STRATEGY, PERFORMANCE, and BALANCED SCORECARD: THEORETICAL AND METHODOLOGICAL APPROACH

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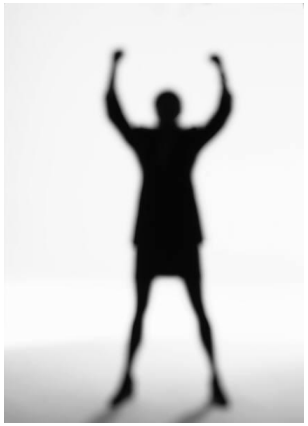
summary….

- The concept of Strategy
- Organizational models
- The concept of performance,
- The Balanced Scorecard (BSC) principles,
- Problems/questions about BSC ,
- Building a logical BSC : Methodology and applications for PLS graph…
- Bringing the idea of BSC
- Conclusion and comments
- Bibliography



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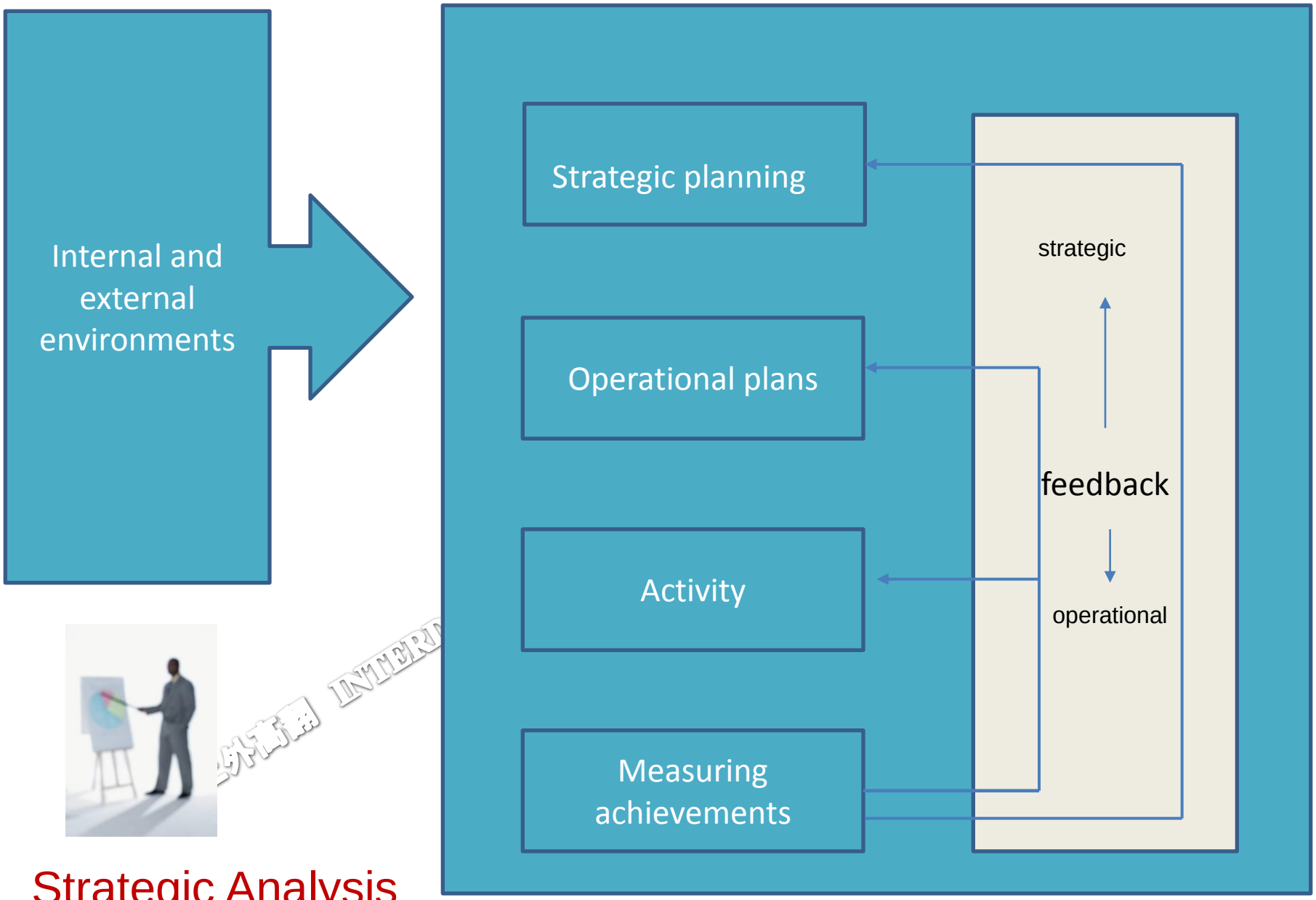
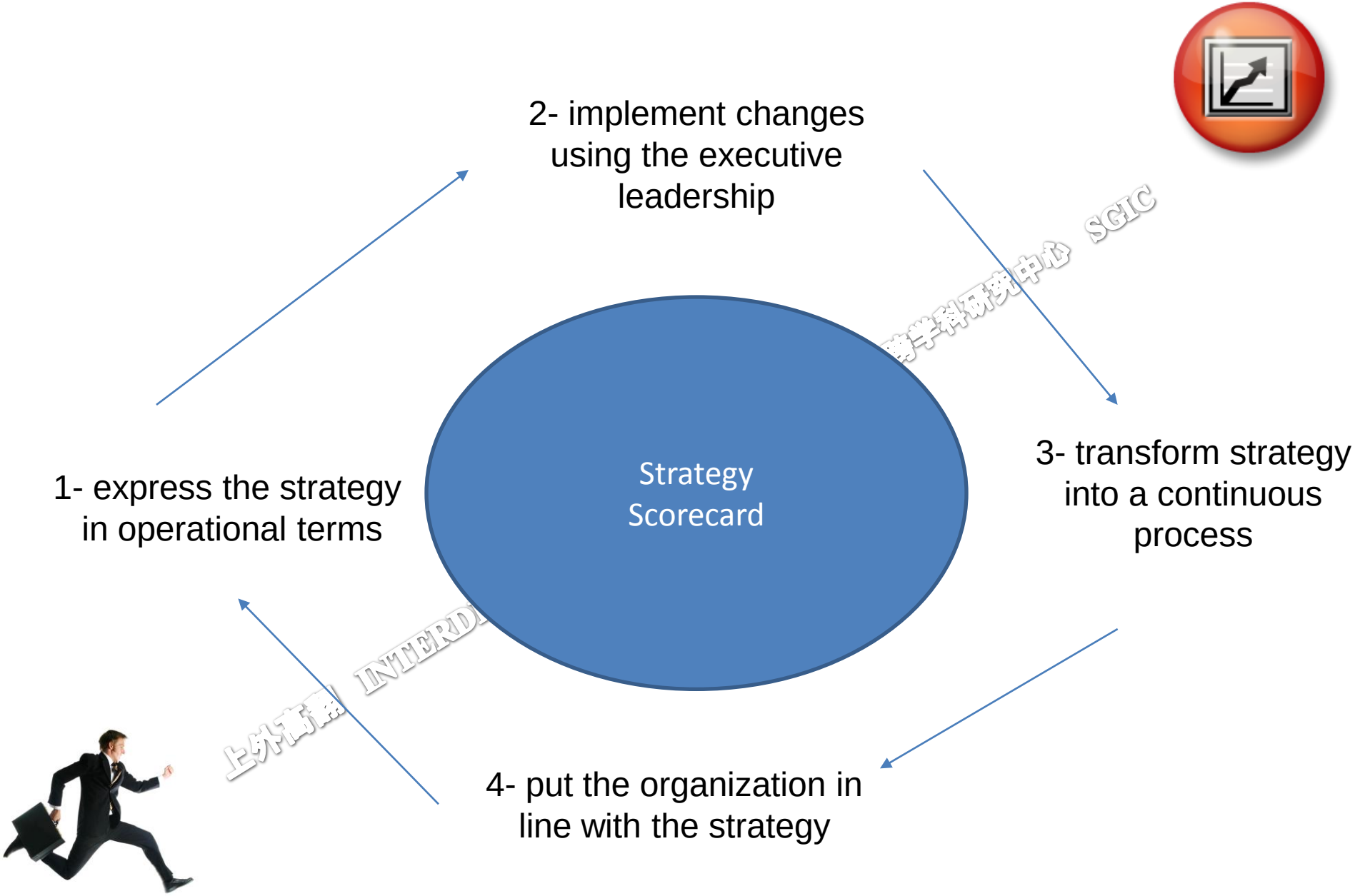


Strategic Analysis


2- implement changes using the executive leadership
3- transform strategy into a continuous process
4- put the organization in line with the strategy
1- express the strategy in operational terms
Strategy Scorecard

Organizational models …

1- Lynch & Cross Model (1991),
2- Matrix determinants: Fitzgerald, Johnston, Brignall, Silvestro, and Voss (1991),
3- Stakeholders Model: Atkinson, Waterhouse & Wells (1997),
4-Balanced Scorecard Model (BSC): Kaplan & Norton (1992; 1996; 2001)

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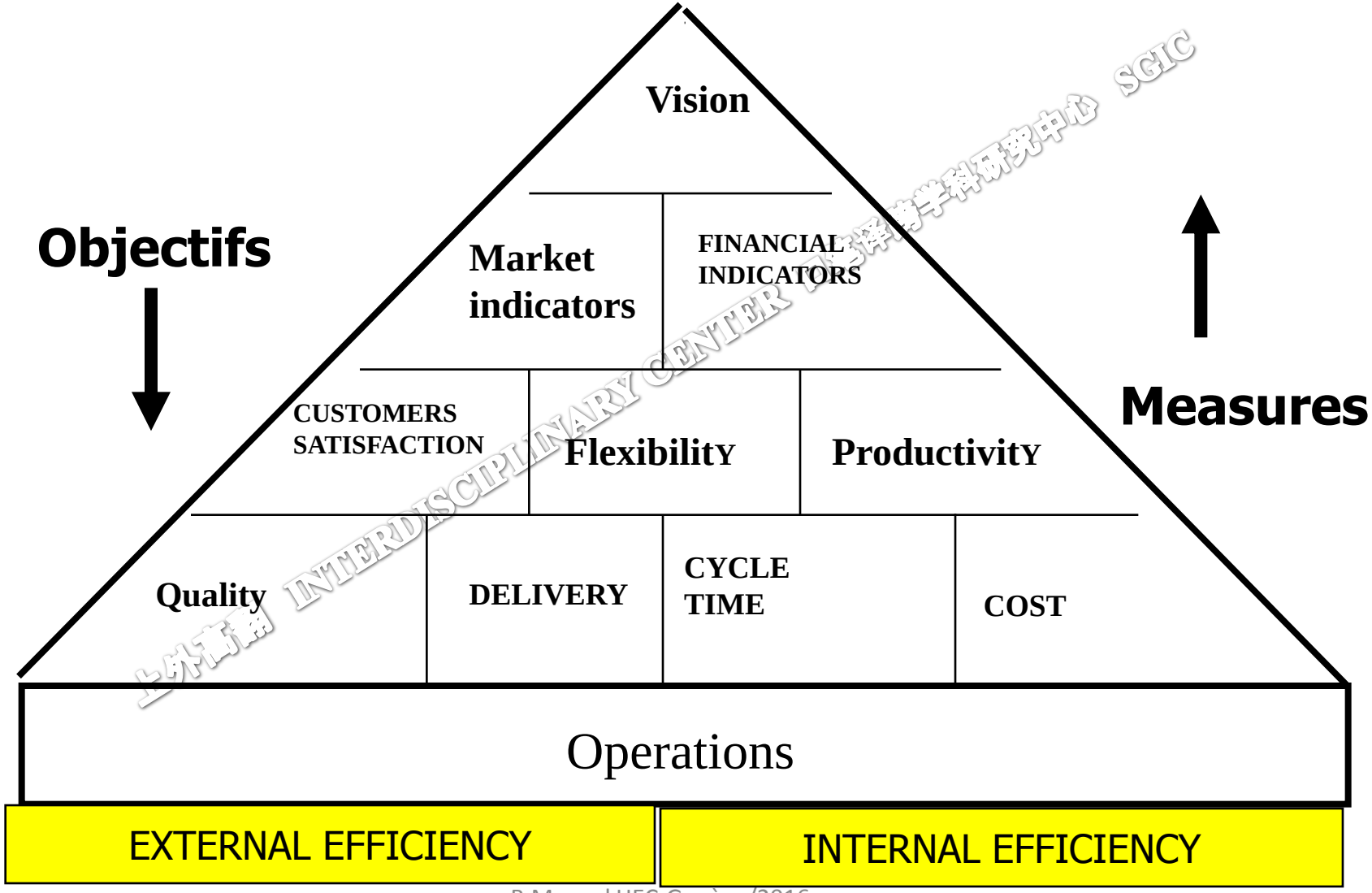
Lynch & Cross Model (1991)



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Comments

At the top: the strategic vision which unfolds through financial objectives and market positioning.

In the center: performance measures that guide basic processes . Three main components measuring performance are needed to adequately control these processes. First, customer satisfaction should be measured . Intention of repurchasing, retention of customers, number of complaints and the overall client satisfaction, including customer service, are examples of indicators to measure the performance for multiple processes. Secondly, there are indicators that control the performance of an organization regarding flexibility.
Examples of suitable indicators measuring achievement of this objective related to the customer service: Inventory turns per year , rapid design changes allowed, average delay, width of product range offered.

The third and final category of indicators is used to find the company's performance related to the objectives of productivity.

Lynch and Cross (1991) add a fourth level to the pyramid which put in light the important of "operations" (Tchokogué Jobin and Beaulieu-ISSN: 1485-5496).

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Matrix determinants and outcomes(Fitzgerald et all, 1991)

- Financial performance and competitiveness of the firm are the result of actions undertaken in 4 areas:
  - Quality of services,
  - Flexibility,
  - Efficient use of resources,
  - Innovation.

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	extended performance	measure type
Results	competitiveness	Market share
		Outcome grow
		Measures on standard customer
	finance	profitability
		liquidity
		capital structure
		financial ratios
**********	**********	**********
Determinant	Quality service	reliability
		sensitivity
		aesthetic
		cleanliness
		comfort
		courtesy
		communication
		benevolence
		competences
	efficient use of resources	accessibility
		availability
		security
	Flexibility	volume
		delivery speed
		specifications
	Innovation	process performance
		with respect to individual innovations

Stakeholders Model (Atkinson, Waterhouse & Wells, 1997)

Stakeholders	primary measures	secondary measures
Shareholders	Return on investment For shareholders	Revenue growth productivity Capital ratios Liquidity ratios Asset quality ratios
Customer	Customer satisfaction	Customer surveys for different markets and products required
Employees	Employee engagement Employee competence Employee productivity	Investigations in different elements regarding customer service to assess employees' competences Index on different elements of customer service to assess employees' competences Cost of financial ratios used by various classifications of income
Community	Public vision	Different external investigations

The concept of performance.

- This concept exists only in relation to a reference (consensus if possible), which acts as a guide,
- This standard can be based on internal indicators (past performance, strategic choices) or external indicators (industry average growth, market share),
- This standard can be for internal purposes (managers) or external purposes(shareholders, regulatory authorities or supervisory committees).
- This concept can cover several dimensions of business (Finance, customer production...)

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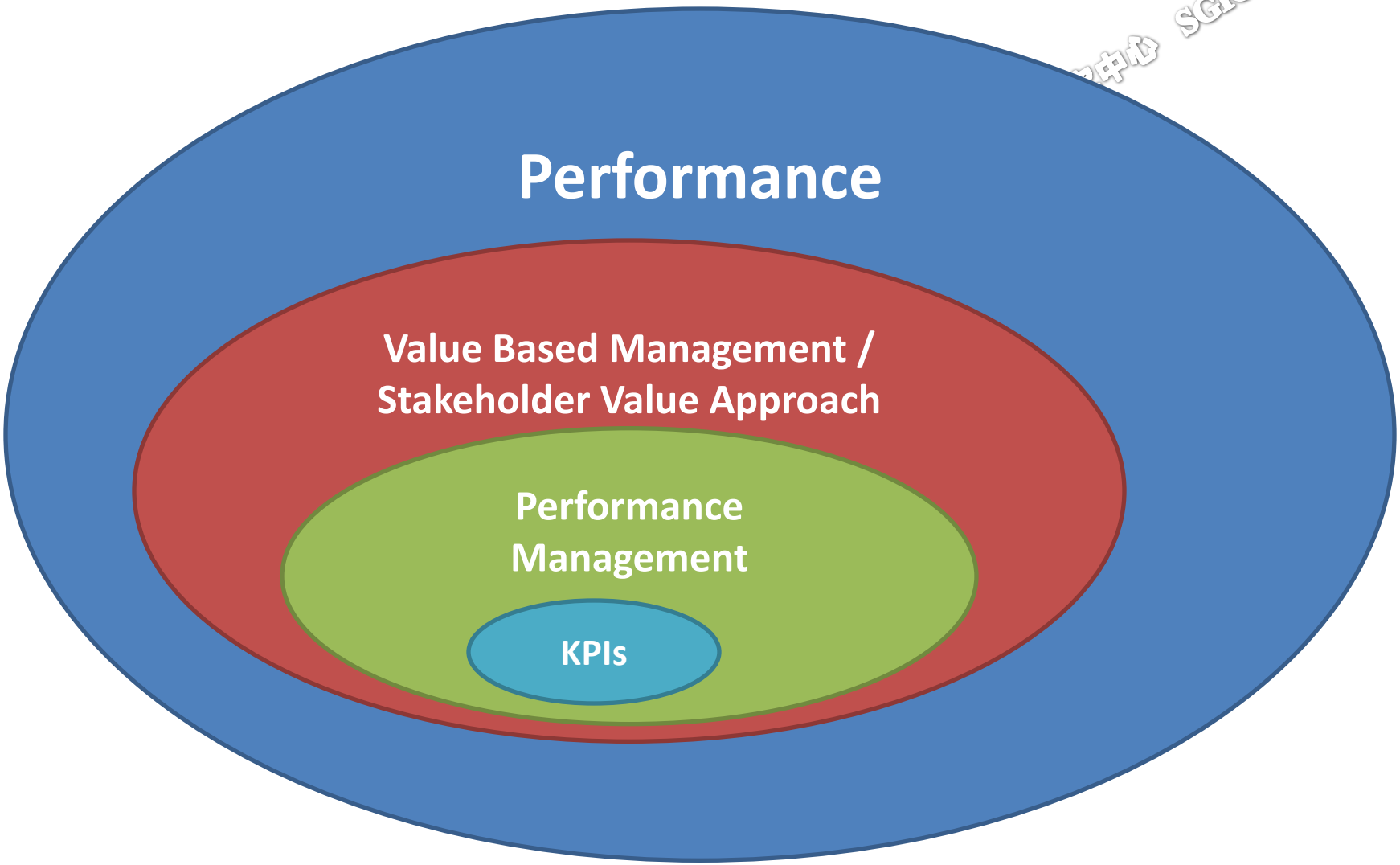
Performance concept



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The five major properties for performance management system (Weele, 2004) :

- Measuring, managing and enhancing performance of all relevant variables,
- Allowing to build a strategy and clarifying the latter,
- Speeding up the strategic dialogue
- Facilitating decision making and choices,
- Stimulating motivation and learning.

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Performance in the real world

- Only **15%** of managers surveyed have a consistent set of performance indicators

- **43%** of them use management analysis, without a structured methodology

- **60%** of them look for improvements in measuring system performance

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Principles of the Balanced Scorecard (BSC)/ Kaplan-Norton

1. Translating a strategy into operational terms (links between cause and effect, KFS, objectives, indicators, dashboards)
2. Putting the organization in line with the strategy (synergies and processes)
3. Making the strategy of all the daily deal (communicate, train)
4. Making strategy a continuous process (learning and adaptations - developing a common synthetic vision)
5. Reaching change through executive leadership (mobilization, incentives)

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How?

- What are the main levers to implement strategy and the objectives?
  → Quality, Price, Costs, Distribution, New products…?

- Which indicators are related to each strategic objective (strategic indicators)?
  - -With the participation of users (= managers)
  - -With interviews and arbitration
  - -Periodicity? Sources of information? Time?
  - -Frequency?
  - -Who is in charge?

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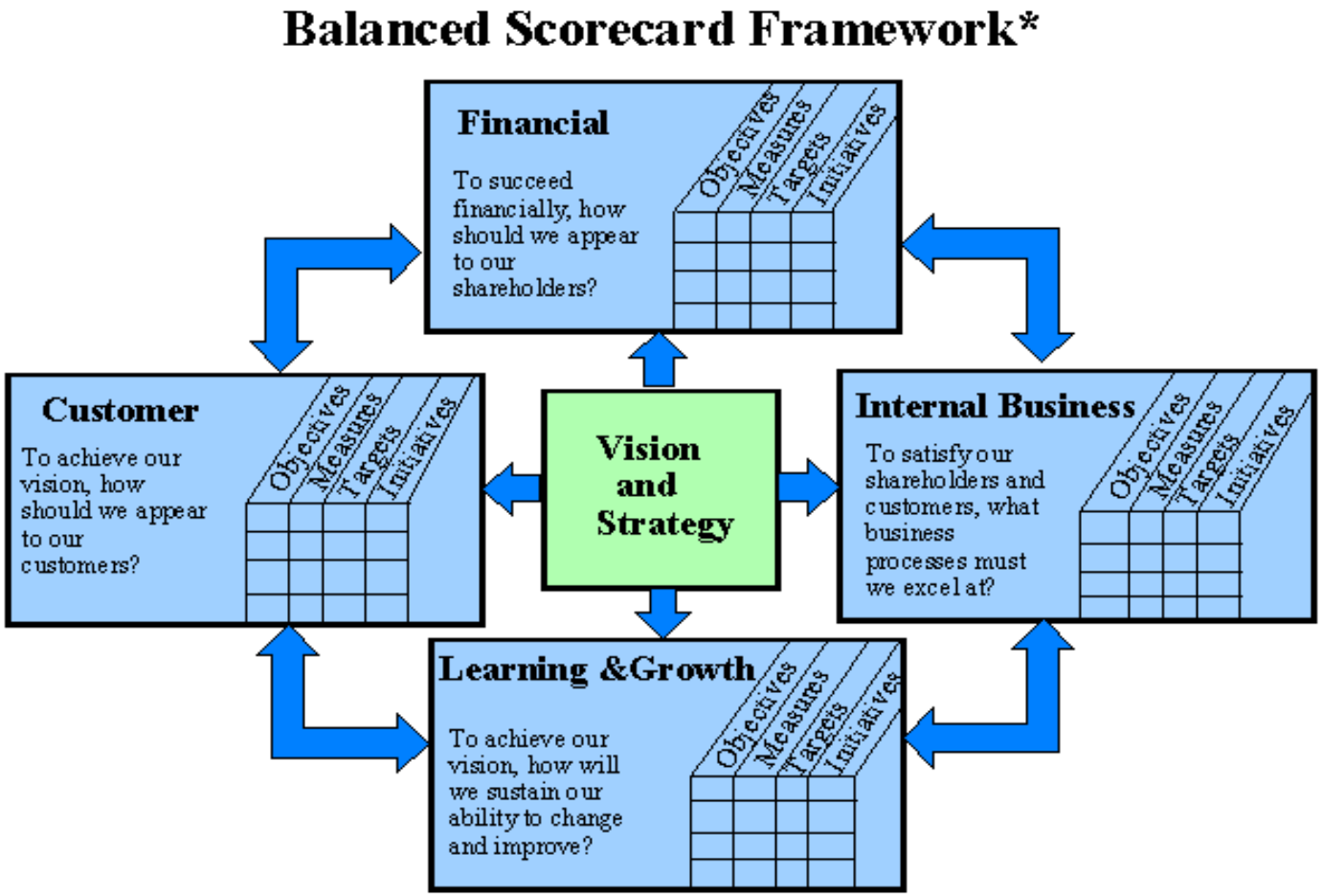
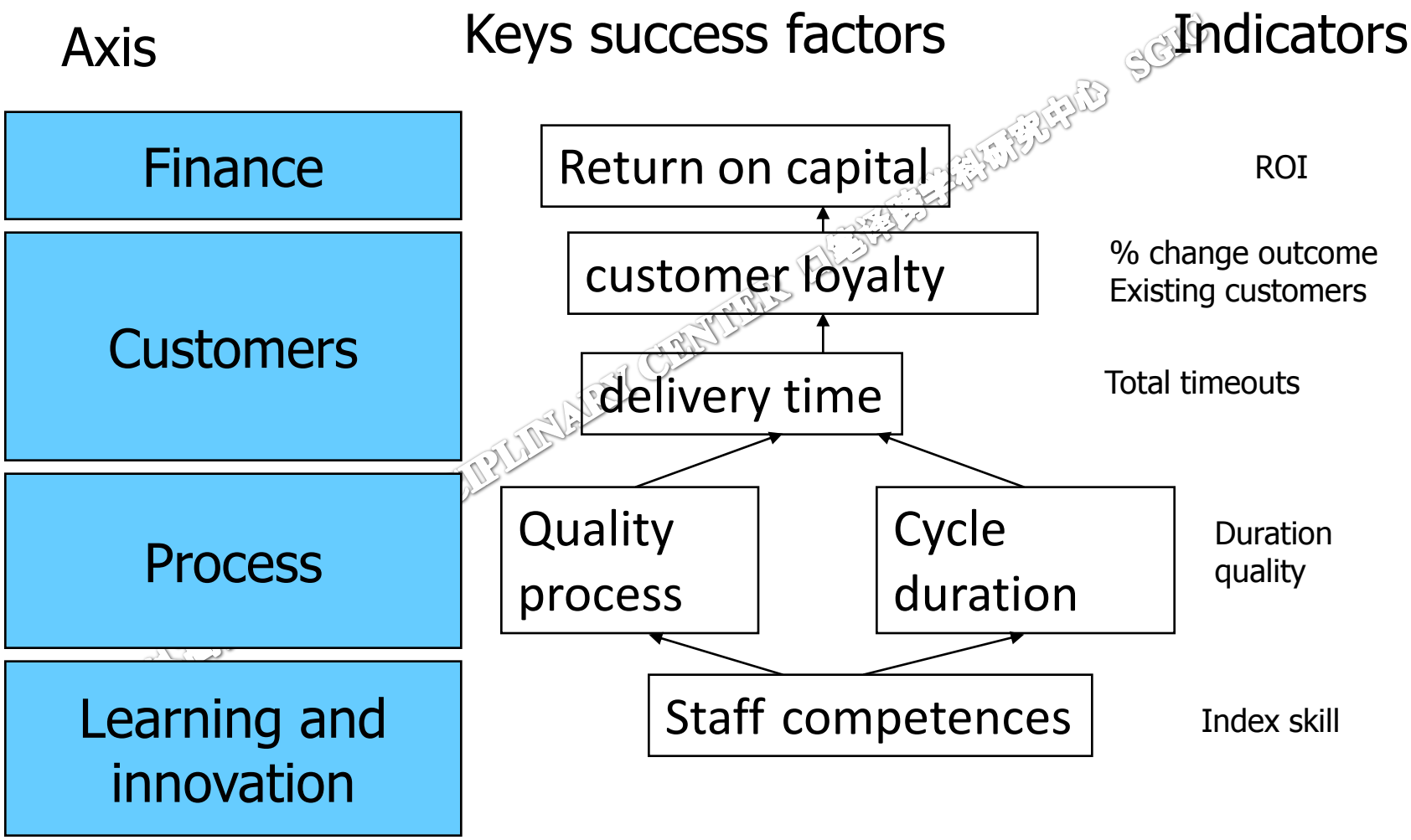
Example



* Adapted from Kaplan & Norton 1996. *The Balanced Scorecard*. Harvard Business School Press: 9. Original from HBR Jan/Feb 1996, p. 76.

Chain of causality….5:



Advantages

- Simple, but not too reductive
- Focused on some indicators,
- Holistic approach to performance indicators
- The largest distribution of market (60% of Fortune 1000 USA)
- Connected to a causal chain of the four strategic perspectives

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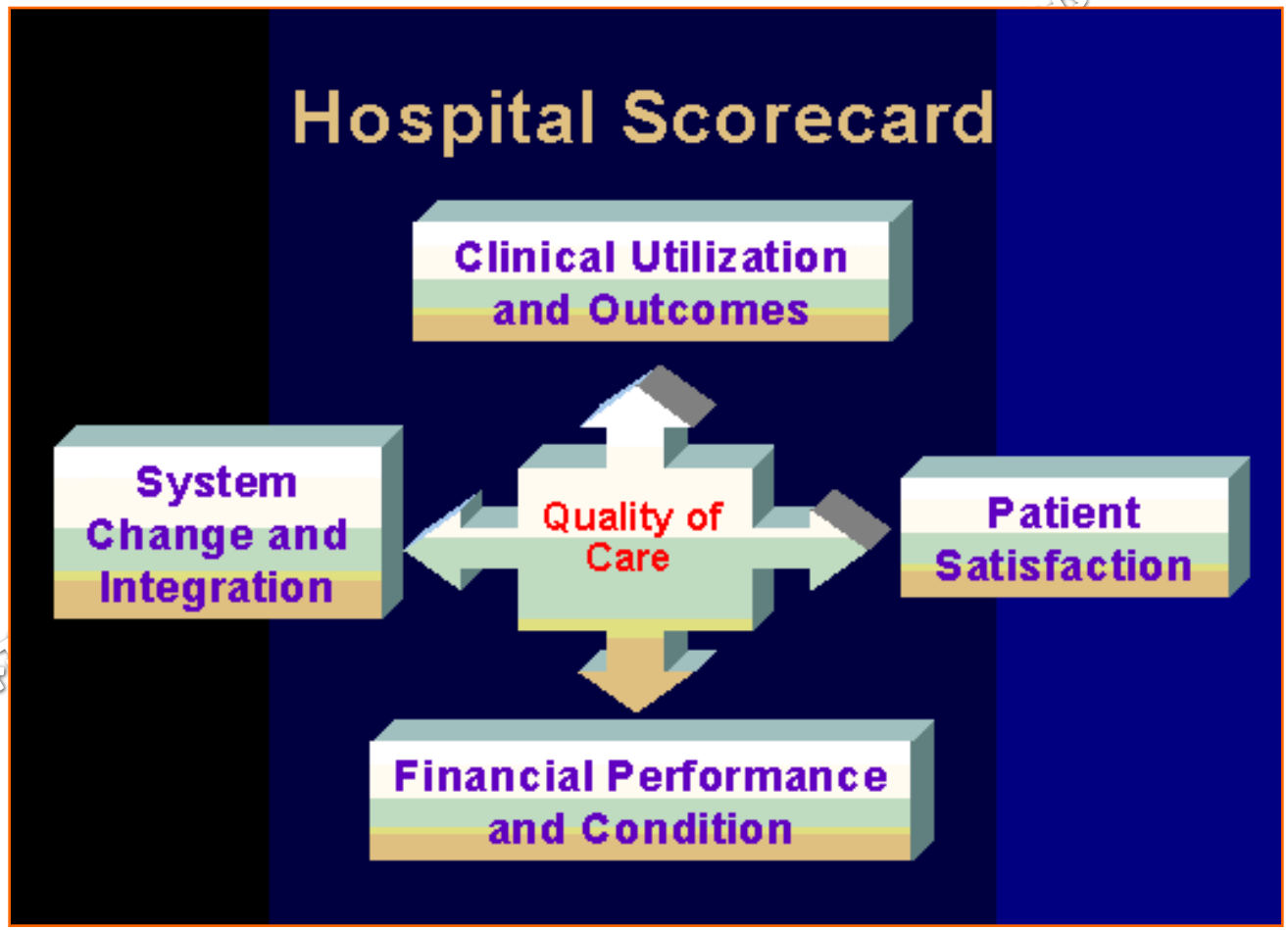
The concept of BSC/Kaplan applied to medical care providers



Comments…

- The major difficulty of the BSC is to model the relation between cause and effect with the different axis (latent variable) and types of indicators. For this causality aspect, the authors suggest to use non-financial measures, among others, to explain future financial performance.
- Norreklit (2000) calls into question the causality which involves measurement sequences for organizational learning .... Financial Measures.
- This representation, which doesn't take into consideration the difference between relationships and unidirectional reasoning is questionable ... development processes also depend on the financial situation ...

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In practice, building a BSC can follow two tracks:

- The question is approached by organized focus groups to identify consensually indicators which should be imposed on all related strategy (aspect becomes secondary causality and implicit)
- Or statistical analysis is performed to approximate axes (4 can be reliable) and identify indicators related to axes. In this case, we use the method of structural equations or partial least squares method (the causal relationship remains at the heart of the BSC).

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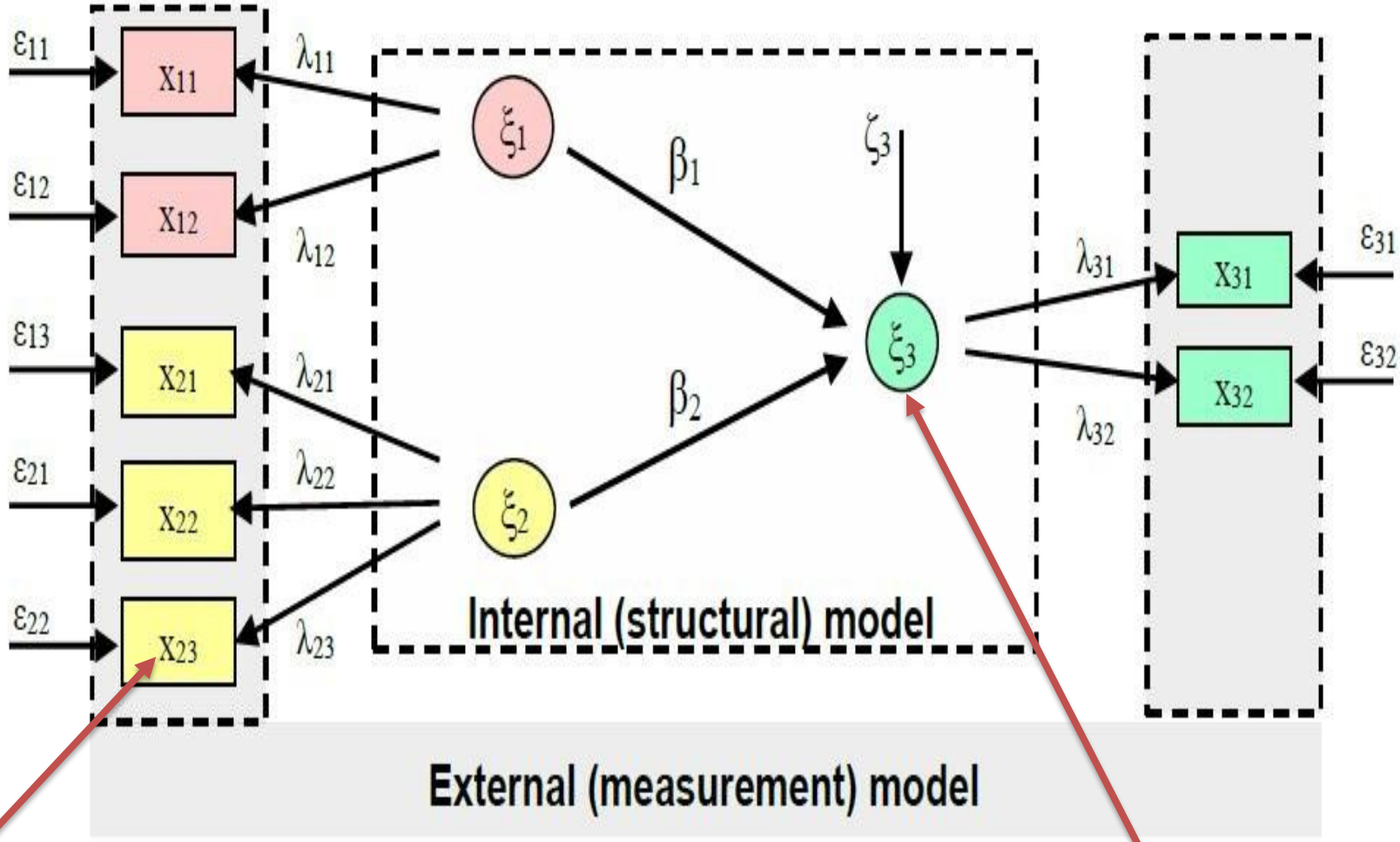
Global vision of PLS

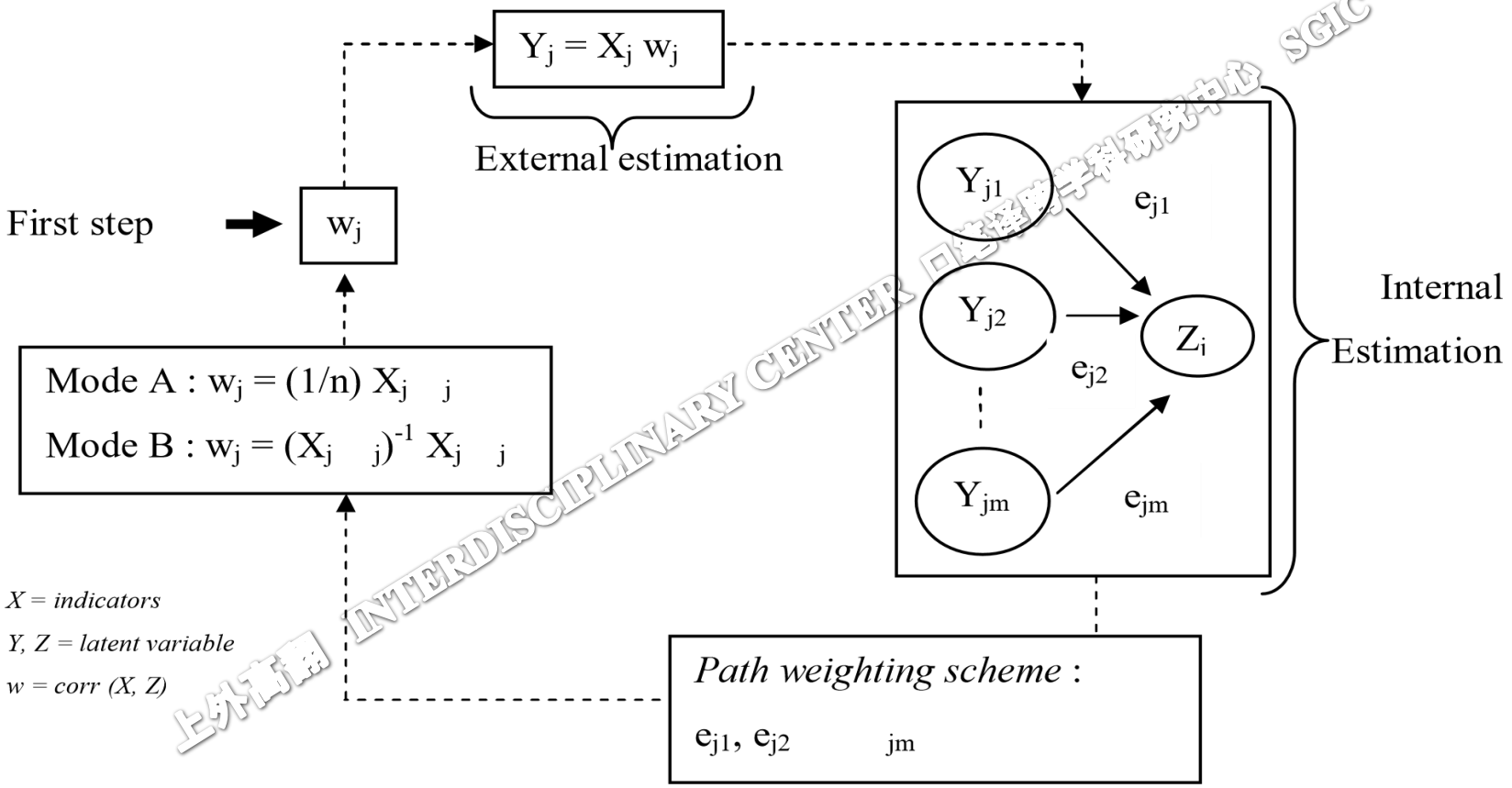


Real variable

Latent variable

PLS Algorithm

Algorithm (Iterate until convergence) :



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The variables X describe the indicators , and variables Y and Z variables latent (axes)

All the basics of table data is normalized….

Thinking logic before jumping

- 1- strategy is specific for each organization,
- 2- the BSC operationalizes and describes factors considered as the keys for success to a strategy ,
- 3- Each firm has its own BSC; each firm has its own stategy
- therefore a generic BSC Kaplan/Norton is not suitable..

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Methodology: Steps for building Balanced Scorecard

- 1 - gathering all available information, financial and non-financial, on the largest and consistent interval of time as possible across all the variables
  2 - Estimating the number of axes that summarizes at least 90% of the available information for each axes and look for indicators correlated with axes
  3 - As each axes represents a data block, searching the optimal arrangement of blocks, either following the pattern of KAPLAN, or following the specific logic of the organization,
  4 - As relations between blocks are quantized, the consistency of target goals could be tested.

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Step 1:

- Database should be the widest possible to integrate all available ..but clean information,
- The information collected has equivalent frequency, (month, quarter or semester)
- The information must be high quality and if possible without errors,
- The information should be normalized (with their mean and standard deviation).

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Step 2:

- It will act to reduce table size by reducing the number of proxies. This downsizing is achieved by different ways;
  - By <u>principal component analysis</u>,
  - By <u>classification methods</u>,
  - By <u>creating arbitrary groups of variables</u> as does Kaplan ...

Step 3, building the diagram…

- The construction of the diagram can be done by several ways;

  - Either one has a priori scheme,
  - or one will look combinatory optimal (on statistical viewpoint) scheme,

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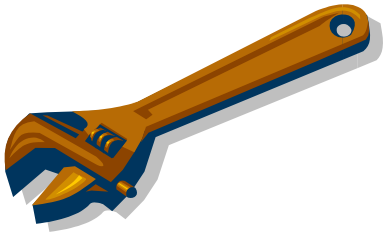

Case 1: Banking sector

- Full service type of banking/financial institution,
- General idea: analyzing performance measurments translated into BSC will allow the followings :
  - Better decision making for ressource allocations,
  - Better communication of company performance,
  - Better anticipation of new strategic indicators.

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Extract of Total Variance Explained

Total Variance Explained			
Component	**Initial Eigenvalues**	**% of Variance**	**Cumulative %**
	Total	43.7064	43.7064
1	47.2029	14.1625	57.8689
2	15.2955	10.0746	67.9434
3	10.8805	8.8378	76.7812
4	9.5448	5.2124	81.9936
5	5.6294	4.1677	86.1613
6	4.5011		

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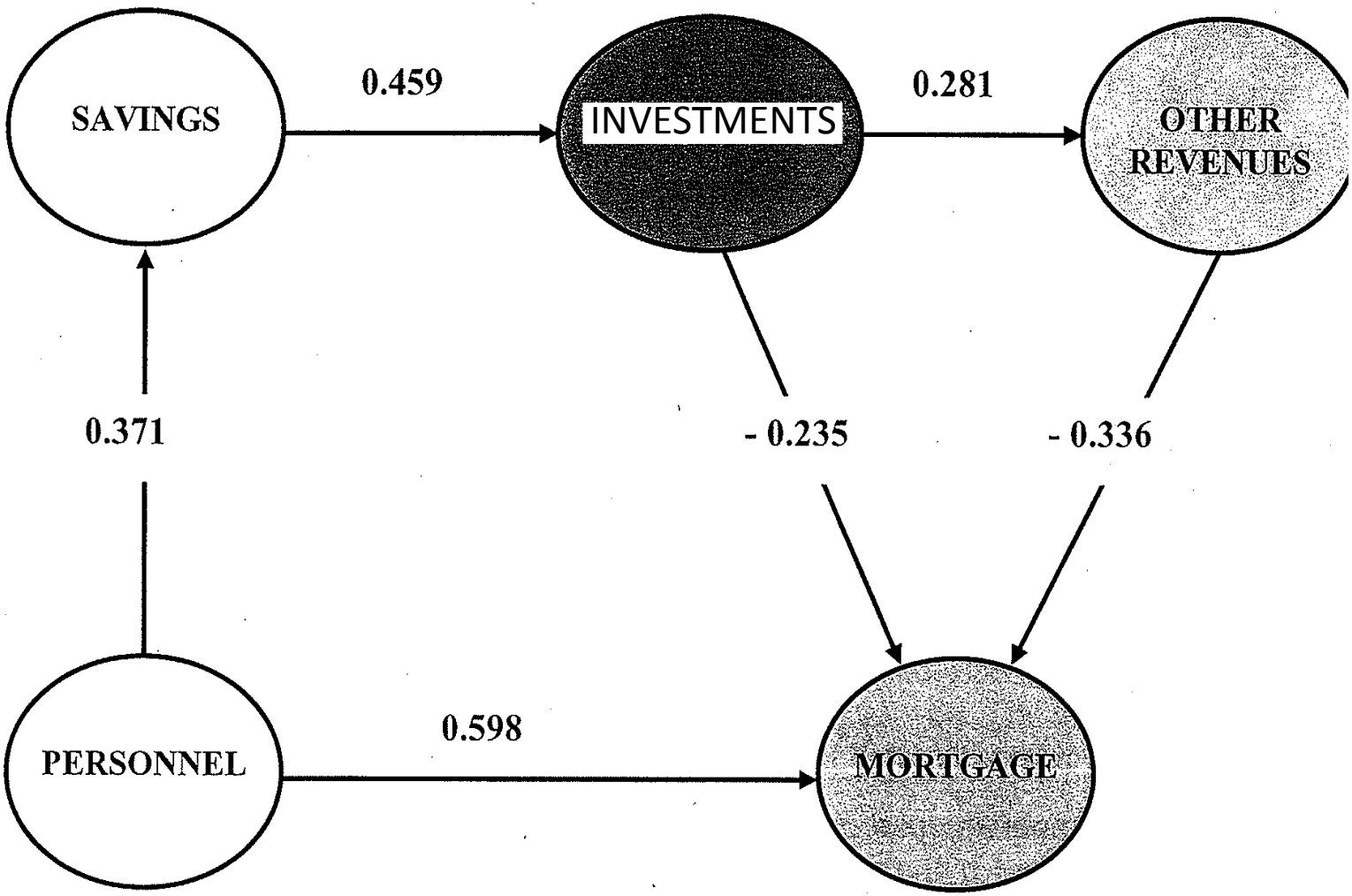
Extract of the First 10 Indicators from Component Matrix

VAR no.	*VAR name*	1st axis	2nd axis	3rd axis	4th axis	5th axis	6th axis
VAR001	Total revenue of all savings	0.6978	-0.2729	0.4838	-0.1778	0.2024	0.2767
VAR002	Monthly revenue CDF savings	0.8423	-0.4860	-0.0267	0.0201	0.0069	-0.1548
VAR003	Monthly revenue pension transfers	-0.8423	-0.2740	0.4031	-0.0960	0.0140	0.1340
VAR004	Monthly revenue pension savings	0.4751	-0.5542	0.1691	-0.0360	0.3785	0.3013
VAR005	Monthly revenue collective pensions	0.9289	-0.1127	0.3278	-0.0862	0.0058	0.0438
VAR006	Monthly revenues Town accounts	-0.7332	0.0763	-0.2472	-0.2536	-0.0289	-0.2521
VAR007	Monthly revenues private accounts "senior"	-0.9478	-0.0010	0.0778	-0.1551	0.0004	0.1186
VAR008	Monthly revenues savings "youth"	0.7362	-0.3021	0.3563	-0.1061	0.2114	0.2373
VAR009	Monthly revenues saving accounts type A	-0.4641	-0.7170	-0.1426	-0.0530	-0.3184	0.1195
VAR010	Monthly revenues accounts CDF-Town	-0.0280	-0.8570	-0.2272	-0.0387	-0.0263	-0.3993

BSC's Cause-and-Effect Chain using PLS Approach



This correlation model highlights the following conclusions:

1. The "Personnel" axis is indeed at the basis of the process, but not analyzed form a financial perspective (costs, salary, benefits, etc) but rather illustrated from a social perspective (e.g. number of employees, years of employment, occupancy ratio, etc.). In 2005-2006, reducing the global occupation ratio by hiring new part-time employees, determined an improvement into the company's performance. The importance of average years in employment (which could be similar to years of experience) indicates that the extent of the experience outside the CDF institution is an important element in the performance analysis.
2. The quality of personnel generates two types of incomes: savings and mortgages. This means that the employees have a direct influence on two types of standard clients of the bank: those having savings and thus being potential investors, and those having mortgages. The members of the latter category make savings even with the price of "selling" some of their investments to finance the mortgage (and thus lowering the investment revenues).
3. The savings generates additional investments. Indeed making investments without having savings is synonymous with speculation, unless the savings are actually in another bank institution, on which we do not have any visibility on. It is thus normal that the saver is able to invest his fortune and this model shows that not only this does not destroy the savings, but is a complement. The savings attract investments.
4. The investments, made in 2005-2006, have been active and have generated additional incomes.
5. The mortgage, however, lower the investments and the additional incomes. One can notice from the figure that the level of mortgages does not have influence on savings, but on the investments and additional income.

Case 2: Bridging the idea of BSC…..

- If we follow the logic of Kaplan/Norton's thaughts, a BSC explains the strategy of a firm by axes and indicators….
- If we analyze a BSC of any firm, it is realistic to assume that we can recall the defined strategy….
- Therefore.. as the strategy is specific to each firm, its necessary to built a tailored BSC for each firm with its own data. But….the best BSC for each firm… we suggest this approach… with the data of EDP SA (Energias de Portugal) …(Ali Anwar, 2015)

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Basic information……

Energias De Portugal SA (EDP SA) is a leading Portugal-based company in the energy sector, which is involved in the generation, distribution and trading of electrical energy along with the distribution and trading of natural gas in the Iberia Peninsula. EDP SA operates in countries such as Portugal, Spain, Brazil, United Kingdom (UK), France, Belgium, Poland, Romania, Italy, the United States of America (USA), Canada or China through subsidiaries **.** Organized around six business segments that are (1) Long-term contracted generation, (2) Iberian liberalized Activities, (3) Regulated Networks Iberia, (4) EDP Renovàveis, (5) Brazil and (6) Corporate activities & adjustments, EDP SA employed 12'314 people and had a net profit of € 1'005 million in FY 2013 from a € 5'551 million gross profit, thus representing a net profit margin of 18.1% (EDP Annual Report 2013).

Founded in 1976, EDP SA came to existence after the merger of thirteen nationalized companies active in the energy sector under the name of "Electricity of Portugal". While this organization was stated-owned from its foundation to June 1997, it was in charge of activities such as the electrification of the country, the modernization and the extension of Portugal's electricity distribution network or the planning and construction of the national electric generation network. In 1994, the company went through a large reorganization that led to the foundation of Energias de Portugal SA, as a consolidated group. Steps toward the liberalization of EDP SA took place in 1994, when the Portuguese state sold its 30% stake in the company until 2013, where the state sold its last remaining 4.144% share in the company.

EDP SA's vision is to become "a global energy company, a leader in value creation, innovation and sustainability" supported both strong values and commitments for realizing the company's vision and its strategy

The EDP agenda and strategy

1. EDP SA's strategic agenda from 2006 to 2008
2. EDP SA's strategic agenda from 2009 to 2012
3. EDP SA's strategic agenda from 2012 to 2015 (discontinued in end 2013)
4. EDP SA's strategic agenda from 2014 to 2017 (to be revealed in end 2014)
5. EDP SA's business plan from 2007 to 2010
6. EDP SA's diverse transversal strategic programs to support the achievement of the organizational goals for the 2006-2008, 2009-2012 and the 2012-2015 periods

2006-2008

Creating grow options

2009-2012

Focus on execution

2012 +

Cash Flow Generation

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EDP SA's Strategic Transversal Programs 2006-2008

Program title	Program description
Opex	Design and implement a transversal cost-cutting program
Capex	0ptimize cost allocation
Lean	Define and implement lean methodologies
Portfolio	Redefine EDP's strategic priorities to guarantee profitable growth
Cliente	Strengthen the ability to retain customer and their loyalty
Hedge	lmplement an integrated strategy of electrical sales in the wholesale market and to end customers
Marca	Develop a coordinated strategy with the objective of increasing brand equity
Talent	Redefine policies of attraction, development and retention of talent within human resources
Innovation	Define and implement a new model of research, development and innovation
PR.O.s	Review and optimize organizational and system procedures
SOX	Meet the requirement of the Sarbanes-0xley Act
Lex	Define and implement an action plan for the resolution of regulatory matters

Source: EDP SA's Institutlonal Report 2006

The strategic agenda from 2009 to 2012 is based on three pillars:

1. ***Controlled risk:*** This pillar's objective is to achieve a low risk portfolio and regulatory exposure compared to the company's activities in the Iberian Peninsula, meaning in both Portugal and Spain. Three lines of action allow the company to effectively keep up with this objective:

a.Active management of regulatory challenges to maintain low risk profile
b.Lucrative supply strategy as a normal coverage for the generation business
c.Reduction of CO_2 emissions through the introduction of clean generation capacity

2. ***Greater efficiency:*** The objective of this second pillar is to improve the overall company efficiency as a mean of reducing costs through streamlining operations, adopting a rigorous investment discipline and adopting a stronger performance culture. Three lines of action have been identified for carrying out this objective:

a.Introduction of ambitious cost efficiency programs
b.Strict investment discipline that promotes internal competition for resources
c.Divestiture from non strategic asset and increased focus on the company's core business

3. Profitable Growth: The objective of this last pillar is to re-orientate the company towards profitable growth by selecting investments designed to create a leading position in the renewal energy sector and in both the Brazilian and Iberian market. Four lines of actions have been identified to carry out this objective:

a.Entrance in the high-quality wind farms segment in the Iberian Peninsula and starting an international expansion initiative (in Brazil)
b.Focus on growing in the Brazilian electricity generation market while maintaining limited exposure
c.Building new combined cycle power stations in the Iberian Peninsula throughout 2008
d.Developing an integrated strategy for natural gas to achieve a competitive gas supply

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EDP SA's Strategic Transversal Programs 2009-2012

Program title	Program description
Sou +EDP	Foster employees' activity as a source of competitive advantage for The Group, by launching initiatives aiming at increasing their engagement and developing the conditions required for improving their mobility cost-cutting program
Lean	Promote a continuous improvement culture broadly participated by everyone, by extending the implementation of leaninitiatives to additional businesses and geographies, and consolidating the various lean implementations already undergoing
Edpro	Effectively manage the Group's processes through the implementation of a systematic approach centered in measuring and optimizing the performance of the key processes, and the gradual consolidation of EDP's own modus vivendi based on the concept of Group macro-processes
Sharedp	Aligning concepts and gradually extending the offering of shared services to additional business units, in terms of geographical coverage and range of services provided
Opex	Continuation of the rationalization of EDP Group's cost base by launching a new wave of operational costs optimization, focused on a systematic identification and elimination of waste and redundancies

Source: EDP SA's Sustainability Report 2012

To summarize EDP SA's:

1. There is no evidence that EDP SA's ultimate goal is generating financial revenues as such an objective is not stated in any of its strategic intent. The first time a formal financial goal is stated in a strategic agenda was in the 2012-2015 strategic agenda, where one of EDP SAs goal was "delivering attractive shareholder remuneration". However, only months after the declaration of this strategic agenda, financial difficulties pressured EDP SA's top management to abandon this strategic intent and look for another vision and strategy. 0nly in the 2014-2017 strategic intent, purely financial goals such as "delivering attractive returns" and "maintaining financial deleveraging" where added to the firm's previous goals: "Continue to grow", "Preserve low risk business profile" and "Improve efficiency".

2. It is clear that EDP SA has three important goals: (1) reducing the risk of their current activities, (2) improving the efficiency of their operational activities to reduce the cost and (3) grow into their most profitable market segments: the renewable energy sector and the Brazilian market.

3. The set of transversal strategic programs compromised specific activities aimed at improving the operational efficiency of the company, reducing the firm's exposure to regulatory sanctions by complying with environmental regulations, building customer loyalty and attracting, retaining and developing the skills of employees, thus aiming at satisfying the needs of all of its stakeholders.

4. The only surprising element in EDP SA's strategy is this lack of financial objective that is formerly written down into the strategic intent of the company. How could it be justified that such a publically traded company does not ultimately strive for increasing revenues and shareholder value? Such question would motivate investigating the composition of EDP SA's shareholder structure, to find out what are the reasons why EDP SA's executives are not held accountable for creating shareholder value.

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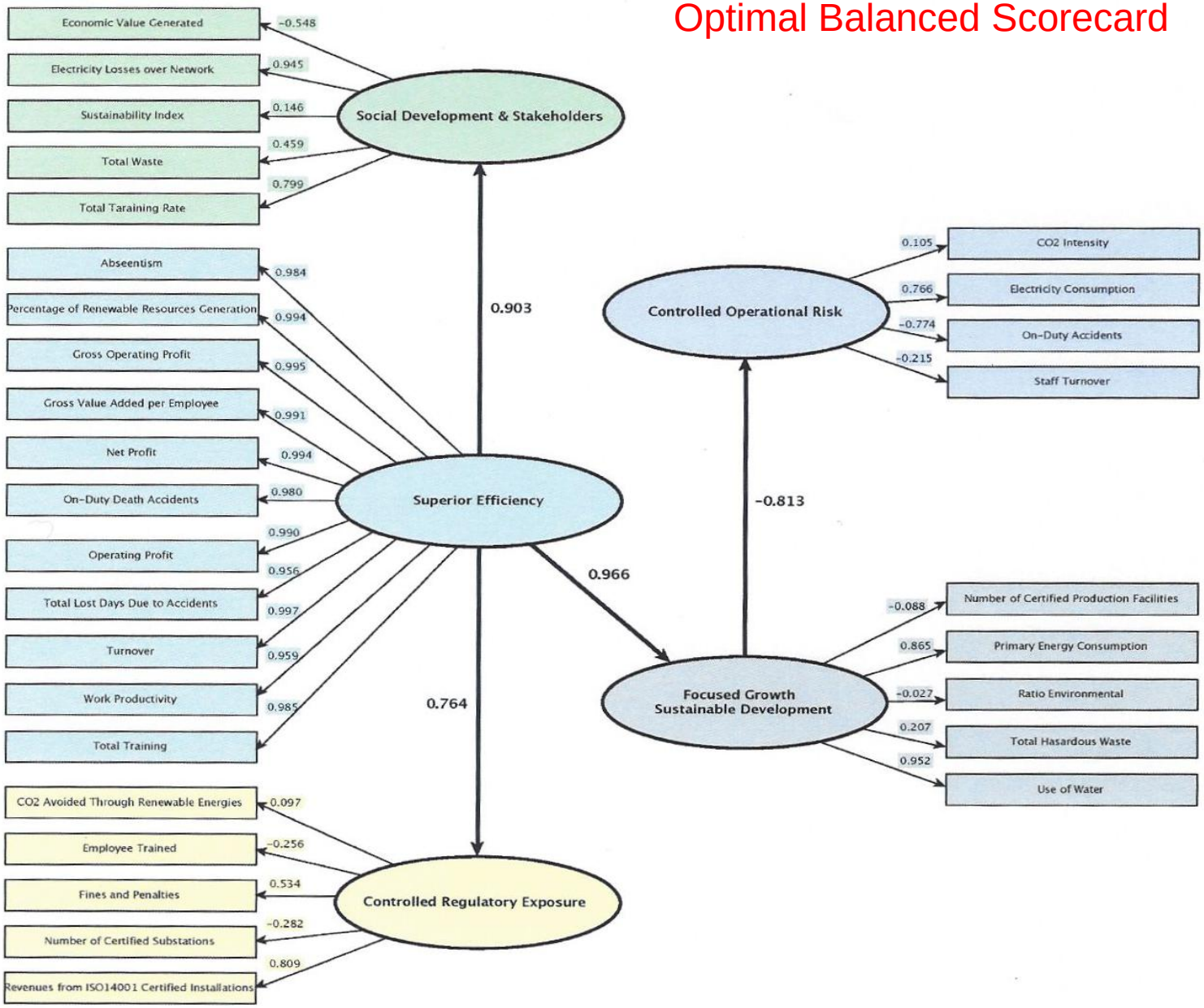
Optimal Balanced Scorecard



Here is the representation of EDP SA's Optimal Balanced Scorecard (OBSC), composed of five strategic axes explaining together 87% of EDP SA's total performance .

After reviewing all the combinations between those strategic perspectives, the most predictable Partial Least Square (PLS) Path Modeling model is the one presented above . Therefore, from all the models analyzed through the SmartPLS program, this model is the closest to EDP SA's current strategy, as it is based on the bootstrap quality criterion (Morard et al., 2013).

After having thoroughly analyzed EDP SA's reported strategy for the last eight years, anyone can notice that EDP SA's three strategic pillars being the efficiency, the risk and the growth pillars are properly reflected into this model through the "Superior Efficiency", the "Controlled Regulatory Risk", the "Focused Growth - Sustainable Development" and the "Controlled 0perational Risk" perspectives.
The most important understanding of this model is that EDP SA's focus on operational efficiency is the main driver of performance for the entire organization.
The more efficient EDP SA becomes, the more it will be able to focus on reducing regulatory risks, the more it will be able to improve social conditions and meet its stakeholders' expectation and finally, the more it will grow into its key market and most profitable market: renewable resources. The "Superior Efficiency" perspective is essential for EDP SA as it is the basic driver of the firm's performance.

Another important understanding of this model is the negative relationship between the "Focused Growth - Sustainable Development" perspective and the "Controlled operational Risk". The more EDP SA focuses on growing into the renewable energy market, the less it is able to control operational risk inherent to such growth. Consequently, the more EDP SA focuses on investing for future growth, the more damage it does to the firm's performance due to its inability to control the operational risks linked to such growth. In parallel, it is interesting to notice that there is no formal financial perspective that wouid indicate that EDP SA's ultimate goal is generating revenues and improving shareholder value. While such a goal is assumed, this model rather suggests that EDP SA's strategic intent is to generate cash flow by focusing on improving operational efficiency to be able to pursue sustainable and profitable growth along with reducing the risks inherent to its activities. This is clearly in line with EDP SA's practices since the first time EDP SA formalized its focus on financial indicators was in its 2012-2015 strategic agenda, the one discontinued only months after. In fact, in the 2014-2017 strategic agenda, "delivering attractive returns" or "maintaining financial deleveraging" finally became formerly stated as one of the company's striven goal.

Clearly, EDP SA's optimal Balanced Scorecard (oBSC) provides a clear representation of the strategy described by the firm's executives in their annual and quarterly reports as the three fundamental strategic pillars are indeed practiced by the company.

→ This optimal Balanced Scorecard (oBSC) model suggests that executives of EDP SA should take into consideration that (1) the firm's most important driver of performance is its ability to maximize operational efficiency and that (2) EDP SA is typically facing a trade-off situation since the more it focuses on growth, the less it can control the operational risk inherent to its growth.

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Strategic Perspective	AVE	Composite Reliability	R-Square
Superior Efficiency	0.969	0.997	
Controlled Regulatory Risk	0.219	0.172	0.68
Social Development & Stakeholders	0.413	0.525	0.79
Focused Growth - Sustainable Development	0.341	0.525	0.92
Controlled Operational Risk	0.311	0.005	0,84

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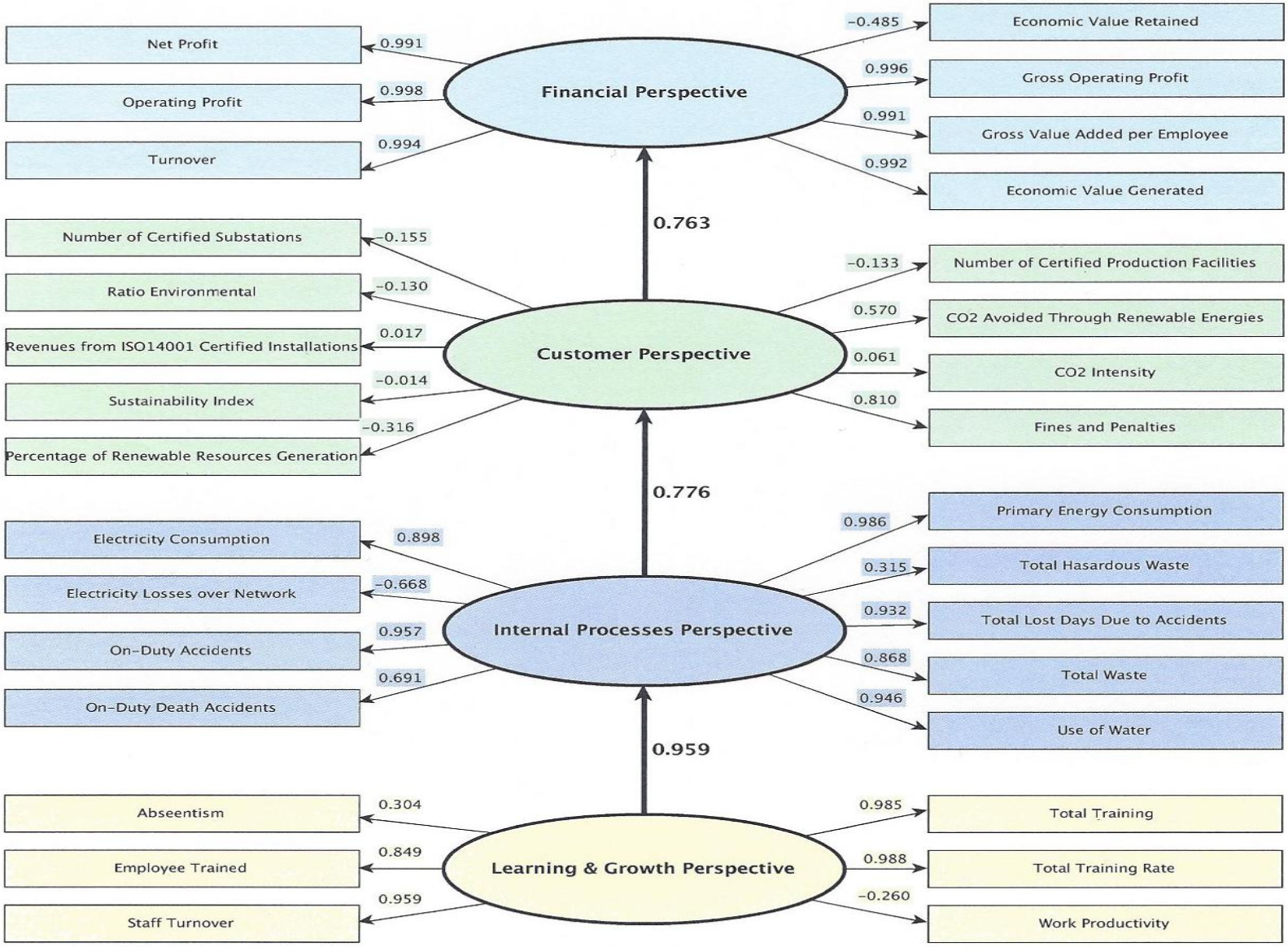
Stability/strength of the inner model:

The most appropriate measure would be analyzing the R-Square level. Values of 0.67, 0.33 and 0.19 are considered to be strong, moderate and respectively weak for the inner model (Morard et al., 2013, 2015). The analysis of the R-Square level for EDP SA's 0ptimal Balanced Scorecard points out that the inner model is strong, thus validating the strength and stability of the Partial Least Square (PLS) Path Modeling's inner model. Indeed, we can see that ail relations between the strategic perspectives are relatively strong.

Stability/strength of the outer model:

It is suggested to take the Average Variance Extracted (AVE), an indicator representing the variance in the indicators explained by the common factor, and the Composite Reliability score, an indicator assessing the reliability of a summated scale. For the outer model to be valid, the Average Variance Extracted (AVE) should be above 0.5 and the Composite Reliability should be above 0.6 (Morard et al. 2013, 2015). The analysis of EDP SA's 0ptimal Balanced Scorecard suggests that the outer model relatively weak, particularly for the "Controlled Regulatory Risk" and the "Controlled 0perational Risk". Those results are not so surprising since a careful analysis of the relationship between the variables and their own strategic perspectives would suppose that only the "Superior Efficiency" perspective has a very strong link with its variables.

Kaplan Balanced Scorecard



Strategic Perspective	AVE	Composite Reliability	R-Square
Financial Perspective	0.85	0.93	
Customer Perspective	0.10	0.04	0.58
Internal Process Perspective	0.67	0.89	0..56
Learning & Growth Perspective	0.59	0.83	0.89

- EDP SA's Balanced Scorecard according to Kaplan and Norton's model turned out to reflect Kaplan and Norton's predicted Strategy Map since the learning & growth perspective does positively impact the internal process perspective, which in return positively impacts the customer perspective before positively influencing the financial perspective . In this sense, Kaplan and Norton's assumption regarding the cause-and-effect chain of reaction is clearly illustrated by visualizing EDP SA's Balanced Scorecard.

- However, this mode does not tell us anything about the strategy of EDP SA. This model appears to be a generic explanation of how EDP SA is able to drive the performance by investing into the human capital mainly, which will in turn improve the current internal processes, which will improve the customer's opinion about the firm before generating shareholder value for the organization. As mentioned before, there is no single evidence that could assume that EDP SA's final and ultimate goal is generating financial revenues, as it has never been stated as an objective.

→ Applying Kaplan and Norton's Balanced Scorecard model did not allow an accurate reflection of the strategy adopted by EDP SA. Therefore, the criticisms made regarding Kaplan and Norton's choice of the strategic perspectives and their relationship could definitively be questioned (Kanji, 2002; Malina & Selto, 2003; Morard & Stancu, 2005; Morard et al., 2008; Morard et al., 2012, 2013, 2015; Norreklit, 2000).

In order to assess the strength and thus the stability of the outer model, it is suggested to take the **Average Variance Extracted** (AVE), an indicator representing the variance in the indicators explained by the common factor, and the **Composite Reliability score**, an indicator assessing the reliability of a summated scale. For the outer model to be valid, the Average Variance Extracted (AVE) should be above 0.5 and the Composite Reliability should be above 0.6 (Morard et al. 2013, 2015).

→ The analysis of EDP SA's Optimal Balanced Scorecard (OBSC) suggests that the outer model is relatively stro
"Customer perspective". Consequently, Kaplan and Norton's Partial Least Square (PLS) Path Modeling's outer mo

Case 3 : Health care sector – Strategic principles

- Brand values : **Innovation**, **Efficiency** and **Sustainability**
- Brand fundaments : **Transparency**, **Trust** and **Respect.**
- **Actions…**
  - Growth from own resources (internal growth)
  - Expertise sharing
  - Innovation
  - Improvements of structure and processes
  - Responsibility for people and resources
  - Trust, Transparency, Recognition
  - Qualified employees
  - Customer Proximity for creating reciprocal values
  - Focus on Therapies
  - Reliable compliance and appropriate business lead

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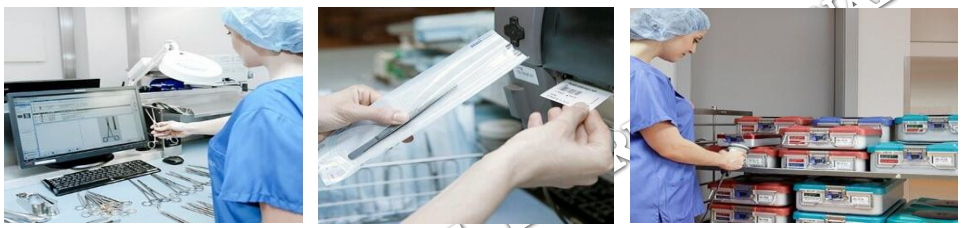
Plasma volume, semi-rigid containers, urological irrigation

Discofix, perfusor, single-use syringes , injection accessories



Training and development

Cleaning solutions for skin & hands, mucous membrane, surfaces, wounds…

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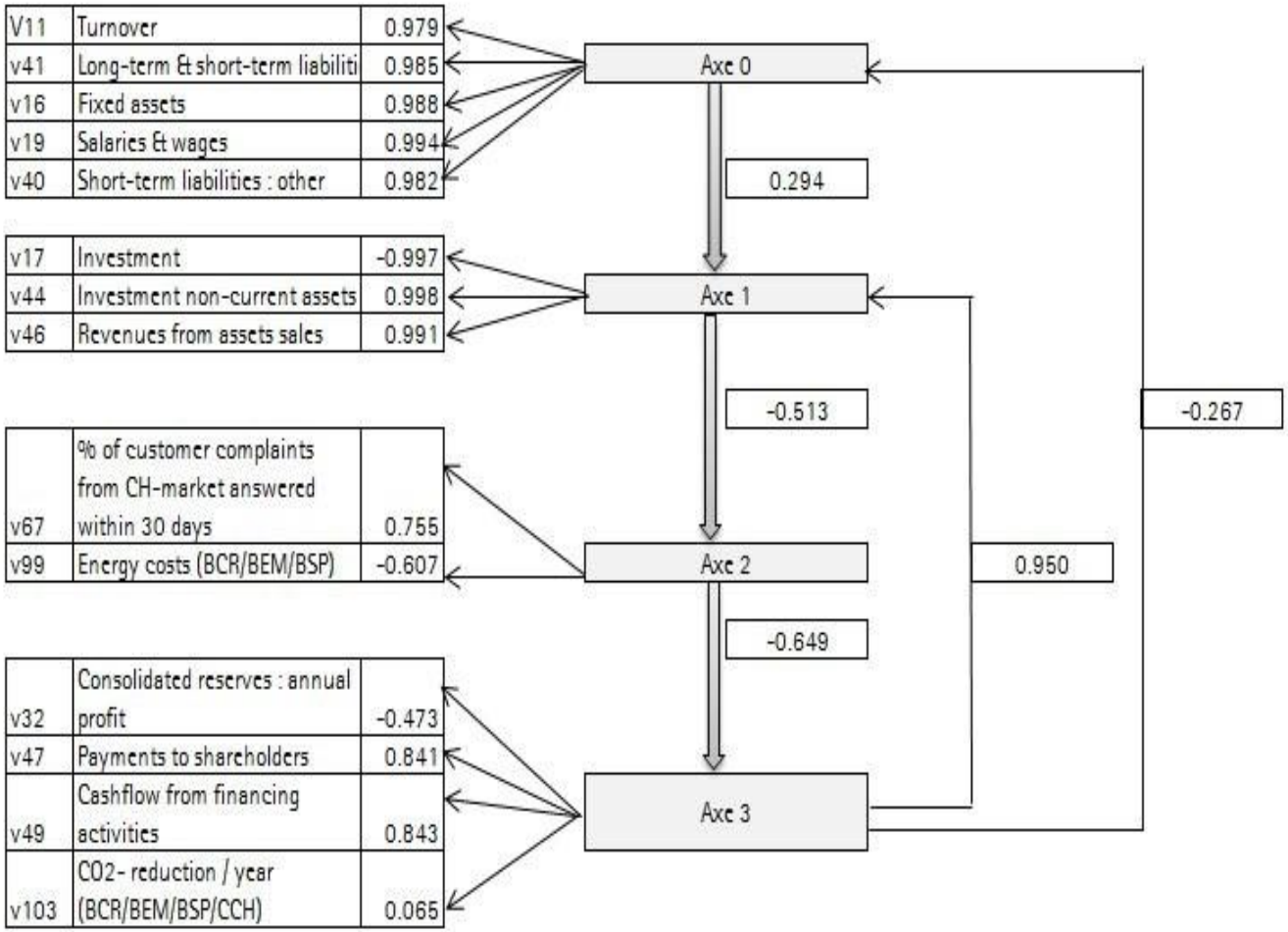
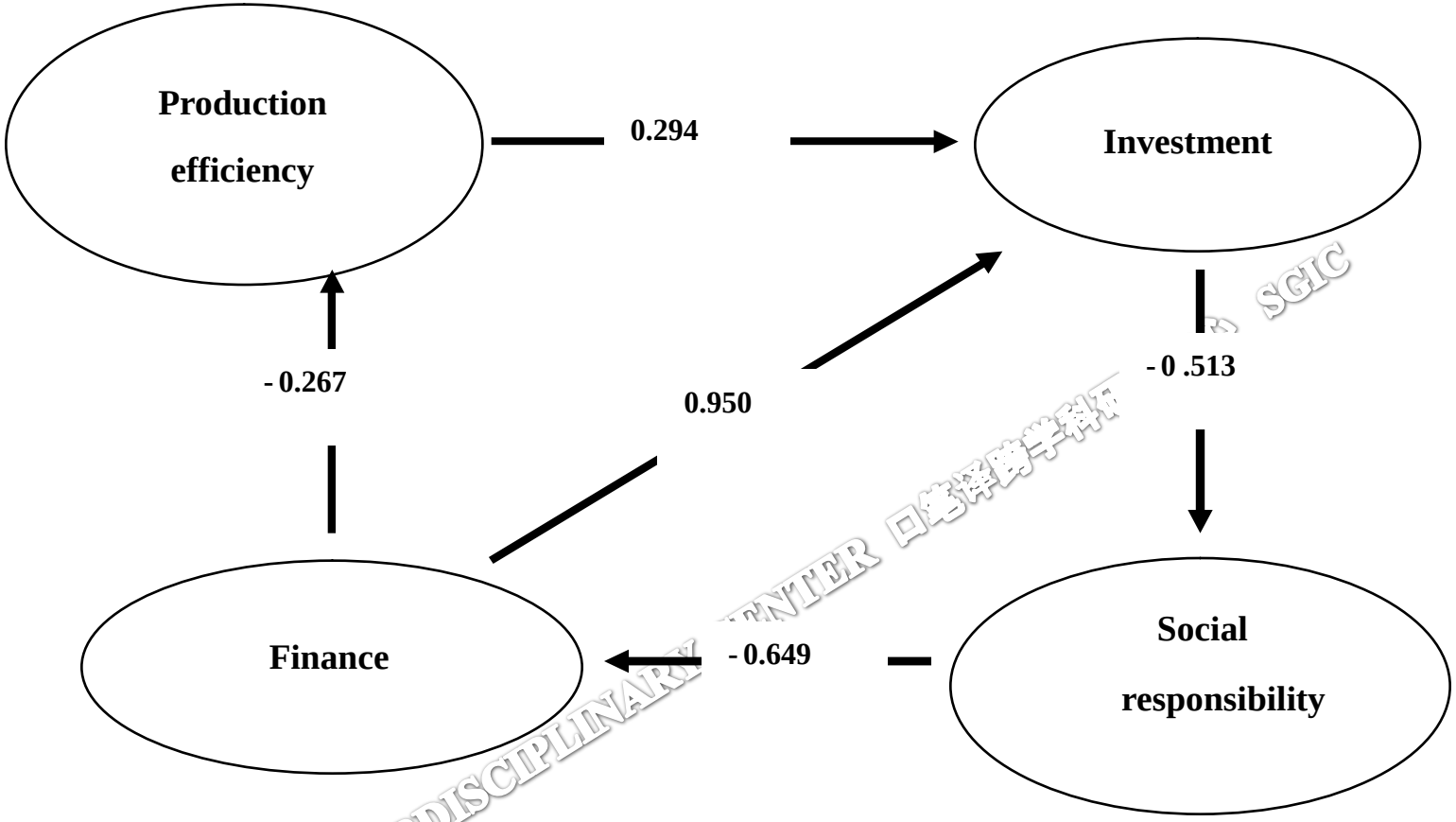

V11 Turnover 0.979
v41 Long-term & short-term liabiliti 0.985
v16 Fixed assets 0.988
v19 Salaries & wages 0.994
v40 Short-term liabilities : other 0.982
Axe 0
0.294
v17 Investment -0.997
v44 Investment non-current assets 0.998
v46 Revenues from assets sales 0.991
Axe 1
-0.513
-0.267
v67 % of customer complaints from CH-market answered within 30 days 0.755
v99 Energy costs (BCR/BEM/BSP) -0.607
Axe 2
0.950
-0.649
v32 Consolidated reserves : annual profit -0.473
v47 Payments to shareholders 0.841
v49 Cashflow from financing activities 0.843
v103 CO2- reduction / year (BCR/BEM/BSP/CCH) 0.065
Axe 3



After analyzing the results with the PLS approach, the following axes have been identified:

- PRODUCTION (Axis 0),
- INVESTMENTS (Axis 1),
- SOCIAL RESPONSIBILITY (Axis 2),
- FINANCE (Axis 3).

To sum up

1- There are clear evidences that the Optimal Balanced Scorecard (OBSC) model is able to accurately describe the strategy followed by a company while Kaplan and Norton's Balanced Scorecard does not appear to have the same predictive capability

2- This situation implies firstly that the Optimal Balanced Scorecard (OBSC) is relatively strong regarding its ability to describe the causality between strategic perspectives while Kaplan and Norton's model is more moderate in this process, secondly that EDP SA's performance indicators are more strongly connected to their strategic variables in Kaplan and Norton's Balanced Scorecard model than with the Optimal Balanced Scorecard (OBSC) model.

3- Based on the second remark, it appears to be a kind of trade-off between the predictability and stability characteristics of both models.

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To conclude

- The model described by Kaplan BSC is a special case, the number of axes ,indicators by axes and the hierarchy of axes must be correctly defined,
- The schema must be able to summarize all the information of the organization,
- Optimal-BSC should assume a dynamic vision of the strategy of each firm ....

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ANY QUESTIONS?

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