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A Study on an Evaluation Method of an Investment of a Firm for SDGs using the Balanced Scorecard

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Abstract The United Nations launched the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) and 169 targets. The SDGs will allow leading companies to demonstrate how their businesses help advance sustainable development, both by minimizing negative impacts and maximizing positive impacts on people and the planet. In general project analysis, the Net Present Value (NPV) is often used. NPV predicts future cash flow for around five years. In contrast, the long-term uncertainty due to global warming must be considered in the time horizons of 50-100 years. Furthermore, analyzing the effects of global warming, qualitative factors such as good corporate image should be evaluated. These factors must be expressed in monetary value. According to the one of the world's largest pension funds, CalPERS, a pioneer investor and signatory of the Principles for Responsible Investment (PRI), the asset owner can derive benefit by reducing risks (climate change, customs and practices) in sustainability. We can understand theoretically that risk management provides benefits but to evaluate such benefits using the NPV method will not be easy. Therefore, we will examine the Balanced Scorecard (BSC) as an evaluation method model to include SDGs as part of a firm's core business. The Model can incorporate action towards SDGs into the BSC using the SDGs investment strategy plan listed in UNCTAD (2014). Since SDGs strategy plans predict long-term events for the company, the model integrates the SDGs with management policy from the outside of the firm's short-term action plan. This paper focuses on the gap existing between action plan and investment in SDGs. The study concludes that a company's strategy should integrate long-term strategy and short-term strategic objectives using the BSC to cancel the gap. The evaluation method using the BSC may contribute to the promotion of SDGs investment.

Key words: Balanced Scorecard, SDGs, Evaluation

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1. Introduction

At the United Nations Sustainable Development Summit on 25 September 2015, the 193-Member United Nations General Assembly formally adopted “Transforming our World: the 2030 Agenda for Sustainable Development,” which includes a set of 17 the Sustainable Development Goals (SDGs) and 169 targets to end poverty, fight inequality and injustice, and tackle climate change by 2030.¹ The SDGs build on the Millennium Development Goals (MDGs), which are eight anti-poverty targets that the world committed to achieving by 2015. The SDGs go much further than the MDGs, addressing the root causes of poverty and the universal need for development that works for all people and ensure that no one is left behind. The SDGs is formed in cooperation with the United Nations and with stakeholders from as wide as possible.

Japan will first pursue various initiatives in order to promote the Agenda: (1) To achieve this aim, Japan will take a leading role in promoting quality infrastructure investment as a foundation for quality growth in Asia, Africa across the world; (2) Japan has announced a new global policy in the fields of health and education to protect and empower people in vulnerable situations; (3) Japan will further strengthen its efforts to achieve a sustainable environment and society. On the issue of climate change, Japan will steadily implement assistance to the most vulnerable countries in particular; (4) Japan’s Government Pension Investment Fund (GPIF) has just signed the United Nations Principles for Responsible Investment (PRI) (Ministry of Foreign Affairs).²

The SDGs will allow leading companies to demonstrate how their business helps to advance sustainable development, both by minimizing negative impacts and maximizing positive impacts on people and the planet.³ This is related to Foreign Direct Investment (FDI). So next, we consider the present status of FDI and SDGs.

2. Present Status of FDI and SDGs

The latest situation of FDI is summarized in UNCTAD (2015). According to UNCTAD (2015), global FDI inflows fell by 16 per cent in 2014 to \$1.23 trillion, and FDI flows to developed countries, mainly from cross border Mergers and Acquisitions (M&A), dropped by 28 percent to \$499 billion. Inflows to the United States fell to \$92 billion (40 per cent of their 2013 level), and FDI flows to Europe also fell by 11 per cent to \$289 billion.⁴ FDI flows to developing economies increased by 2 percent to a historically high level in 2014, reaching \$681 billion. FDI in China amounted to \$129 billion, up 4 per cent from 2013, and FDI inflows also rose in Hong Kong

1 United Nations Development Program (URL: <http://www.undp.org/content/undp/en/home/sdgoverview/post-2015-development-agenda.html>, accessed June 20, 2017). The concept of the SDGs was born at the United Nations Conference on Sustainable Development, Rio+20, in 2012.

2 Ministry of Foreign Affairs of Japan (URL:<http://www.mofa.go.jp/announce/pm/index.html>, accessed June 21, 2017). Statement by Mr. Shinzo Abe Prime Minister of Japan at the United Nations Sustainable Development Summit 2015 (<http://www.mofa.go.jp/files/000101404.pdf>, accessed June 21, 2017).

3 The UN Global Compact, GRI and the WBSCD (2015), p.4.

4 UNCTAD (2015), pp.2-3.

(China) amounting to \$129 billion.⁵ In this way, FDI to Asia (\$465 billion) accounts for most of the inflow to the developing countries, and FDI to LDCs increased by 4 per cent to \$23 billion, led by greenfield investment projects.⁶

The total annual global investment needs are \$3.9 trillion, but current annual investment is \$1.4 trillion in 2013. The balance \$2.5 trillion becomes the annual investment gap. The principal investment gaps are in vital public services infrastructure (roads, railroads, ports, power stations, water and public sanitation), food security (agriculture and local development), climate change, mitigation and adaptation (in health and education).⁷ UNCTAD (2014) states that the target for the promotion of private sector investment in LDCs could be to double the current growth rate of such investment.⁸ UNCTAD (2014) also presents a strategy to call on private investment because it is impossible to achieve SDGs through investment from the government sector alone. The plan states that implementation of ODA is indispensable in order for private investment to be directed to LDCs. It also calls on private companies to make an effort to cooperate.⁹ Electricity and renewable energy, transportation, water and public sanitation are some of the fields highlighted in the plan.

In Japan, FDI has a bigger outflow than inflow. In 2014, Japanese FDI outflow was \$114 billion and inflow was \$2 billion. In the case of Japanese FDI, large-scale cross border M&As to the U.S. and European countries account for most of the amounts. For example, in 2013, Softbank purchased Sprint Nextel Corporation, a major U.S. mobile communications, for \$20,100 million (approximately 1,500 billion yen), and in 2014, Suntory Holdings purchased major U.S. distiller, Beam Company for approximately 1,600 billion yen. The reason why FDI is mainly composed of cross border M&As in the U.S. and European countries is the anticipated positive effect to corporate earnings in the short term.¹⁰ In the case of Softbank, Sprint accounted for 2,600 billion yen out of the total 6,600 billion yen consolidated sales for the period ending March, 2014 period. Its aggregate market value moved up to the second place next to Toyota. In this way, the cross border M&As bring great financial impact to corporate earnings and aggregate market value.

On the other hand, within Japan, it is necessary to attract FDI inflow from foreign countries to support reconstruction after the Great East Japan Earthquake that occurred on March 11 in 2011. Moreover, because the use of the nuclear power generation has been limited due to the accident at the Fukushima Daiichi Nuclear Power Station, the implementation of global warming measures have fallen behind. If recovery from the Great East Japan Earthquake

5 *Ibid.*, p.3

6 *Ibid.*, pp.3-4.

7 UNCTAD (2014), pp.26-27.

8 *Ibid.*, p.27.

9 According to the Ministry of Foreign Affairs of Japan

(URL: http://www.mofa.go.jp/mofaj/gaiko/ohrlls/lde_teigi.html), the Least Developed Countries are those countries designated by resolution by the U.N. General Assembly—after deliberation by the U.N. Economic and Social Council based on criteria recommended by the U.N. Committee for Development Planning—as being particularly delayed in their development. At present, 49 countries worldwide are designated as LDCs (Africa: 34 countries; Asia: 9; Oceania: 5; Latin America: 1). (accessed June 25, 2017)

10 UNCTAD (2014) op.cit., p.10.

begins to get on track, the effect of global warming measures on greenhouse gas (GHG) emissions reduction will be reflected. Therefore, it is necessary to push forward with the promotion of renewable energy to attain SDGs. In addition, it is necessary to develop a new offset credit system where implementation of GHG reduction measures in technology, products, systems, services, and infrastructure in developing countries can be credited as part of Japan's contribution quantity towards its GHG emissions reduction target. The Japanese Government has already built and implemented the new offset credit system, "Joint Crediting Mechanism¹¹," and it will be necessary to promote it more. In order to carry out such efforts overseas, action to pursue SDGs is required not only to contribute in reducing GHG but also to eradicate poverty. The effects of global warming must be considered in terms of long-term uncertainty of 50–100 years. Furthermore, if we try to analyze the effects of global warming, quantitative factors such as good corporate image should be evaluated. These cannot be expressed in value. Hence a study on an evaluation method to arrive at various SDGs is necessary.

Institutional investors such as the pension funds, even before, have conducted studies regarding the evaluation of the relationship between sustainability activities and investments. In the 1990s, the number of mutual funds that took sustainability into account when evaluating a company or a project for investment increased rapidly in Europe and the United States of America. The operational assets of the institutional investors that have already signed the PRI have swollen to more than \$45 trillion by the end of April, 2014. Simpson A and Currall S. (2013) stated that reducing "sustainability" risk (Climate Change and Labor Practices) could lead to higher valuations and rebound to the benefit of current owners of the asset (Simpson, A. and Currall S., 2013, p. 17).¹²

However, institutional investors when managing their portfolios already choose stocks from countries with high market values. Therefore, their fund distribution ratio to LDCs becomes small. In Japan, when financial brokers would like to sell funds that incorporate foreign bonds and stocks, per Japanese Financial Instruments and Exchange Law, they have to explain country risk sufficiently before individual investors make a purchase. In the case of an emergency, investors must understand that their funds may not be recovered. Investing in the SDGs assumes a high risk and it is difficult to sufficiently grasp such investment risk.

Private companies raise funds from financial institutions so they will follow investment principles of institutional investors. Therefore, if the government presses the private sector to invest in LDCs, an action plan by the public sector will be necessary to lower the risk.

3. Examination of the evaluation method of the SDGs investment

UNCTAD (2014) presented "Investing in the SDGs: An Action Plan" to solve problems such as the poverty of LDCs, and the following items are cited as the plan for the public sector: (1)

11 Government of Japan (2016), Recent Development of the Joint Crediting Mechanism (JCM). URL: https://www.env.go.jp/earth/ondanka/mechanism/jcm_dev1602_2_rev.pdf, accessed June 23, 2017

12 Simpson A. and Currall S. (2013), p.17. They give the following example. Suppose future \$10 annual cash flow and 10% discount rate, the value of a company is \$100 (= \$10/10%). Next, shareholders spend \$1 per year to reduce a risk and this reduces the discount rate on cash flow to 8%, then the value is \$120 (=(\$10-\$1)/\$8).

Figure 1 Strategic Framework for Private Investment in the SDGs

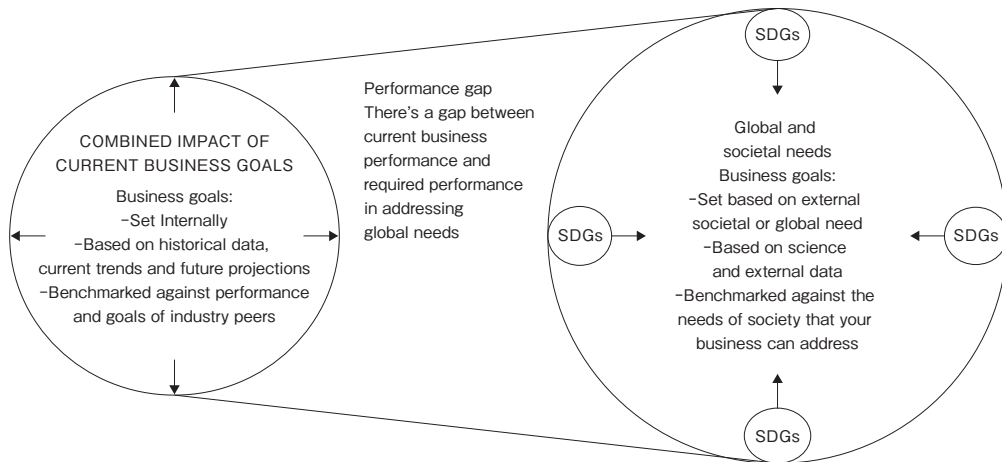


Reference: UNCTAD(2014), Figure 10, p.30.

Figure 2 Investing in the SDGs Gap

In action: Adopting a goal setting approach

Inside out approach	Outside in approach
Today's internally focused approach to goal setting is not enough to address global needs.	By looking at what is needed externally from a global perspective and setting goals accordingly, businesses will bridge the gap between current performance and required performance. The SDGs represent an unprecedented political consensus on what level of progress is desired at the global level



Source: The UN Global Compact, GRI and WBCSA(2015), p.19.

Leadership; (2) Mobilization; (3) Channelling; and (4) Impact (Figure 1).

It is assumed that the annual gap of \$2.5 trillion mentioned above is related to the gap between the current level of achievement by businesses and the required level of achievement to address global needs in Figure 2.

The gap means that when companies make decision to invest in the SDGs, the positive financial effects to corporate earnings or market value is not anticipated. Or, it may be said that they cannot find the appropriate method to evaluate investment in the SDGs. In the case of project investment, investment decision-making by the company is generally motivated by profit maximization. According to the traditional capital budgeting approach, for example the Net Present Value (NPV) rule, managers should invest if the proposed project's NPV is positive, and should reject a project if its NPV is negative. Thus, with the traditional capital budgeting approach, the achievement of qualitative, non-financial and long-term objectives are not considered in investment decision-making (Kaplan, R. S. and Norton D. P., 1996, p. 239).¹³

As one method to evaluate such a gap, we examine the Balance Scorecard (BSC).

4. Integration of Investment in the SDGs and the BSC

4.1. The BSC that considers investing in the SDGs: An Action Plan

The BSC is a strategic management system and a navigation management system originated by Kaplan R. S. and Norton D. P. (1996). The BSC provides four perspectives: (1) Financial (generic measures are return on investment and economic value added etc.); (2) Customer (generic measures are satisfaction, retention, market, and account share etc.); (3) Internal Business Process (generic measures are quality, response time, cost, and new product information etc.); (4) Learning & Growth (generic measures are employee satisfaction, and information system availability etc.) (Kaplan, R. S. and Norton D. P., 2004, p. 44).¹⁴ These four perspectives are provided in order to ensure fulfillment of the vision and strategy advocated by corporations and government. Through these four perspectives, the BSC examines strategic objectives, critical success factors, performance indicators, targets, and action plans. (Yoshikawa T., 2013, pp. 23-24)¹⁵

The BSC also considers intangible assets that drive long-term value creation such as human capital, customer relationships and brands (Kaplan, R. S. and Norton D. P., 2004, p. 10).¹⁶ Thus, the BSC could also be applied to consider information about sustainability. Schaltegger and Burritt (2000) mentioned that BSC is a useful tool for integrating environmental strategy with other business strategies (Schaltegger and Burritt, 2000, p. 155).¹⁷ Kaplan R. and Norton D. P. (2004) also mentioned that the BSC can consider environmental and the social aspects in the internal business process and learning & growth perspectives (Figure 3).

However, strong management leadership is necessary for SDGs. The leader should play a role in ushering in SDGs not only in the internal business process perspective but also in the vision of the company, and incorporate the targets in every section. In other words, integration with management is necessary.

Therefore, we next consider how to incorporate the SDGs into the BSC.

13 Kaplan R. and D. Norton (1996), P.239.

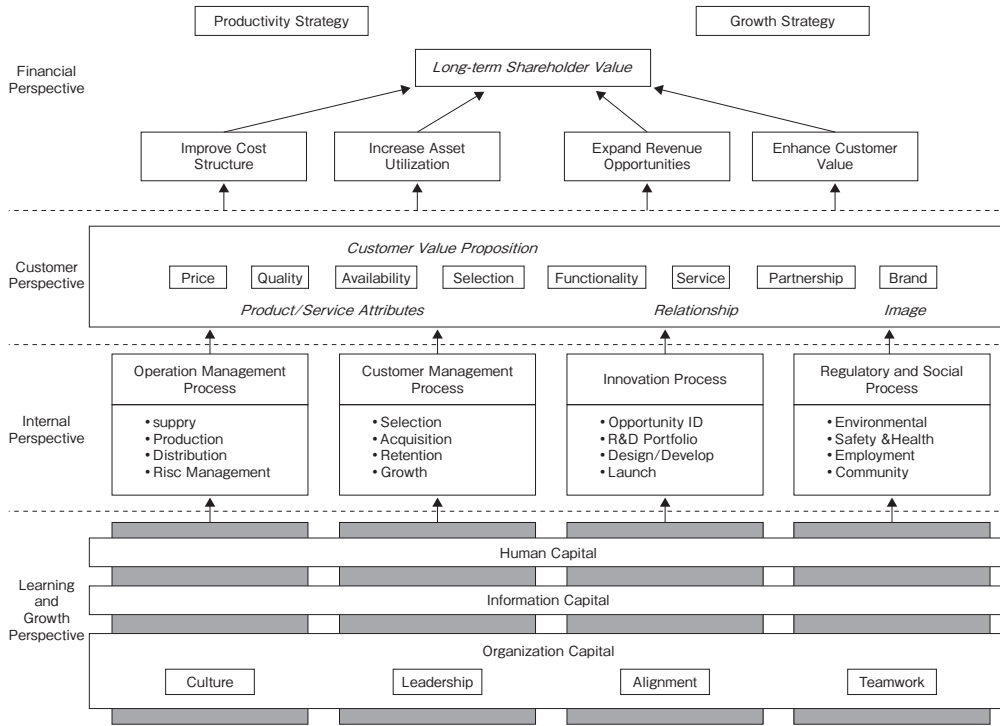
14 *Ibid.*, P.44.

15 Yoshikawa T. (2013)

16 Kaplan R. and D. Norton (2004), p.10.

17 Schaltegger and Burritt (2000), p.155.

Figure 3 Basic form of the strategic map taken society and environment into account



Reference: Kaplan R. S. and Norton D. P.(2004), p.11.

4.2. Example of BSC that incorporates SDGs

What is demanded by investment in the SDGs is long-term vision. The task is to insert a long-term vision of cost-benefit into the capital budget. If the time axes are applied to BSC, the long-term event affects most is the Action Plan. Therefore, we focus on filling the gap existing between Action Plan and investing in the SDGs. In other words, when integrating the sustainability point-of-view into an Action Plan that was created around short-term critical success factors, it becomes necessary to fix the gaps in the portions of Action Plan → Target → Key Performance Indicators..

Even if a company recognizes that the SDGs are in line with the maximization of the shareholder value, there is no company that would reduce profit to give priority to the SDGs. The UN Global Compact, GRI and the WBSCD (2015) point out that it is necessary for companies to determine how they can align SDGs with management strategies as well as how they can measure and manage their contribution to the SDGs (The UN Global Compact et al., 2015, p. 10).¹⁸ In other words, there is a need to identify what kind of business opportunities present themselves when incorporating the SDGs into the business strategic map. In this case, a gap would be evaluated by comparing the company's strategic map with the strategy plan of

18 GRI, the UN Global Compact and the WBSCD (2015), p. 10.

Table 1. The Model of the BSC with the SDGs

Vision	To contribute SDGs and maximize a shareholder value					← Integrating sustainability into the core
	Strategic Objective	Critical Success Factor	Key Performance Indicators	Target	Action Plan	SDGs Gap
Financial Perspective	• Implement SDG impact assessment systems	• Indicators for measuring (and reporting to stakeholders) the economic, social and environmental performance of SDG investments	• ROI	• 25%	• Indicators for measuring (and reporting to stakeholders) the economic, social and environmental performance of SDG investments	← Impact: Maximizing sustainable development benefits, minimizing risks
Customer Perspective	• New Products	• Build SDG investment partnerships	• % of sales from new products	• 15%	• Use of ODA-leveraged and blended financing • SDG investment guarantees and risk insurance facilities	← Channelling: Promoting and facilitating investment in SDG sectors
Internal business Process Perspective	Modalities to internalize in investment decisions the costs of externalities, e.g. carbon emissions, water use	• Use of government-development funds as seed capital or guarantee to raise further private sector resources in financial markets	• CO ₂ discharge reduction rate	• 30%	• Incentives for and facilitation of financial instruments that link investor returns to impact, e. g. green bonds	← Mobilization: Raising finance and reorienting financial markets towards investment in SDGs
Learning and Growth Perspective	• Change business/investor mindsets	• Changes in other educational programmes, e.g. specialized financial markets/advisor training, accounting training, SDG entrepreneurship training.	• The number of the student attending a lectures	• 100%	Dedicated MBA programme or modules to teach mindset and skills required for investing and operating in SDG sectors in low-income countries (e. g. propoor business models)	← Leadership: Setting guiding principles, galvanizing action, ensuring policy coherence

Reference: Yoshikawa T. (2013) and UNCTAD(2014), pp.191-192, Figure IV.16.

investing in the SDGs. Then, the company finds that it is necessary to improve the company's strategic map for the SDGs.

In the following, we try to show a BSC that incorporates the SDGs model in Table 1. First, we assume that a vision incorporating the SDGs is within the management leadership's awareness. In accordance with this vision, for each of the BSC perspectives, we pick up and apply items as gap from "Detailed plan of action for private investment in the SDGs" listed in UNCTAD (2014) Figure IV.16. To fill the gap, we assume Key Performance Indicators, Critical Success Factor, the Strategic Objectives and Target for each perspective.

We try to construct the BSC to include the above as an example. Table 1 shows the SDGs integrated with the company's vision. In order to show comparison with a company's core business, the actions for SDGs are placed outside of the Action Plan as a gap. Then, SDGs are moved to the left side laterally towards the Action Plan to indicate an integration with the normal balance scorecard. And by this integration, SDGs are reflected sequentially in each Perspective: Action Plan, Target, Critical Success Factor, and the Strategic Objectives.

5. Conclusion

This paper examined the BSC as an evaluation method model that incorporates the SDGs into the core business: “The BSC with the SDGs Model.” The Model uses the SDGs investment strategy plan listed in UNCTAD (2014) to incorporate actions towards the SDGs into the BSC. It focused on the gap existing between Action Plan and investing in the SDGs. The method of the model first reflects the SDGs within the company’s vision. Next, it examines the SDGs investment strategy plan based on the basis of that vision. Then it analyzes the gap with the current business plan. This paper pointed out that we integrate the SDGs with management from outside of an action plan because the SDGs strategy plan predict long-term event for the company. Finally, a target is decided using key performance indicators to cancel this gap. This study concludes that a firm’s strategy should integrate long-term strategy and short-term strategic objectives using BSC, and the evaluation method using BSC may contribute to promotion of the SDGs investment.

Our future challenge would be the problem that many companies tend to still place much importance in short-term numbers. To declare a commitment to SDGs would mean that the company has to raise the number to reflect results of actions towards SDGs. Currently, the difficulty to make long-term predictions with a number remains a problem.

Professor Takeo Yoshikawa who is the first person to study BSC in Japan, through an interview with Professor Robert S. Kaplan, mentioned that the competition with foreign countries has become more severe than in 1996, the year when the first edition of the Balanced Scorecard was published (Yoshikawa T. (2013), pp. iii-iv). Therefore, through the study of the balance scorecard, we expect to be able to contribute towards SDGs and the development of Japanese companies.

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