An Investigation of the Need to Embed Sustainability in the Capital Budgeting

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Abstract:

When an organization is preparing its investment policy, it should look at the policy from strategic perspective and to take into consideration the economic, environmental and political context both at national as well as global levels. This is because the economic and political contexts have faced serious crises in areas like finance, food security as well as environmental and social challenges which will affect the policy. So nowadays, investment policy is not a matter of finance only; either, it will look at the investment from many perspectives through embedding sustainability.

Keywords: Capital Budgeting, Sustainability, Investment Decision, Strategic Planning.

1. Introduction

Using social and environmental information and further non-financial information for budgeting and evaluating projects and integrate them with appropriate financial information enable companies to manage its economic, environmental and social costs and risks. The project appraisal procedure must identify the possible use of environmental resources like water, and also the environmental effects, for example pollution (IFAC, 2011). And it should take into consideration so social effect of the project.

However, given the importance of the capital budging, most of the evaluation techniques which used to select the most appropriate investment are depending on financial measures only. Examples of these techniques are Average return on capital, Payback period, NPV method, Internal Rate of Return.

For this, there is an urgent need to consider the new generation investment policy that emphasizes the inclusion of the sustainability goals in the investment policy and to embed the pillars of sustainable development when evaluating different projects along with the financial criteria considered.

2. Capital Budgeting

Budgeting could be defined as a "quantitative expression of a proposed plan of action by management for a future time period and is an aid to the coordination and implementation of the plan" (Horngren, Foster and Datar, 2000).Budgeting is very important to manage strategic changes and to support the continuing operations of the corporation. The strategic decisions have significant outcomes that affect the organization and it success. Each project is a challenge in how to manage uncertainty surrounding it. Once taken, capital investment can't be reversed; and the resources invested in it may be at risk (Burritt and Schaltegger, 2001).

For this, budgeting for the majority of companies remains a very important process. Budgeting is the result of a complex combination of management style, organizational structure, selection and promotion policies, financial and non financial data. All of these factors together are used to accomplish the goals of the company.

3. Sustainability

There are a lot of definitions for sustainability but mostly the primary one is the one derived from Brundtland Report (WCED, 1987) , the one that has been used a lot by organizations and governments: "Sustainable development is development that meets the needs o f current generations without compromising the ability of future generations to meet their own needs".

This definition requires from the current generation to keep and safe the environment so they can use it nowadays and also sustain it to the next generations. To reach to this goal, organizations must consider the long and short term effects of all their decisions and how these decisions affect the economic, social and environmental conditions. By doing this, companies will achieve long-term sustainable value for investors and all stakeholders. The report also ensures that a motivation from governments, communities and organizations should exist for sustainability to be applied (IFAC, 2011). The report also points out that: “Sustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs.”

Moreover, the “World Business Council for Sustainable Development” (WBCSD, 2018) addresses that "Sustainable development involves the simultaneous pursuit of economic prosperity, environmental quality and social equity. Companies aiming for sustainability need to perform not against a single, financial bottom line, but against this triple bottom line”. ‘Triple Bottom Line’ is the most common concept in the literature which regards sustainability at the intersection of environmental, economic and social targets of any organization (Elkington 1998; Tascioglu, 2015).

From an organization point of view, the ‘International Institute for Sustainable Development’ (IISD, 2013) has defined sustainability for the business enterprise as, “adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future.”

This explanation is proposed to assist business managers in applying the idea of sustainability to their institutions. However, it should be clarified and emphasized that sustainability cannot be attained by a sole organization. Sustainability is a model that all party acting in the worldwide economy including consumers and government must adhere to it.

Also, (Tascioglu) emphasizes that sustainable development doesn’t mean minimizing damage to environment; instead it means that all decisions should be taken with a consideration to safe social and environmental conditions (Tascioglu, 2015). According to the ‘Council of Supply Chain Management Professionals’ (CSCMP, 2013) to be sustainable, organizations must conduct their activities in an environmentally and socially responsible approach.

However, today's successful organizations know that sustainability is an essential part of an institution’s daily processes and its strategic plan. These institutions are winning since they recognize the environmental propositions of their tasks, and considering environmental subjects as a necessary element of the business operations, instead of considering them as a result of these operations.

Sustainability is concerning planning and achieving the organization's mission nowadays while taking into consideration all the exterior issues that may affect the accomplishment of the organizations’ long term objectives. In these days’ struggle for restricted resources, employees and funds, the development will be for associations that apply sustainability (Office of Real Property, 2000).

Although, the term sustainable development was defined in many papers from different scientific scopes, there are some common and difference in those definitions in the literature. This divergence is because the concept is fairly new and there is a lot of researches are needed to clarify it more and more (Tascioglu, 2015). However, the significance of sustainable development has been extensively documented by practitioners and researchers. For example, a study prepared by KPMG (2011) showed that 95% of the 250 biggest corporations in the world are nowadays reporting their sustainable development activities and 62% of these corporations are selling sustainable manufactured goods.

Moreover, (IFAC, 2011) asserts that applying sustainability in the organizations have many benefits; among them are:

- It aids corporations to act in accordance with environmental law.
- Motivating customers to be loyal to the

organization.

- Enhancing the reputation of the organization.
- Minimizing costs by the efficient use of energy and materials.
- Reducing risks to both new investments and on-going activities
- Attracting and motivating employees
- Exploring new marketplaces.
- Influencing product and service innovation
- Improving economic, social and environmental situations has a lot of advantages for the whole society.

Also, there are a number of benefits when embedding sustainability in the budgeting process. "From these gains is the anticipation of potential environmentally induced financial impacts on the company (potential environmental costs) which will lead to establish proactive management of processes which influence future business periods" (Burritt and Schaltegger, 2001)

4. Pillars of Sustainability

Sustainability has three pillars. They are economic, social and environmental pillars. However, a perfect list of economic, environmental and social topics cannot be present. "It would not be possible or desirable to produce a list, or a set of definitions, that claimed to be exhaustive or definitive. Any such list would inevitably be incomplete and would soon be out of date" (PRI, 2016b).

Nevertheless, these pillars are interconnected in various ways. For example, if the corporation is adapting the social and environmental pillars, this will lead to creating trust in the market and hence attaining the financial pillar through making better business (IFAC, 2011).

4.1Economic pillar

The economic pillar means recognizing the economic effects of the processes of the organization. The economic aspect is mostly misunderstood to be identical to financial issues, for this, it may be considered to be easier to be executed than the social and environmental pillars of the sustainability. Also, the economic aspect is not just a matter that the organizations are financially healthy. The economic aspect of sustainability must fairly reflect the indirect and direct economic effects that the company's processes may cause on the surrounding society and on the overall organization's stakeholders (Uddin, Md. and Kazi, 2008).

More specifically, economic pillar includes the economic performance of the organization, its market presence, the indirect economic impact (shifting the efficiency of organizations, sectors, or the whole economy; Economic improvement in regions of high poverty;

Availability of services and products for people with small wages; the economic effect that may arise from using services and products) and procurement practices (for example, the proportion of services and products locally acquired) (GRI, 2015).

So, the economic pillar includes the financial performance, and includes also the company's broad effect on the economy. By knowing this, stakeholders and organizations will be aware that productivity, expansion, maintaining the environment and creating new jobs can guide to competitive advantages that will differentiate the organizations from others (IFAC,2011).

4.2Environmental Pillar

Business operations could have several forms of impacts on the environment. Regularly, environmental effect means "the negative effects occurring in the surrounding natural environmental due to business operations" (Uddin, Md. and Kazi, 2008). Or it can be defined as "the amount of natural resources consumed in delivering products and services" (IFAC, 2011).

Example of these effects can consist of the following: excessive use of natural recourses, non-replenished sources of energy; resource, air or water pollution; climate change; stratospheric ozone depletion; waste management; changes to the phosphorus and nitrogen cycles and deforestation etc.

(Uddin, Md. And Kazi, 2008; PRI, 2016b).

4.3Social Pillar

Although social pillar is the latest sustainability pillars but it is becoming more recognized than it has previously had. Several institutions are now ever more dynamic in considering the social pillar than before. "It means being accountable for the social affects the company has on people - even indirectly. This includes the people within the company, in the supply chain of the company, in the community the company is in and in customers of the company. It refers to the management's obligation to make choices and take actions that will contribute to the well fare and interests of society as well as those of the organization" (Uddin, Md. And Kazi, 2008).

Also, the social pillar includes subjects that concern the interests, welfare and the rights of citizens and societies. These may contain among others: human rights, labor principles, child labor protection, safety and health in the place of work, freedom of expression, diversity, relations with local communities, human capital management and relations of workers, health and access to medicine and finally consumer protection (PRI, 2016b)

More specifically, social pillar concerns the corporation's effect on citizens and community issues, which may include: skills, motivation and health on the citizens part; and individual partnerships and relationships on the community part (IFAC, 2011).

5. Drivers to incorporate sustainability in the business

Businesses have applied techniques to enhance its social and environmental performance for a lot of explanations like improving competence and regulatory compliance. Numbers of studies have investigated the reasons motivate companies to integrate sustainability pillars in their strategy. The documented motivations comprise: improving environmental performance; improving company image and public relations; improving legal compliance; and obtaining competitive advantage (Florida and Davison 2001; Morrow and Rondinelli 2002).

Sustainability is also becoming an employing instrument for businesses if they want to hire more professional staff. “A recent survey by the nonprofit Net Impact showed that 53% of workers and 72% of students indicated that a job where they could make a difference was important or essential for their happiness” (Zukin, and Szeltner 2012). Most of the directors now understand the importance of the employee for the survival and the success of the companies. Adding to all the previous motivations to integrate sustainability is fact that sustainability promotes innovations in technologies, processes, business model and products (National Research Council, 2014).

However, a survey conducted by PricewaterhouseCoopers (2002), were 1000 companies interviewed, 72% of the respondents are not including the opportunities and/or risks of sustainable development in their project appraisal process because there is no driver to do so. For this, Labuschagne (2005) has identified four drivers for the business to incorporate sustainability. The following figure illustrates these drivers.

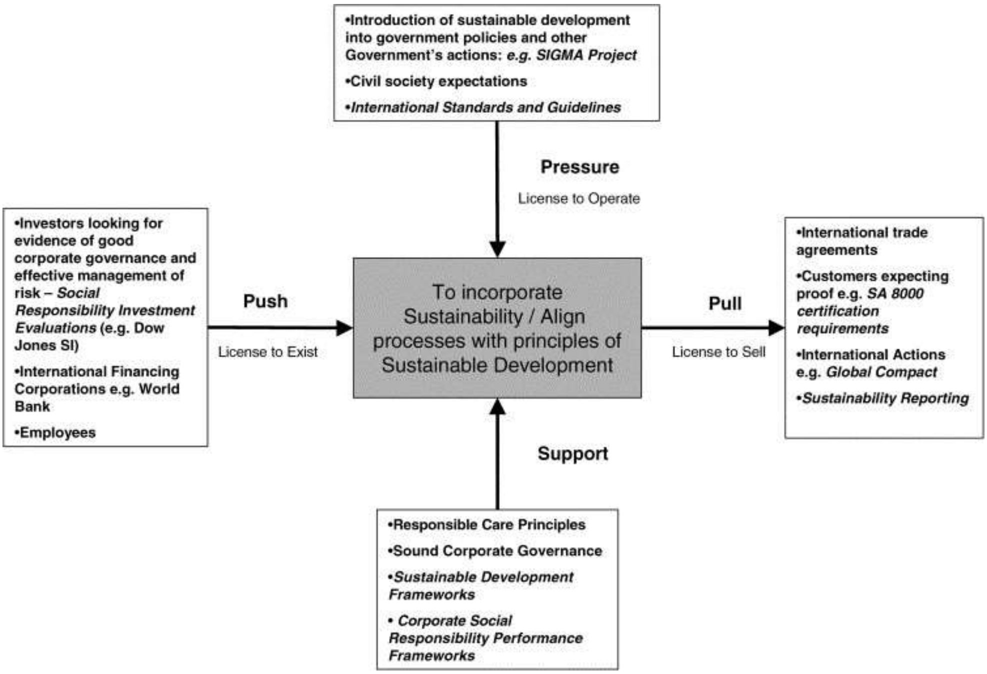

Figure 1 Drivers for integrating sustainability in company's practices; from Labuschagne (2005)

Labuschagne (2005) has divided the drivers as push (license to exist), pressure (license to operate), pull (license to sell) and finally the support drivers.

A- Push drivers

If business wants to grow and survive, it must guarantee the acceptance of its activities and role by the society. This is a license for the business to exist. The investors and employees' expectations of business and standards for business are strongly based on societal norms. Higher degrees of social responsibility with the necessary supporting evidence or proof thereof will become prerequisites for licenses to exist, operate and sell.

Also, the financing agencies represent another push driver for business to incorporate sustainability where financing will not be granted to a business unless it embeds sustainability in its operation.

B- Pressure drivers

These drivers are the introduction of sustainability into the government policies regulations, International standards and guidelines and finally society expectations. These drivers are granting business license to operate. Without following the government regulations, international standards and the expectation of the society business can't continue its operation and will be forced to quit.

C- Pull drivers

Customers form part of society and grant business a license to sell. The license to sell thus also depends on customers' acceptance of business's role and activities. Social responsibility is thus becoming a prerequisite for a license to sell. Also, international agreements support the integration of sustainability in the business and then considered as a license to sell. Moreover, when a business report that it integrates sustainability in its activity and roles will also enhance the role of the business and grant a license to sell.

D- Support drivers

There are some drivers that will enhance and support the integration of sustainability in the business. These drivers are sound corporate governance and sustainability principles and frameworks. However, some factors may be found at two or three different drivers. For example, although SA 8000 is an International Standard, i.e. pressure driver, some customers require that their suppliers have SA 8000 certification, i.e. pull driver. Also, International standards and guidelines (pressure driver and/or pull driver) are definitely relevant to sustainability and have a strong influence on business to use it.

The study of the driving forces indicates that stress is growing for business to integrate sustainability in their operation and also to purplish this integration. Since business's role in the sustainability challenge cannot be ignored, business should start addressing the sustainability issue. Business can, however, not do it on its own. The 2002 World Summit revealed that business, government and society should all cooperate to explain the challenge and attain proper sustainable development (Labuschagne, 2005).

6. Embedding Sustainability in the business

Although classical management practices are focusing mainly on the financial output, the important of sustainability recognized by governments and organizations has started to change the culture and society of business. Because of the global challenge facing organizations, organizations have to start adopting sustainability to enhance their social, environmental and financial performance and to change the way of doing business (IFAC, 2011).

Moreover "organizations that have successfully embedded sustainability from a strategic perspective tend to be those that convert increased sustainability performance into commercial advantage. Taking a strategic perspective helps an organization to develop an awareness of its sustainability risks and opportunities, promote a commitment to deal with these, and to manage difficult choices and trade-offs that might have to be made between financial, environmental or social performance" (IFAC, 2011). Companies that recognize and handle risks at early stage are going to be in an advanced location to catch opportunities. This also can be applied to manage sustainability risks and opportunities. Sustainability risks and opportunities should be considered as an element of the existing risk strategy, not as a new level of risk management.

Looking at sustainability from strategic perspective also aids in developing and identifying the required talents to implement sustainability. Sustainability frequently inspires staffs and motivates them in their job. However, an excellent evaluation method to determine if sustainability is embedded into the business operations and the management system is the degree to which a business (1) manages operation risks wisely as well as the sustainability risks, and (2) be familiar with the opportunities for enhancing the organization’s financial and sustainability performance (IFAC, 2011).

Nevertheless, the integration of sustainability in the organization’s activities needs guidance and change from leading managers. Managers and proficient accountants may modify the way businesses operate if they have an obvious vision for sustainability and if they also demonstrate leadership. Hence, leadership and visions are probably the main significant ways of change. These changes along with the cultural changes they bring can differentiate successful businesses.

“A sustainable vision helps to ensure that an organization looks at its business through a new lens, to ensure that sustainability forms part of its mission, goals and objectives, and strategy. The sustainability lens reveals the world through the eyes of its stakeholders, and helps an organization to understand the many ways, good and bad, that operating activities affect and are affected by society, the economy, and the environment. Effective leadership wills then help to ensure that sustainability is also integrated into management, operations, and reporting of the organization” (IFAC, 2011).

The significant aspects that should be presented when executing a sustainability strategy are **first**, senior managers should understand and commit to sustainable development in every single part of the organization. It will not be sufficient to only make paper recycling, applying a number of "green" designs, nor encouraging divisions to implement "green" operations. **Second**, to be successful, organizations should translate their visions and sustainability missions into detailed long-term targets and objectives that are understandable through all organizations' levels. **Third**, a clear process that identifies the social and environmental issues and their effects on the organizations' operations, products and services should be presented. **Fourth**, training is very important to achieve the required understanding, conscious and skills needed to convert the company to sustainability culture. **Finally**, performance should be evaluated (Office of Real Property, 2000).

Embedding sustainability into decision making process necessitates an organized way for collecting data and information, and the use of a suitable costing, valuation and accounting methods. Organizations that integrate sustainability into decision making must apply a formal and systematic way to ensure the availability of valuable information. The information should contain (1) how to control the environmental and social effects, and (b) ways to improve the value added of their environmental and social activities (IFAC, 2011).

"Sustainable development is good business in itself. It creates opportunities for suppliers of 'green consumers', developers of environmentally safer materials and processes, firms that invest in eco-efficiency and those that engage themselves in social well-being. These enterprises will generally have a competitive advantage. They will earn their local community's goodwill and see their efforts reflected in the bottom line" (just Economics, 2011). Companies need to be encouraged to embed sustainability in their decision making process. As (Schmidheiny, 1992) suggests, there is a need for a different and new approach of thinking and also a new economic factors if the organization is not planning only to avoid current problems, but also wants to reduce the effect of nowadays' decisions on future's quality of life (Office of real property, 2000).

However, the role of companies in contributing to sustainable development is still imprecise. This contribution is varied by size and sector of organization (IISD, 2013). Analyzing the linkage between environmental and social aspects and corporate financial performance becomes increasingly important as a significant positive relation could justify embedding sustainability. If sustainability is valued as aspects that improve the corporate financial performance and overall societal expectations, hence, a company should pursue sustainability to obtain competitive advantages (PRI, 2017b).

For this, embedding sustainability into corporate strategies and operations in evaluating different investments are becoming an opportunity for the corporations (Porter and Reinhardt 2007; D'angelico and Pujari 2010; Tascioglu, 2015).

"The role of business in contributing to sustainable development remains indefinite. While all business enterprises can make a contribution towards its attainment, the ability to make a difference varies by sector and organization size" (GRI, UNGC and WBCSD, 2017).

(GRI, UNGC and WBCSD, 2017) produced report called "SDG Compass" which provide phases to be followed if the business wants to contribute to the SDGs. The SDG Compass guide illustrated the five steps as follow:

01 Understanding the SDGs

To work with anything new you should know and understand it very well. Thus all managers, staff and stockholders should be aware of the concept of sustainability and its benefits toward the organization and to the whole society.

02 Defining priorities

Not all the SDG are applicable to all companies in all conditions. For this, each organization should check its priorities, strength, and weakness and to assess how each goal can improve the current situation.

03 Setting goals

The Goal of the organization should be known and by embedding the sustainability goals with the goal of the organization, organization can commit to achieve sustainability.

04 Integrating

Embedding sustainable development in the heart of the business and within each function in the organization is leading the organization to achieve its targets. For this, organizations are motivated to make partnership within all the value chain and governments. Also, sustainability should be embedded in the processes and policies of an organization to pursue sustainability principles. This requires a new cultural direction and wide modification to refinements to practice, procedure and system.

05 Reporting and communicating

The goals of sustainable development present general indicators to be used by organizations to disclose information about sustainability. Also, "the SDG Compass encourages companies to build the SDGs into their communication and reporting with stakeholders" (GRI, UNGC and WBCSD, 2017). By doing this, organizations could use the sustainability goals as a frame to communicate, shape, guide and report their activities, goals and strategies.

For this, sustainability should be embedded in the business from many perspectives as follows:

1- From the strategic perspective: the organization should adopt a strategic approach so that sustainability embedded into the vision, strategies, objectives, goals and targets. The strategic perspective aids the organization to be aware of sustainability challenges and risks and how to deal with both. Applying sustainability in the organization strategy will lead to reducing waste, lower maintenance and operating cost and make recruiting more easily which lead at the end to competitive advantage.

2- From operational perspective: which means how an organization can achieve its strategy (that embed sustainability) into its daily operation through improving efficiency and reducing waste. Sustainability should be considered at every step in the business process not as a result of these processes.

3- From the reporting perspective: developing a high quality reports show the whole picture of the organization performance and activities. “This will involve reflecting sustainability impacts in financial statement, improving reporting and disclosure” (IFAC, 2011).

Nevertheless, the International Federation of Accountants (IFAC) has developed “International Good Practice Guidance” (IGPG) that assists accountant to apply sustainability in appraising projects. The IGPG advices the use of DCF in evaluating investment; and other measurements such as payback takes less attention to (IFAC, 2013).

The key principles for evaluating and selecting investment under IGPG are:

1- The time value of cash should be taken into consideration when appraising multi period investment where expected cash costs and benefits and its related cash flows and outflows arise over time.

2- The opportunity cost of capital should represent the time value of money.

3- The best choice will be based on understanding the organization and it should be taken in connection with the company's strategy and its economic, social and environmental positions.

4- When applying DCF analysis, the cash flow to be analyzed is the one related to the investment being evaluated. This is because the value of a project is depending on all changes to the expected cash that arise from accepting the project.

5- When evaluating projects under DCF analysis and when some or all assumptions are difficult to predict and established, these assumptions should be supported by reasonable judgment.

6- After implementing the project, a review or an audit of the evaluating process, the results, benefits and outcomes shall all be studied.

Also, (CAPEX, 2015) has identified a practical approach to be followed to integrate sustainability issues into capital investment appraisal processes by asking the following questions:

1- **Who are the people to be involved:**

The people to be involved in the process of embedding sustainability should have sustainability culture. Also a system for accountability should be established. People who should be involved are those who have the proper positions and competence.

2- **What to embed:** To recognize and prioritize sustainable development issues that should be considered in the evaluation process.
3- **How to evaluate:** There are three basic approaches to evaluate sustainable development issue embedded are:
   - *Quantitative for example, KPI scorecards*
   - *Financial,*
   - *Qualitative like: rating*
4- **How to take decision:** To take a decision of sustainability, a framework should b established to help in the assessment process.
5- **What are the financing sources:** Sources of funds have a great influence on the choice of a project to invest in. If the business is financed internally, then, it has its own decision; otherwise, the organization providing the fund may have certain requirements in the project to be selected. However, to embed sustainable development completely in project evaluation process is not an easy task and taking a lot of time.

7. Strategic changes needed to enhance embedding sustainability

There are a number of reasons for not investing in sustainable project. (EUROSIF, 2012) revealed that "allocations to sustainable investment often remain small due to the following reasons: While many are planning to increase the size of their investments, they are constrained by issues such as lack of historical performance data, lack of knowledge about these investment areas, as well as high real or perceived risk levels".

Also, the future costs that may arise if sustainability is not embedded in the investment are having significant dilemmas. Assessment of the potential cost of preventing pollution or cost of environmental responsibilities is complicated because both are known. One of the main problems in this perception is that it is depending on the implied grounds that when reducing the environmental pollution this should lead to more cost through incurring new costs like waste management, establishing control system for pollution, and recycling process. So focusing on the extra charges that will be incurred because of the above new costs instead of considering the advantages gained from it; and not considering the cost that may incur if environmental protection is ignored are all considered as a barrier for embedding sustainability (Burritt and Stefan, 2001).

(EUROSIF, 2012) proposed possible strategies and modifications that help to remove any barriers preventing investing on sustainable projects. These are as follows:

(1) Attract clients through developing innovative services and products which are social and environmental friendly.

(2) Adopting strong disclosure and evaluation system is

critical for supporting the credibility of sustainable investments: EUROSIF (2012) argued that “as investors get to know these investment areas and their associated impacts better, many have found that the risks associated with these investments may not be as high as they were initially perceived to be and that these investments can indeed generate healthy financial returns”

(3) The regulatory bodies should establish regulations that help removing investment barriers in sustainability.

8. Summary

It has been identified that strategy as an umbrella phrase covers all topics like planning, budgeting, operations and activities; while capital budgeting is the quantitative expression of strategy that shows how to implement the strategy. There are a number of techniques used in evaluating investments; these techniques are a measuring the financial situation only. However, there is a need nowadays to evaluate projects using not only the financial perspectives but also to use economic, environmental and social perspectives.

Moreover, for a business to apply sustainability there should be drivers. The drivers in this research have been classified as push, pull, and pressure and support drivers. The study of these drivers showed that there is pressure on organizations to embed sustainability in their operation and also to publish this integration. The final points in the research covered the process needed to integrate sustainability in the business as well as all changes required to make this integration.

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