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From the Editor

Entrepreneurship and triple bottom line accounting (with the goal of sustainability) are the focus of this 86th spring issue of one of Indiana's longest running publications. The *Indiana Business Review* began as a service to the citizens of Indiana just one year after the creation of the Indiana Business Research Center in 1925. Its goal then and now is to provide factual insight into the economy of the Hoosier state. While we have bowed to the power (and cost savings) of the Internet age by publishing only online now, our readership continues to grow throughout the state and across the nation. We encourage you to connect with us and share your ideas on our coverage of events and issues of importance to our economy, be it by e-mail or Twitter or Facebook. Enjoy!

Embracing Entrepreneurship

SUSAN CLARK MUNTEAN, Ph.D.: Assistant Professor of Management, Ball State University

Which public policies are most effective at enhancing economic performance? On two occasions in the past six months, I have presented research findings on this topic to members of the Indiana General Assembly. I made two interesting observations during these meetings. First, there is an apparent translation problem between the quality of our top entrepreneurship programs and the actual creation of new employment-generating ventures in the state. For example, entrepreneurship programs at Ball State University and Indiana University both rank in the top 10 of all entrepreneurship programs nationally, but according to a study funded by the Kaufmann Foundation, Indiana ranks 44th nationally in the percent of employment accounted for by young firms.¹ Second, I observe a disconnect between, on the one hand, the recognition of entrepreneurship's importance to Indiana, and on the other hand, the lack of knowledge regarding what to do to create an entrepreneurial economy. There is significant uncertainty exhibited among our elected leaders regarding what they should be doing to grow the economy through increasing entrepreneurial activity.

What the Research Shows

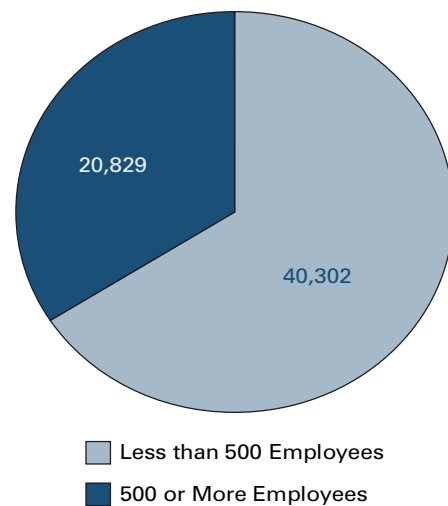
Scholars, public officials, successful entrepreneurs and financiers must come together to rapidly devise and implement effective strategies to take Indiana from its agrarian and industrial past to its entrepreneurial and globally competitive future. Empirical research strongly suggests that the old economic models and economic development strategies are not the answer.² We need to question the wisdom of chasing after mature and declining industries through

traditional strategies, which often represent a race to the bottom among states who give away the store in the form of foregone tax revenues in order to secure visible "wins." These short-sighted strategies include temporarily delaying a plant's closure or claiming large job creation numbers at low-skilled, labor-intensive call centers, distribution centers, service providers and big-box retail shops.

A better focus would be on maximizing the contribution of small, fast-growing and relatively young businesses. According to the Statistics of U.S. Businesses, about 90 percent of employers nationally have fewer than 20 employees.³ In 2007, 85 percent of all Indiana businesses were micro businesses (fewer than 20 employees) and employed approximately one out of every five workers in the state.⁴ Importantly, high-growth small businesses are the types that provide the greatest percentage of net new jobs.⁵ Between 1994 and 2006, U.S. firms with fewer than 20 employees represented approximately 94 percent of all high-impact firms (those with high employment and high revenue growth) and accounted for approximately one-third of job growth among all high-impact firms.⁶ As seen in **Figure 1**, small businesses created nearly double the number of net new jobs created by large businesses, according to the most recent data available.

According to U.S. Department of Commerce data, firms with greater than 500 employees have been contracting, resulting in net job losses year to year over the last decade, while firms with fewer than 500 employees have been consistent in creating net new jobs over the same time period.⁷ Yet in the media, we typically only hear about large

■ **FIGURE 1: Net Jobs Created in Indiana by Firm Size, 2005 to 2006**



Source: U.S. Small Business Administration Office of Advocacy

corporations bringing jobs, while small firms lack recognition for their role in overall job creation. Net employment losses are not just due to employment contractions among existing, mature firms; a lack of expansion among younger firms in particular is thought to be just as important of a factor.⁸

Public policy follows this tendency to reward the large, mature corporations while ignoring the smaller, faster-growing businesses, despite the latter being significantly more effective in providing new employment opportunities. Prototypical tax credits do not provide incentives for new firm creation. Start-ups do not normally have taxable income for their first several years, so providing credits and deductions to offset corporate income tax is an ineffective way to stimulate the creation and initial growth of new ventures. Politicians may feel pressure from their constituents to support what is tried and true and visible—even though the strategy represents a losing

hand in the economic development game. On average, low-impact firms do not grow at all, and nearly all job loss in the economy from 1994 to 2006 has been attributed to low-impact firms with greater than 500 employees.⁹ Public officials should focus on providing grants for, and equity investments in, promising small and emerging enterprises, as well as providing regulatory relief and regulatory stability, which would remove serious obstacles to the establishment and growth of new job-generating businesses.

Research confirms that through finding new market opportunities and commercializing innovation, entrepreneurs play a central, critical role in job creation, productivity growth and economic prosperity.¹⁰ Smaller and younger companies generate systematically higher growth rates relative to their older, larger counterparts. Regional economic performance is linked to how well public investment in new knowledge translates into innovative activity in the marketplace. Entrepreneurship is the vehicle by which the most important ideas are implemented and commercialized, representing the missing link between investments in education, research and development, and economic growth.¹¹

Innovative risk takers are likely to become serial entrepreneurs, reinvesting the gains from their initial business in successive employment-generating enterprises. Entrepreneurs themselves are central to economic growth, accounting for one-third of the difference in economic growth rates among countries.¹² Areas with greater entrepreneurial capital in the form of regional institutions, professionals, and fluid and decentralized networks produce higher economic output.¹³ Greater competition and diversity among a large number of small, innovative

“Policy-makers should target those industries most conducive to new firm creation, which research shows have lower start-up costs, fewer barriers to new firm entry and higher levels of technological change.”

enterprises itself positively impacts economic growth.¹⁴ Wealth is positively affected as well, since the earnings of entrepreneurs with incorporated businesses are nearly double that of the earnings of wage and salaried workers in established firms.¹⁵ Small entrepreneurial firms are the fastest growing segment of exporting firms and thus are also important for addressing the trade deficit.¹⁶

The results from these research findings suggest that Indiana should focus on growing its own firms as a high-growth economic development strategy. States that succeed in the new economy differentiate themselves by explicitly meeting the specific needs of aspiring and emerging entrepreneurs and by making entrepreneurial firms central to its economic development strategy.¹⁷ Policy-makers should target those industries most conducive to new firm creation, which research shows have lower start-up costs, fewer barriers to new firm entry and higher levels of technological change.¹⁸ In addition, policy-makers can assist by fostering supportive networks and allocating resources for nascent, emerging and serial entrepreneurs. A consensus among academics and public officials is forming that new ventures with high revenue growth or so-called “gazelles” deliver the greatest return on public investment.¹⁹ Firms with both high revenue growth and rapid employment expansion, or so-called

“high-impact firms” are especially critical, and in fact contribute to the majority of overall economic growth and almost all growth in private sector employment.²⁰ Our leaders can promote high-impact entrepreneurial activity by encouraging risk taking, providing legal protection and seed capital, and encouraging heavy investment in human capital, research and development, and knowledge creation.

What Entrepreneurs Need Most

Policy-makers can stimulate economic growth and job creation by making improvements to the three things entrepreneurs need to commercialize an opportunity: skills, resources and networks. Indiana can give its innovative and creative citizens and new immigrants to Indiana the greatest chance of success by creating and nourishing networks, fostering partnerships among local and regional governments and educational institutions, and by developing the necessary technical and managerial skills in the population.

Entrepreneurs need assistance in creating solid business plans and with accessing and developing managerial talent. Policy-makers can improve the skills of individual entrepreneurs by investing in entrepreneurial education and providing training through one-stop shops, business development centers and incubators. Curriculum that fosters risk taking, innovation,

creativity, and technological and managerial prowess can be designed from elementary through graduate school.

The best entrepreneurial education will be hands-on, immersive and experiential, and will connect active participants with existing firms, entrepreneurs and professional service providers such as lawyers, accountants and marketing executives; as well as supportive and resourceful investors. High schools, community colleges, teaching universities and small business development centers can play a more active role in delivering the skill sets and providing direction for those considering business ownership, while entrepreneurship centers at research universities can deliver the next generation brainpower and unleash the creativity and management skills necessary to deliver more promising high-impact gazelles.

Policy-makers can strengthen both networks and community resources by pooling funds and providing better access to technology as well as information and guidance on starting, running, growing, funding and managing a business. Local governments can provide the requisite information to aspiring entrepreneurs. Rural and small town entrepreneurs in particular face serious challenges in establishing the critical networks and support systems, including finding the right financiers, lawyers, accountants and business partners.²¹ Policy-makers can play an active role in transitioning Indiana to the 21st century global economy by fostering strategic relationships and vibrant networks among research intensive universities, corporations and entrepreneurial agents such as scientists, engineers, financiers and inventors across the globe. In addition, policy-makers might

“Stimulating intelligent risk taking, creativity and innovation is good public policy.”

consider actively funding and promoting research parks, incubators, public-private partnerships, immersive learning and collaborative development projects to foster the expansion of and returns to these networks.

In Short

Through creating stronger linkages among state universities, research institutions and the global business sector, and by shifting the culture away from developing job retention employment skills for mature and dying sectors to one that develops the skills necessary to build new high-growth businesses, Indiana leaders can create a rich climate conducive to the birth, attraction and retention of innovative entrepreneurial firms that create new products and services and expand into new markets. Stimulating intelligent risk taking, creativity and innovation is good public policy. A failed start-up is not a net loss to society; those involved with the start-up venture, including the founders, venture capitalists, lenders and other competing businesses learn from attempts to launch a new technology or take a new idea to market. Later attempts by serial entrepreneurs may just launch the next Google, Facebook, Intel or Microsoft, which would be a boon to the Indiana economy for years to come. ■

Notes

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The Triple Bottom Line: What Is It and How Does It Work?

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Sustainability has been an often mentioned goal of businesses, nonprofits and governments in the past decade, yet measuring the degree to which an organization is being sustainable or pursuing sustainable growth can be difficult.

John Elkington strove to measure sustainability during the mid-1990s by encompassing a new framework to measure performance in corporate America.¹ This accounting framework, called the triple bottom line (TBL), went beyond the traditional measures of profits, return on investment, and shareholder value to include environmental and social dimensions. By focusing on comprehensive investment results—that is, with respect to performance along the interrelated dimensions of profits, people and the planet—triple bottom line reporting can be an important tool to support sustainability goals.

Interest in triple bottom line accounting has been growing across for-profit, nonprofit and government sectors. Many businesses and nonprofit organizations have adopted the TBL sustainability framework to evaluate their performance, and a similar approach has gained currency with governments at the federal, state and local levels.

This article reviews the TBL concept, explains how it can be useful for businesses, policy-makers and economic development practitioners and highlights some current examples of putting the TBL into practice.

The Triple Bottom Line Defined

The TBL is an accounting framework that incorporates three dimensions of

performance: social, environmental and financial. This differs from traditional reporting frameworks as it includes ecological (or environmental) and social measures that can be difficult to assign appropriate means of measurement. The TBL dimensions are also commonly called the three Ps: people, planet and profits. We will refer to these as the 3Ps.

Well before Elkington introduced the sustainability concept as “triple bottom line,” environmentalists wrestled with measures of, and frameworks for, sustainability. Academic disciplines organized around sustainability have multiplied over the last 30 years. People inside and outside academia who have studied and practiced sustainability would agree with the general definition of Andrew Savitz for TBL. The TBL “captures the essence of sustainability by measuring the impact of an organization’s activities on the world ... including both its profitability and shareholder values and its social, human and environmental capital.”²

The trick isn’t defining TBL. The trick is measuring it.

Calculating the TBL

The 3Ps do not have a common unit of measure. Profits are measured in dollars. What is social capital measured in? What about environmental or ecological health? Finding a common unit of measurement is one challenge.

Some advocate monetizing all the dimensions of the TBL, including social welfare or environmental damage. While that would have the benefit of having a common unit—dollars—many object to

putting a dollar value on wetlands or endangered species on strictly philosophical grounds. Others question the method of finding the right price for lost wetlands or endangered species.

Another solution would be to calculate the TBL in terms of an index. In this way, one eliminates the incompatible units issue and, as long as there is a universally accepted accounting method, allows for comparisons between entities, e.g., comparing performance between companies, cities, development projects or some other benchmark.

An example of an index that compares a county versus the nation’s performance for a variety of components is the Indiana Business Research Center’s Innovation Index. There remains some subjectivity even when using an index however. For example, how are the index components weighted? Would each “P” get equal weighting? What about the sub-components within each “P”? Do they each get equal weighting? Is the people category more important than the planet? Who decides?

Another option would do away with measuring sustainability using dollars or using an index. If the users of the TBL had the stomach for it, each sustainability measure would stand alone. “Acres of wetlands” would be a measure, for example, and progress would be gauged based on wetland creation, destruction or status quo over time. The downside to this approach is the proliferation of metrics that may be pertinent to measuring sustainability. The TBL user may get metric fatigue.

Having discussed the difficulties with calculating the TBL, we turn our attention to potential metrics

for inclusion in a TBL calculation. Following that, we will discuss how businesses and other entities have applied the TBL framework.

What Measures Go into the Index?

There is no universal standard method for calculating the TBL. Neither is there a universally accepted standard for the measures that comprise each of the three TBL categories. This can be viewed as a strength because it allows a user to adapt the general framework to the needs of different entities (businesses or nonprofits), different projects or policies (infrastructure investment or educational programs), or different geographic boundaries (a city, region or country).

Both a business and local government agency may gauge environmental sustainability in the same terms, say reducing the amount of solid waste that goes into landfills, but a local mass transit might measure success in terms of passenger miles, while a for-profit bus company would measure success in terms of earnings per share. The TBL can accommodate these differences.

Additionally, the TBL is able to be case (or project) specific or allow a broad scope—measuring impacts across large geographic boundaries—or a narrow geographic scope like a small town. A case (or project) specific TBL would measure the effects of a particular project in a specific location, such as a community building a park. The TBL can also apply to infrastructure projects at the state level or energy policy at the national level.

The level of the entity, type of project and the geographic scope will drive many of the decisions about what measures to include. That said, the set of measures will ultimately be determined by stakeholders and

“The level of the entity, type of project and the geographic scope will drive many of the decisions about what measures to include.”

subject matter experts and the ability to collect the necessary data. While there is significant literature on the appropriate measures to use for sustainability at the state or national levels, in the end, data availability will drive the TBL calculations. Many of the traditional sustainability measures, measures vetted through academic discourse, are presented below.

Economic Measures

Economic variables ought to be variables that deal with the bottom line and the flow of money. It could look at income or expenditures, taxes, business climate factors, employment, and business diversity factors. Specific examples include:

- Personal income
- Cost of underemployment
- Establishment churn
- Establishment sizes
- Job growth
- Employment distribution by sector
- Percentage of firms in each sector
- Revenue by sector contributing to gross state product

Environmental Measures

Environmental variables should represent measurements of natural resources and reflect potential influences to its viability. It could incorporate air and water quality, energy consumption, natural resources, solid and toxic waste, and land use/land cover. Ideally, having long-range trends available for each of the environmental variables

would help organizations identify the impacts a project or policy would have on the area. Specific examples include:

- Sulfur dioxide concentration
- Concentration of nitrogen oxides
- Selected priority pollutants
- Excessive nutrients
- Electricity consumption
- Fossil fuel consumption
- Solid waste management
- Hazardous waste management
- Change in land use/land cover

Social Measures

Social variables refer to social dimensions of a community or region and could include measurements of education, equity and access to social resources, health and well-being, quality of life, and social capital. The examples listed below are a small snippet of potential variables:

- Unemployment rate
- Female labor force participation rate
- Median household income
- Relative poverty
- Percentage of population with a post-secondary degree or certificate
- Average commute time
- Violent crimes per capita
- Health-adjusted life expectancy

Data for many of these measures are collected at the state and national levels, but are also available at the local or community level. Many are appropriate for a community to use when constructing a TBL. However, as the geographic scope and the nature of the project narrow, the set

of appropriate measures can change. For local or community-based projects, the TBL measures of success are best determined locally.

There are several similar approaches to secure stakeholder participation and input in designing the TBL framework: developing a decision matrix to incorporate public preferences into project planning and decision-making,³ using a “narrative format” to solicit shareholder participation and comprehensive project evaluation,⁴ and having stakeholders rank and weigh components of a sustainability framework according to community priorities.⁵ For example, a community may consider an important measure of success for an entrepreneurial development program to be the number of woman-owned companies formed over a five-year time period. Ultimately, it will be the organization’s responsibility to produce a final set of measures applicable to the task at hand.

Variations of the Triple Bottom Line Measurement

The application of the TBL by businesses, nonprofits and governments are motivated by the principles of economic, environmental and social sustainability, but differ with regard to the way they measure the three categories of outcomes. Proponents who have developed and applied sustainability assessment frameworks like the TBL encountered many challenges, chief among them, how to make an index that is both comprehensive and meaningful and how to identify suitable data for the variables that compose the index.

The Genuine Progress Indicator (GPI), for example, consists of 25 variables that encompass economic, social and environmental factors. Those variables are converted into monetary units and summed into a single, dollar-denominated measure.⁶ Minnesota developed its own progress indicator comprised of 42 variables that focused on the goals of a healthy economy and gauged progress in achieving these goals.⁷

There is a large body of literature on integrated assessment⁸ and sustainability measures that grew out of the disciplines that measure environmental impact. These are not constrained by strict economic theory for measuring changes in social welfare.⁹ Researchers in environmental policy argue that the three categories—economic, social and environmental—need to be integrated in order to see the complete picture of the consequences that a regulation, policy or economic development project may have and to assess policy options and tradeoffs.

Who Uses the Triple Bottom Line?

Businesses, nonprofits and government entities alike can all use the TBL.

Businesses

The TBL and its core value of sustainability have become compelling in the business world due to accumulating anecdotal evidence of greater long-term profitability. For example, reducing waste from packaging can also reduce costs. Among the firms that have been exemplars of these approaches are General Electric, Unilever, Procter and Gamble, 3M and Cascade Engineering.¹⁰ Although these

companies do not have an index-based TBL, one can see how they measure sustainability using the TBL concept. Cascade Engineering, for example, a private firm that does not need to file the detailed financial paperwork of public companies, has identified the following variables for their TBL scorecard:

- **Economic**
 - Amount of taxes paid
- **Social**
 - Average hours of training/employee
 - From welfare to career retention
 - Charitable contributions
- **Environmental/Safety**
 - Safety incident rate
 - Lost/restricted workday rate
 - Sales dollars per kilowatt hours
 - Greenhouse gas emissions
 - Use of post-consumer and industrial recycled material
 - Water consumption
 - Amount of waste to landfill

Nonprofits

Many nonprofit organizations have adopted the TBL and some have partnered with private firms to address broad sustainability issues that affect mutual stakeholders. Companies recognize that aligning with nonprofit organizations makes good business sense, particularly those nonprofits with goals of economic prosperity, social well-being and environmental protection.¹¹

The Ford Foundation has funded studies that used variations of the TBL to measure the effects of programs to increase wealth in dozens of rural regions across the United States.¹² Another example

“Companies recognize that aligning with nonprofit organizations makes good business sense, particularly those nonprofits with goals of economic prosperity, social well-being and environmental protection.”

is RSF Social Finance,¹³ a nonprofit organization that uniquely focuses on how their investments improve all three categories of the TBL. While RSF takes an original approach to the TBL concept, one can see how the TBL can be tailored to nearly any organization. Their approach includes the following:

- **Food and Agriculture** (economic): Explore new economic models that support sustainable food and agriculture while raising public awareness of the value of organic and biodynamic farming.
- **Ecological Stewardship** (environmental): Provide funding to organizations and projects devoted to sustaining, regenerating and preserving the earth's ecosystems, especially integrated, systems-based and culturally relevant approaches.
- **Education and the Arts** (social): Fund education and arts projects that are holistic and therapeutic.

Government

State, regional and local governments are increasingly adopting the TBL and analogous sustainability assessment frameworks as decision-making and performance-monitoring tools. Maryland, Minnesota, Vermont, Utah, the San Francisco Bay Area and Northeast Ohio area have conducted analyses using the TBL or a similar sustainability framework.

Policy-makers use these sustainability assessment frameworks to decide which actions they should or should not take to make society more sustainable. Policy-makers want to know the cause and effect relationship between actions—projects or policies—and whether the results move society toward or away from sustainability. The State of Maryland, for example, uses a blended GPI-TBL framework to compare initiatives—for example, investing in clean energy—against

“The concept of the triple bottom line can be used regionally by communities to encourage economic development growth in a sustainable manner.”

the baseline of “doing nothing” or against other policy options.¹⁴

Internationally, the European Union uses integrated assessment to identify the “likely positive and negative impacts of proposed policy actions, enabling informed political judgments to be made about the proposal and identify trade-offs in achieving competing objectives.”¹⁵ The EU guidelines have themselves been the subject of critique and have undergone several rounds of improvement.¹⁶ The process of refining the guidelines shows both the transparency of the process and the EU commitment to integrated assessment.

Regional Economic Development Initiatives

The concept of the triple bottom line can be used regionally by communities to encourage economic development growth in a sustainable manner. This requires an increased level of cooperation among businesses, nonprofit organizations, governments and citizens of the region. The following examples throughout the United States show various ways the TBL concept can be used to grow a region's economic base in a sustainable manner.

Cleveland, Ohio

In 2009, the mayor of Cleveland convened the Sustainable Cleveland 2019 (SC2019) Summit to bring together hundreds of people interested in applying the principles of sustainability to the design of the local economy.¹⁷ The SC2019 is a 10-year initiative to create a

sustainable economy in Cleveland by focusing on a TBL-like concept. The city uses four key areas for measuring sustainability: the personal and social environment, the natural environment, the built environment (e.g., infrastructure and urban growth patterns) and the business environment. Each key area has six goals. At this point, specific measurement indicators have not been fully developed; however, the city is looking to create a dashboard that could be combined to create an index for overall project success. This dashboard would allow for quick year-to-year assessment in the SC2019 progress.

Grand Rapids, Michigan, and the Surrounding Region

In 2005, the Grand Rapids region created the nation's first “Community Sustainability Partnership” to develop a roadmap to lead Grand Rapids to sustainability. The region employs 14 major indicators related to the region's quality of life and environmental factors to determine progress made towards sustainability. Rather than create an index, target goals were established for each indicator. More detailed information of the metrics used for each indicator can be found in their TBL report.¹⁸ Below are brief explanations of the variables used to measure their TBL.

- **Environmental Quality**
 - o Waste: trends in recycling, refuse and yard waste
 - o Energy: energy consumption, natural gas

consumption and alternative fuel usage

- o Water: water consumption
- o Air Quality: toxic release inventory and number of air pollution ozone action days
- o Built Environment: number of LEED registered and certified projects
- o Land Use and Natural Habitat: inventory of land use and forest canopy
- o Transportation: public transportation ridership

- **Economic Prosperity**

- o Personal Income: personal income per capita
- o Unemployment: unemployment rate
- o Redevelopment, Reinvestment and Jobs: results from brownfield redevelopment investment and job creation
- o Knowledge Competitiveness: third-party report ranking U.S. regions

- **Social Capital and Equity**

- o Safety and Security: crime statistics
- o Educational Attainment: degree attainment levels
- o Health and Wellness: infant mortality rate and blood lead levels trends
- o Quality of Life: home ownership, poverty, and reduced price and free lunches trends
- o Community Capital: 211 calls for assistance, voter participation and population and ethnicity

Summary

The Triple Bottom Line concept developed by John Elkington has changed the way businesses, nonprofits and governments measure sustainability and the performance of projects or policies. Beyond the foundation of measuring sustainability on three fronts—people, planet and profits—

the flexibility of the TBL allows organizations to apply the concept in a manner suitable to their specific needs.

There are challenges to putting the TBL into practice. These challenges include measuring each of the three categories, finding applicable data and calculating a project or policy's contribution to sustainability. These challenges aside, the TBL framework allows organizations to evaluate the ramifications of their decisions from a truly long-run perspective. ■

Notes

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8. Integrated assessment is used as a general rubric for all sustainability assessment frameworks, including TBL. The proliferation of frameworks and their acronyms often complicates the issues associated with implementing a TBL framework for evaluating economic development initiatives. Except for a couple of sustainability frameworks, the accessibility components and measures

can be easily organized into the three TBL categories (economic, social and environmental).

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