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دمج مؤشرات الأداء البيئي في بطاقة الأداء المتوازن
لتفعيل دور منظمات الأعمال في التنمية المستدامة

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Lagging indicators
Leading indicators

.(Bieker et al. 2000) .

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(...)

.(Zingales & Hockerts 2003)

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.BSC

outcome

.(Sinclair & Zairi 1995a)

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(Sinclair & Zairi 1995b) :

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(Johnson 1998)

Toni & Tonchia ()

(2001)

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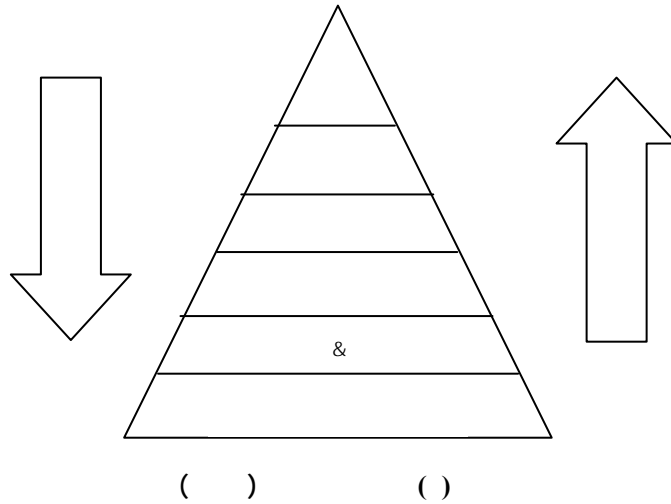
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(2003) Swee Seang

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Hierarchical (Vertical) Model ()

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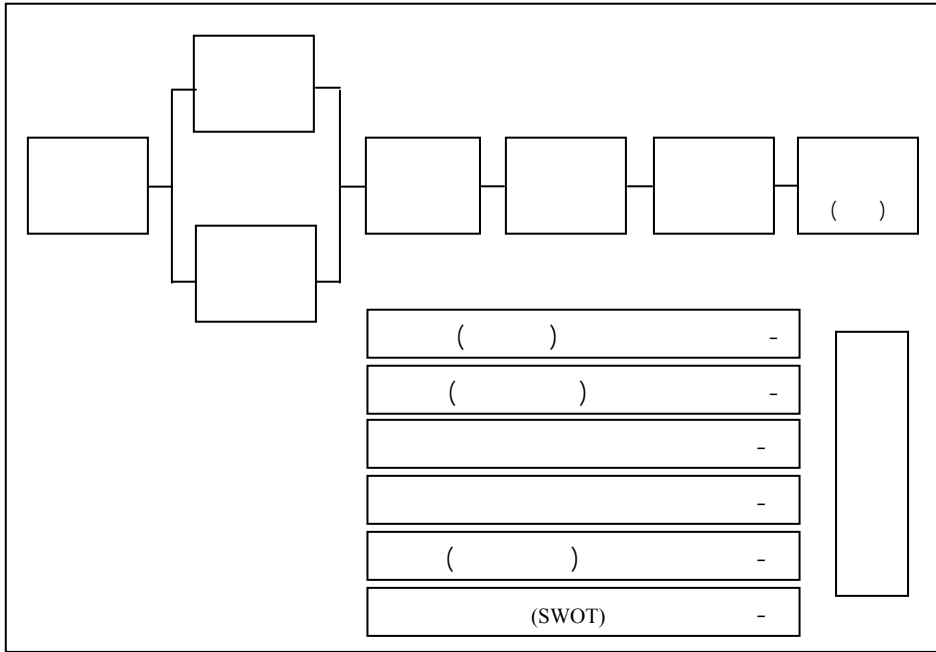


Source: Bititci, Carrie & McDevitt (1997)

Value Chain Model

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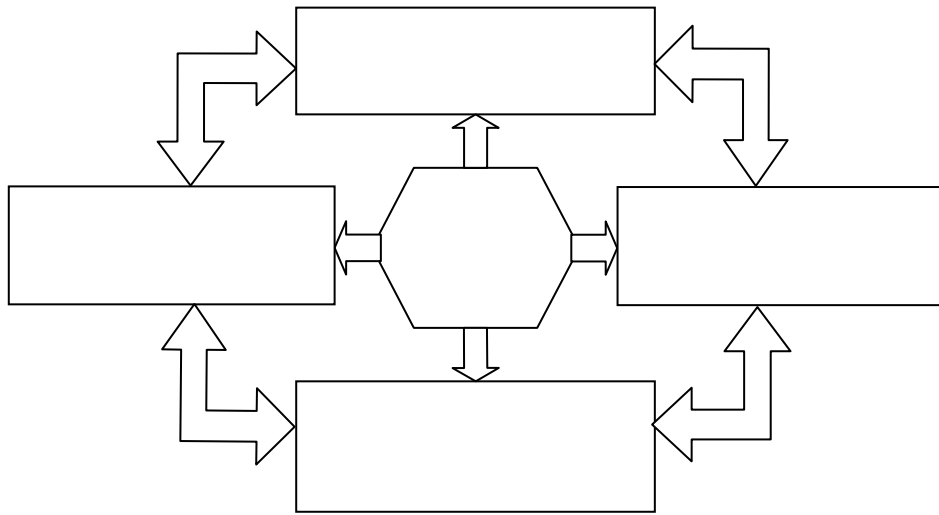
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Source: Mertins, Heising & Vorbecks (2001)

Balanced Scorecard Model

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Source: Kaplan & Norton (1993)

BSC

SPI

(Dantes) :

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eco systems

(Stuart 2004)

(2004) Stuart

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Formalization () *

Trends *

Benchmarking *

(Ford 2000) .

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GRI

WBCSD

(Kolk & Mauser 2000) :

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.. EMIs -
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.. ECIs -

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: .. EPIs -

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(Dantes)

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	..		
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	SO ₂	NO ₂ ()
	(/ /)	
CO ₂	CO ₂	

(Malmi 2001)

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(Sidiropoulos et al. 2004)

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(Sparks 2001)

upgrade

BSC

(stuart)

(Lipe

.& Salterio 2000)

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BSC

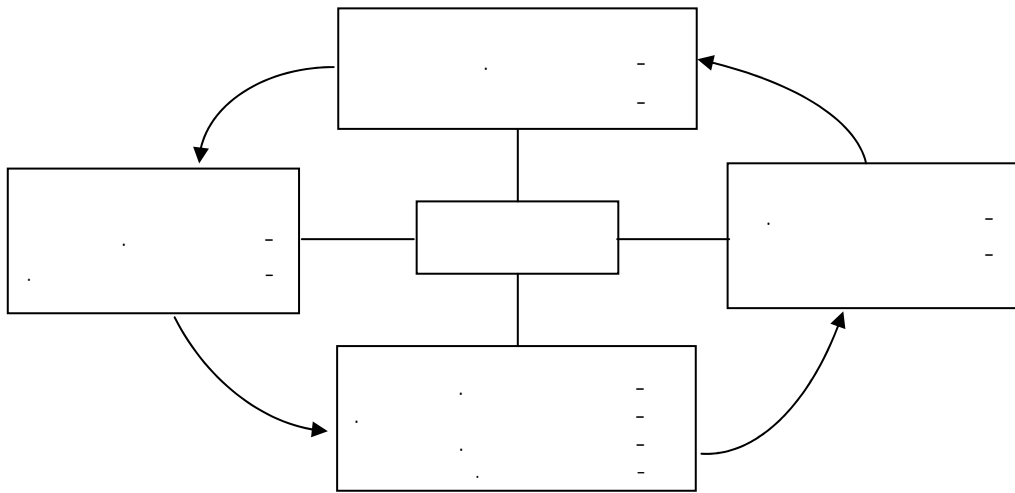
KPI

Lagging ()

Leading

(Atkinson & Epstein 2000)

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Source: Sidiropoulos et al. (2004)

(2002) Morisawa

NRI

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equilibrium

(Oliver 2002)

Leading

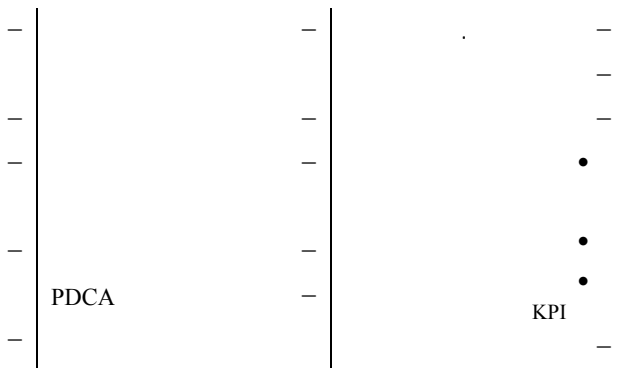
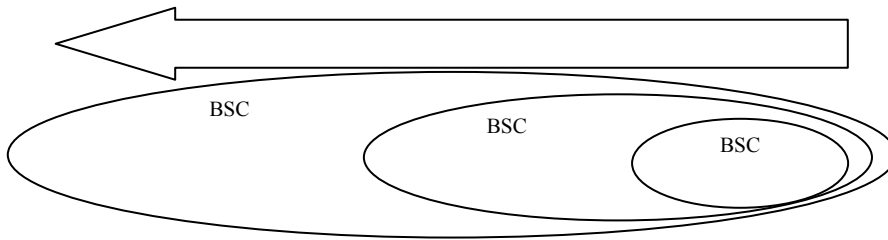
Lagging indicators

indicators

(Bieker & Gminder 2001)

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(Morisawa 2002)



DDCA= Plan, Do, Check & Act

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Source : Nomura Research Institute

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(2000.2001 a, b, c) Kaplan & Norton

Strategy mapping

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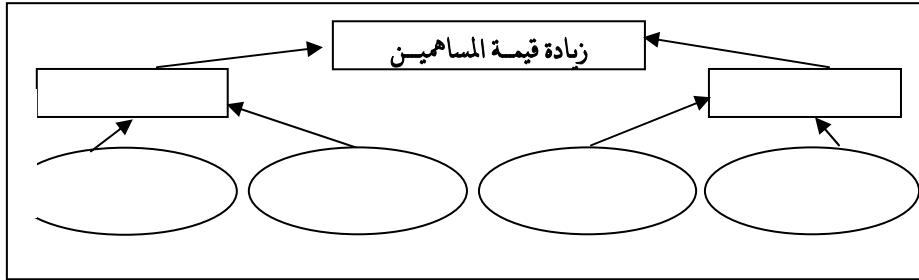
(Brignall

.2003)

(Morisawa 2002 , Swee Seang 2003) :

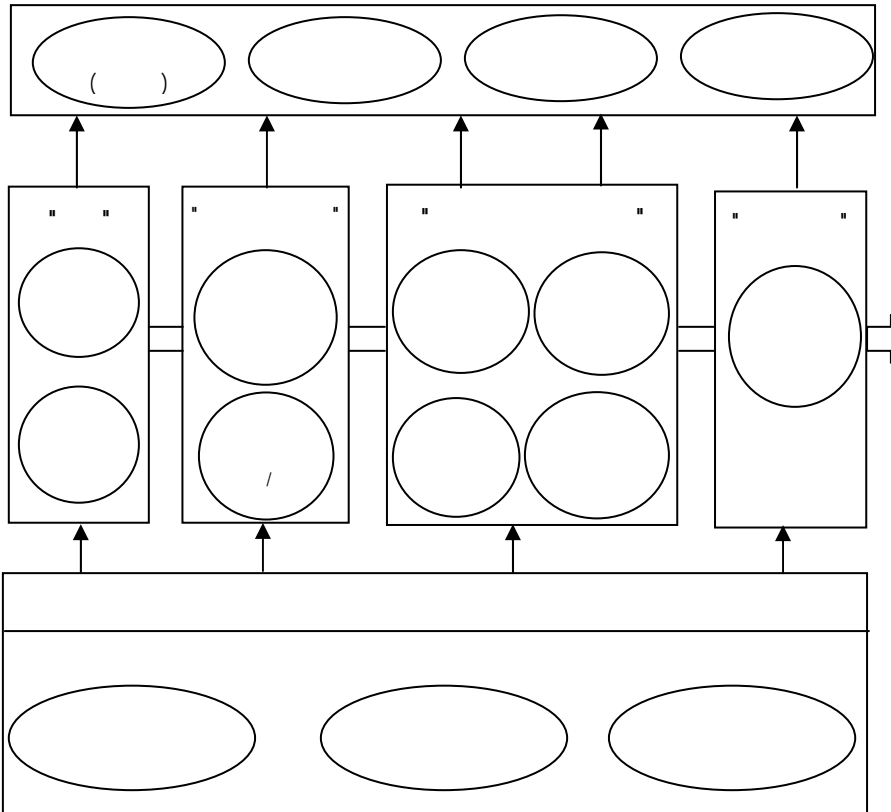
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BSC (2002) Kaplan



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Value for Money

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Source: Kaplan (2002)

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rewards Perspectives

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.(Atkinson & Epstein 2000)

(Lipe & Salterio 2000, Sparks 2001) :

Vision

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BSC

(Kaplan & Narton1996) :

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Corporate Sustainability

(Sidiropoulos et al.

al.2004)

triple – bottom line

(Elkington 1997)

(2001) Bieker et al.

(2001) Bieker & Gminder

normative

(1997) Elkington

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Shear Zones "

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.. Business Case

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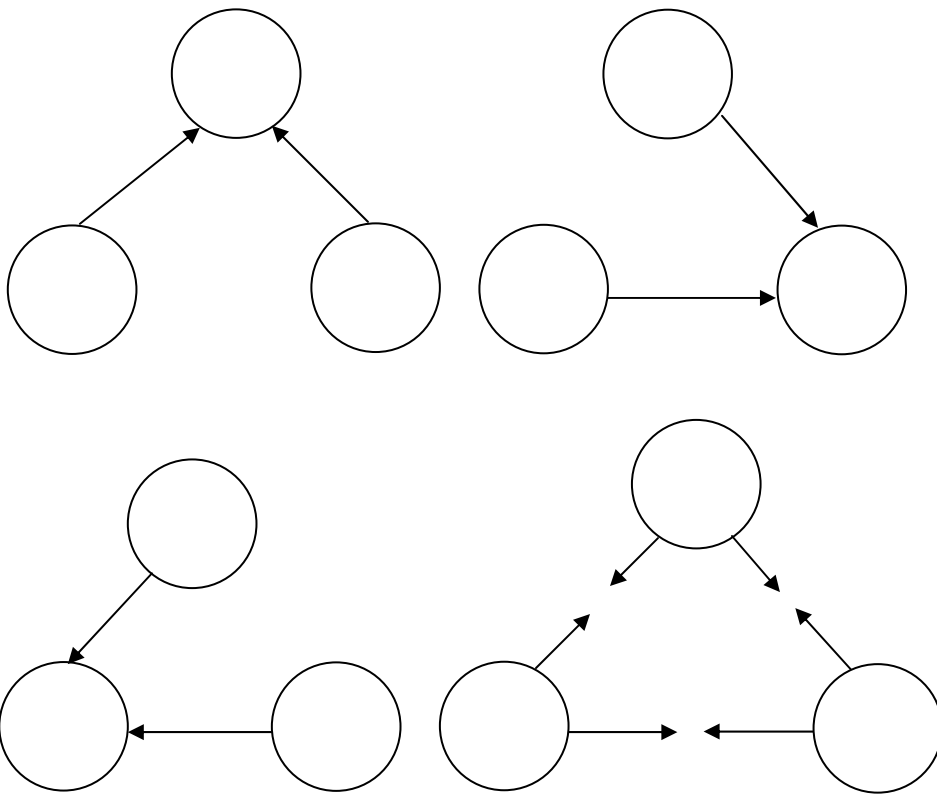
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.. Human Case

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.. Green Case

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Source : Adoption of Hockerts (1996;1999)

(WBCD

2001)

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(2001) Kaplan & Norton

EHS

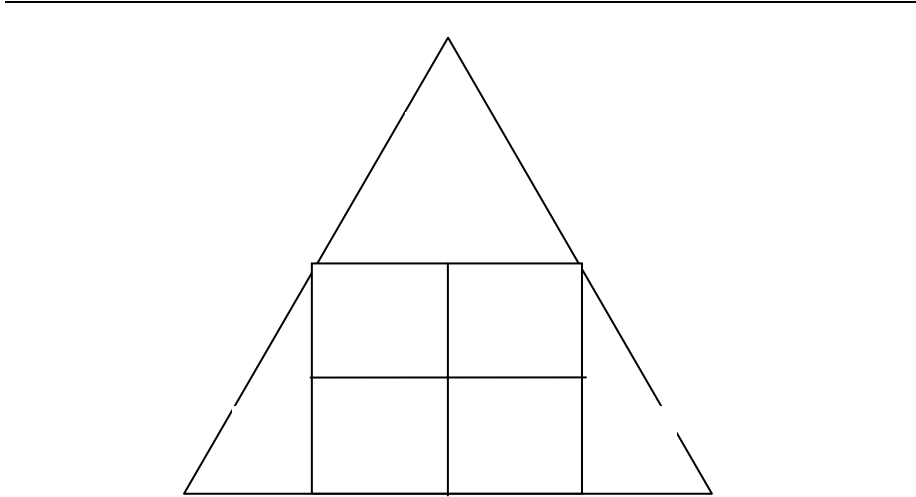
good corporate citizen "

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(1998) Johnson

Leading

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(SBSC

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Value Creating

Close Loop

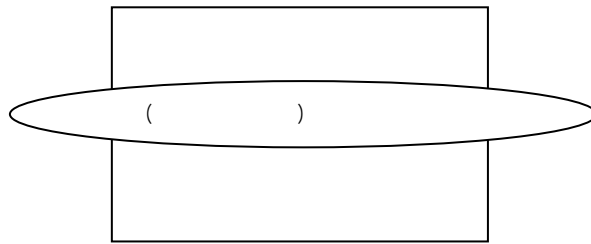
(Sidiropoulos et al. 2004)

(2001) Figge et al.

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(2001) Beiker & Gminder



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Source : Sidiropoulos et al. (2004)

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(Slack & Lewis 2002) .

Bieker & Gminder : (SBSC)

(Bieker et al. 2001 2001)

Partial SBSC

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Transversal SBSC

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Additive SBSC

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Total SBSC

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Shared Services SBSC

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SBSC

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: (1997) Dyllick et al. .

..Clean •

.. Efficient •

.. Innovative •

.. Progressive •

(Beiker & Gminder 2001) .

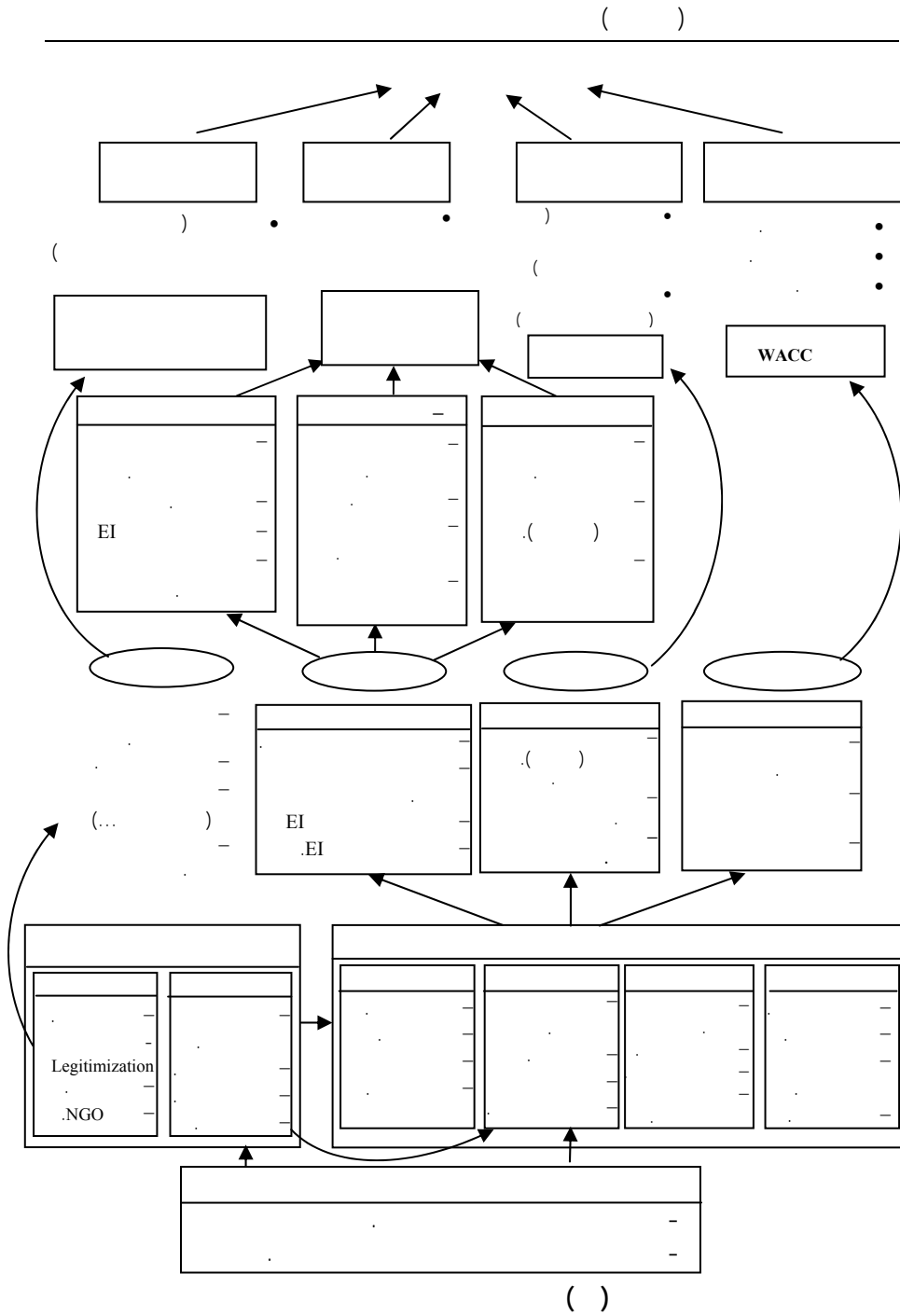
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SBSC

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SBSC



Source: Adaption of Hoekert (2001)

: SBSC

SBSC :

SBSC

SA8000 ISO 14000

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Leading
Indicators

Indicators
.Lagging

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Integrating Environmental Performance Indicators in Balanced Scorecard to Activate the Role of Organization in Sustainable Development

Dr. Nadia Rady
Al-Azhar University

Abstract

Many companies around the world exploring the concept of sustainable development seeking to integrate their pursuit of profitable growth with the assurance of environmental protection and quality of life for present and future. Scientific and professional organizations attempt to establish a global framework of Environmental Performance Indicators (EPI) in order to develop standardized metrics systems and to evaluate organizations' environmental performance, which has developed from using traditional models to Balanced Scorecard (BSC) models. Organizations use BSC to integrate their environmental, financial and other performance information to provide stakeholders with a more complete and accurate picture of their performance. The study aim to highlight the expected benefits of integrating the environmental aspects in BSC indicators and its effect on sustainability. The study discusses the importance, characteristic and use of EPI; the effectiveness of EPI and its role in improving decision making and organization strategy; the need for positive EPI to promote sustainable development; and integrating environmental information in BSC models.