppliers	1	2%
Others	5	10%
Total	50	100%

Source: Data collected from research
[a]More than one alternative could be marked

Table 11.14 Motives for implementing sustainable practices

Practices	F.A	F.R.
Awareness of managers with regard to need and importance	18	36%
Corporative culture	5	10%
External demands (clients, shareholders, NGOs, administration, general community)	4	8%
Costs decrease	4	8%
Impact on corporative image	4	8%
Desire to be respected by the community	3	6%
Risk administration	3	6%
Profit increase	2	4%
Increase in operational efficiency	2	4%
Concern on brand	2	4%
Internal demands (by employees)	1	2%
Concern on regulation	1	2%
Others	1	2%
Total	50	100%

Source: Data collected from research
[a]More than one alternative could be marked

culture (with only 10%), external demands (clients, shareholders, NGOs, government, and the community at large), decrease of costs, and impact on the corporative image. The firm's activities were also one of the motives underscored.

Results show that firms are mainly motivated by internal decisions (36%), and only 8% were motivated by external demands. Further, 10% of firms insisted on corporative culture that enhances the implementation of sustainable practices. The above evidences the preparation level of most companies under analysis with regard to the issue whose benefits may be seen in Table 11.15.

The two most important benefits in the implementation of environmental practices were improvement of the firm's image and product quality, followed by

Table 11.15 Benefits when sustainable practices are implemented

Practices	F.A	F.R.
A better image	14	28%
Improvement in quality	10	20%
Improvement in administration	7	14%
Higher income	7	14%
Growth	6	12%
Low costs	2	4%
Improvement in research and development	2	4%
Others	2	4%
Pioneerism	0	0
Total	50	100%

Source: Data collected from research

improvement in management, income, and growth. Other less underscored motives comprised reduction of costs and contribution for research and development. Further, improvement in the work milieu and life quality for all the people involved in the production process and awareness for the preservation of the environment were also mentioned.

11.3.5 Synthesis of Results

The companies' profile demonstrated that 64% have been established for the last 10 years, 22% between 10.1 and 20 years, and 8% up to 30 years, with only two firms on the market for more than 40 years. Further, 24.56% of the firms have Certificate ISO 9.001; 10.53% have ISO 14.001, and 3.51% have OHSAS 18001. In the case of environmental practices, results reveal that several practices have been adopted fully and are thus denominated by strategic eco-adopters (Kemp and Pearson 2008) or, rather, committed to sustainable entrepreneurship (Kuckertz and Wagner 2010). However, 38% of the companies insisted that investments are the greatest difficulty to establish sustainable practices, followed by corporative culture (18%). The main motivation was managers' awareness (36%), with profit increase mentioned by a mere 4% of respondents. Image (28%) and quality (20%) improvement were the most important benefits.

Horbach et al. (2014) agree that several environmental practices have not been adopted by firms due to incomplete information and coordination issues. Results in current research showed that practically one half of the participating firms is aware on the need to implement such practices. However, Khanna et al. (2009) underscore the relevance of managers' broader vision on environmental management systems to commit the head administration and empower workers at all levels and with all techniques, such as mapping of processes, analysis of generating causes, and environmental accounts.

In the case of social benefits, the greatest emphasis lies on health and safety activities, the prevention of accidents, and compliance to ergonomic rules. Other social activities for the external community have also been identified, such as social responsibility and community support through projects and financial aid. It should be made clear that social and environmental actions identified in current research are not the only possibilities. In fact, one may also include activities already mentioned by OECD (2011): the adoption of P+L technologies; incorporation of eco-efficiency practices; preference for purchasing green products, compliance to environmental criteria to select suppliers, adoption of water recycling and, when possible, local purchases; investment in P&D, in eco-design, in the use of ecological material, and dry productive and sustainable processes; incorporation of processes which reduce natural resources in the process; selection of clean transport; use of reused or recycled packages and containers; reuse of ecological material for primary package; adoption of recovery system of materials and recycled materials; separation, preparation, and disposal of wastes; replacement of hazardous materials and pollutants; innovation of storage practices; distribution and commercialization of products to enhance social and environmental sustainability; reduction of gas emissions, liquid effluents, and solid wastes; and reduction of water consumption and energy during production processing.

The conditions of each sector and firm should be taken into account, especially their development stage. This is due to the fact that the companies analyzed in current study hail from different sectors and places. Further, the sample comprised small, medium, and big enterprises. However, through the identification of environmental and social practices undertaken by these companies, results of current research may contribute toward the elaboration of sustainable policies and the construction of cultures in other organizations by imitating the abovementioned activities. In fact, results revealed the amplitude and multidimensional aspects of the social and environmental stances associated to life quality (Leitão and Alves 2016).

11.4 Final Considerations

Current research identified the innovation levels of sustainable and social practices implemented by companies in the state of Santa Catarina, Brazil. Results reveal that fully implemented practices in the different companies comprise separation of wastes, treatment of industrial effluents, auditing of internal processes, reverse logistics; 5Rs; clean energies; training on health and safety on work; monitoring and reporting of types of lesion, rate of lesions, rate of occupational diseases, rate of absenteeism, and mortality rate related to labor as a ratio of all workers (employees and outsourced laborers); training on the prevention of labor-related accidents; monitoring the number of complaints by clients and suppliers; concession of regular benefits to full-time employees; and compliance to ergonomics in the labor milieu.

Non-implemented or hardly implemented practices by the firms analyzed include incineration (burning of mass); composting; use of surface water in the processes;

green chemistry; use of underground water in the processes; environmental auditing in production and management processes of effluents and wastes; employment of indigene and tribal workers; report for those concerned on sustainable performance by means of specific reports (reports on sustainability and social balance); report on significant risks related to corruption identified by risk assessment; quota-discriminated employees; report on formal complaints by the local community; information on anticorruption policies and procedures by the company; monitoring of risks and opportunities for the organization's activities due to climatic changes; priority in expenses with local suppliers; monitoring re-work and re-process index; identification of the company's significant indirect economic impacts, positive or negative; monitoring loss index (in BRS) in the process; and monitoring costs per unit. Results of current research may guide entrepreneurs in other Brazilian states and may contribute toward in-depth discussions on entrepreneurs' and companies' role, through practice and strategies, with regard to the lifestyle of their stakeholders.

The inclusion of different sectors has been one of the limitations in current analysis since an inter-sectorial visualization was not possible. It may be the theme for further research works.

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