

COMMUNITY SOURCED RESEARCH: AN ECONOMIC BALANCE FOR ECOSYSTEM IMPACT ASSESSMENT

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ABSTRACT

Defining, measuring, and actually creating impact with the world beyond academic stakeholders has been an elusive objective for management scholarship. However, the concept of impact has recently been re-imagined as a multidimensional set of actions occurring within a regional ecosystem, a geographical area in which a business school is but one of many interrelated and interacting stakeholders. Our study builds upon this concept and uses a case study to develop an economic balance to assess the specific value added contribution of a business school's research and teaching to its regional ecosystem.

Keywords: Impact – Answerability – BSIS – Ecosystem - Economic Balance

INTRODUCTION

We are out of balance. The challenges facing the world in the 21st century are different from those deemed important to the academic side of management, and business schools are rapidly approaching an existential crisis of irrelevance (Kalika et al, 2016). Business schools are generally composed of disconnected disciplines staffed with academic faculty who do not practice what they teach and therefore, graduates are ill-equipped to critically think through the complex interrelated problems that await them at work (Mitroff et al, 2015). The failure of management scholarship to have meaningful impact on education and practice comes at a substantial cost to our profession.

While a college graduate can still expect to earn a higher income than someone without a college degree, Emmons et al (2019) found that higher education no longer offers a sure path to the wealth accumulation needed for socio-economic mobility. The financial data used in their study was not detailed enough to sort outcomes by academic discipline, but other sources that can offer such insight do not cast management education in a favorable light. The myth of a worthless humanities degree does not stand up to scrutiny, nor is it realistic to

believe that only business colleges can produce managers (Ruggeri, 2019). Social and economic data shows that 64% of humanities graduates end up working in business, with the largest group going into management, and further, leadership positions tend to be held by humanities graduates (AAAS, 2018).

Against the backdrop of the decline in the practical value of a traditional four-year college degree, it is a striking development to find that management positions can just as easily be filled by non-business graduates. For graduate programs, we can find examples like Deloitte, a consulting firm that invested \$300 million to set up its own corporate university in Dallas (Westlake, TX) and a sister campus in Belgium because business schools were not relevant to their needs for advanced training (IEDP, 2014). Management could be the integrative discipline that relates all business school specializations, but that has never been our enacted role (Mitroff et al, 2015). Market economics suggests that we are not fit to survive, as we are trapped in “a self-fulfilling cycle of irrelevant research perpetuated by the pursuit of research-on-research impact (RORI) as measured in citations by other scholars” (Hillon et al, 2019: 2).

Under the RORI system, assessment appears transparent and straightforward, but the ease of quantification hides the insignificance of this type of impact. We can use citation counts from a top-tier management journal to illustrate what “high” academic impact really means. Over the entire life of the *Academy of Management Journal* (AMJ), the most influential reference in the journal was cited 188 times over a 36-year period (Calma & Davies, 2016). Fong and Wilhite (2017) estimate that at least 54.1% of citations in top tier business journals have been coerced by editors or padded by authors (i.e. required for publication but not relevant to the article). Therefore, it is much more realistic to expect that only 86 citations (2.4 per year) of the top-cited reference in AMJ were legitimate. Using the current 18,637 members of the American Academy of Management as a drastic undercount for the global total faculty of management suggests that in any given year, only 0.01% of all management professors might cite the reference in their work. Corrected estimates found in all media using Google Scholar project a more generous 234 citations per year, or 1.3% of AOM members. Thus, the maximum attainable level of academic impact is arguably insignificant in every meaningful sense.

Our future survival depends upon breaking out of the RORI cycle. To that end, our study begins on a much more hopeful note and builds upon the progress that has been made in recent years to redefine and apply a new ecosystem concept of impact. Management scholars and their host business schools and universities do not exist in isolation. They belong to something much bigger. Therefore, the concept of impact has been re-imagined as a multidimensional set of actions occurring within a regional ecosystem, a geographical area in which a business school is but one of many interrelated and interacting stakeholders. Perhaps most importantly, impact under this new approach is a collaborative process with the needs and characteristics of the larger ecosystem shaping the research and teaching agenda of the business school.

A helpful reviewer of an earlier draft of this article noted that business rhetoric has appropriated the term “ecosystem” in order to negate its importance in relation to economic interests. We agree that we have used the term, perhaps too loosely, to broadly describe a regional socio-ecological system that includes

all aspects of natural and human environments. This sense of the word was used by Kalika et al (2016) as they developed a regional concept of impact and our intention was also to place the economic aspects of human life into a larger context so that the economic balance could actually account for both positive and negative impacts beyond mere business activity. However, we agree that a more appropriate term is needed, as “ecosystem” implies that natural environmental factors have been thoroughly taken into consideration. Our approach will allow for such considerations in the near future, but the current stage of our work focuses on the more direct impacts of management research and education.

As we continue to develop the concept of business school impact with an economic balance, we shall adopt Dykeman’s (1955) term “watershed” to capture all of the interconnected human and natural activities that occur on the land drained by a river system. Water “flows past and through many ‘owners,’ who each claim the river’s good parts but hesitate to claim the bad. Persuading people that they own and are responsible for the entire river, spring to delta, small town to metropolis, seems like the only real place to start cleanup” (Rich, 2011: 11). We face the same “cleanup” challenges when we talk about the need for business schools to be answerable for their actions, to be accountable to students and enterprise from classroom to career, with a spiral of supporting research interwoven throughout. However, the commodification and sale of everything, the need for unbridled economic growth has been “characterized by energetic wastefulness and an optimism” that resources can never be exhausted (Dykeman, 1955: 166-167). Becoming part of something larger will provide a local context of interrelationships within which business schools can begin to understand the balance of interests. “The concept of a watershed is critical to understanding rivers and our relationship with them. The geographic term ‘watershed,’ or ‘river basin’ as it is sometimes called, is often misunderstood. A watershed consists of not only the springs, creeks, brooks, rivers, ponds and lakes, but also the land surrounding these water bodies. The reason this concept is so important is that most of the pollution that impacts our waterways occurs on land. The struggles over water quality from changing land-use patterns and growth...are common to many rivers, as farmland and forest disappear to make way for commercial and residential development” (Rich, 2011: 92).

This article is part of a larger project, a multi-year thought process in which this year’s work has turned into a series of three articles. The first provides a basis for discussion of impact as the existential crisis that threatens our profession. The second article, the one that you are reading at this very moment, follows a case example of a management school, beginning with the conventional view of impact as flowing from the school to the ecosystem. A closer look at measures for this one-way concept of impact reveals that, just like the case of top-tier journal impact, a business school is a very small part of a much larger regional ecosystem and therefore, cannot have impact in any meaningful macro sense of significance. We then consider how a portion of their impact initiative could be reimagined as a collaborative process engaging the school, its students, and regional enterprise partners in a causally interrelated and ongoing process. To this extension of the ecosystem approach, we add an economic balance to measure whether their initiative can be justified. The more general contribution of this study is to propose an economic balance assessment for the impact of management scholarship on education and practice.

The third article of our series will apply this measurable “community sourced research” finding to plan the process for creating impact in a greenfield school of management. Instead of seeking a gradual extension of its impact into the ecosystem, we will imagine the process beginning with the watershed ecosystem that hosts the school. But, that is our next paper. Let’s continue with the current one now.

ANSWERABILITY FOR IMPACT

A helpful reviewer of an earlier draft of this article noted that our concern over the existential crisis facing management education is self-serving. We agree wholeheartedly. We do have a vested interest and our livelihoods depend upon finding viable ways to add value to society through management education and scholarship, as this is the only path to long-term sustainability for our profession. The rising cost of higher education has not kept pace with the benefits of a college degree and while the few elite business schools have resources to perpetually pursue irrelevance, the vast majority of the 13,000+ worldwide business schools will not survive by continuing to sell a standard curriculum that was never connected to the practice of management (Parker, 2018). Thus, the primary objective of this article is to demonstrate that value added to stakeholders can be measured and weighed via economic balance against the costs of creating meaningful impact. We did not invent the concept of an economic balance, but as Savall (1981) noted for management science, past studies of the social and technical aspects of work lacked an economic analysis. Our novel contribution is to add an economic analysis to remedy its historical absence in the concept and practice of impact. Specifically, we will explore how to weigh the value added of a management program against its costs. To help clarify our intent, a reviewer asked rhetorically, “Do any public universities or colleges cover all of their costs?” This was a clever suggestion to point out that an economic balance for a business school is not an account of direct program revenues and expenses. Rather, the question answered is whether the costs of an educational program are outweighed by the total value created for stakeholders in the school’s host region. The article’s introduction and prelude on the way to that objective are meant to offer the reader some insight on the evolution of impact as it diverges from the RORI model.

The reviewer also spoke of the failure of a higher purpose for higher education. There has been a sliding of functions in that the purpose of K-12 education to prepare and assimilate young adults to take their places in civil society is no longer fulfilled by the time a citizen graduates from high school. Only about one-third of adults in industrialized societies have earned college degrees, so the duty to prepare students for active civic engagement has not been assumed by higher education. Learning standards for high school graduates have also declined, and those who do go on to college are not as prepared for advanced studies. Thus, the long ago and far away ideal of a university to awaken a lifelong desire to learn has been replaced by the practical necessity of graduates to gain marketable career skills and knowledge. Dykeman (1955) speaks of the “falsehood of inevitability” to describe the false rhetorical non-choices that serve to maintain business as usual, or in our case, business school

as usual. It is a false non-choice for a program to justify its continued irrelevance with the claim that higher education cannot offer career training and also fulfill higher purposes. The rhetoric does not hold up to scrutiny when we look beyond programs that offer no clear path for graduates to earn a living. For example, students studying to become doctors, lawyers, engineers, musicians, teachers, nurses, accountants, and chemists have a clear path ahead to a career as healthy functioning members of society. They may even have gained an appreciation for learning for its own sake and for the fun of solving problems. A university education should offer more than career preparation, but a school cannot really fulfill higher purposes if students do not gain any employable attributes along the way. So then, why do management professors cling to the falsehood of inevitability that lack of meaningful impact is uniquely essential to business schools?

Management and organization scholars are uniquely positioned within business schools to create the cohesion needed to realize an integrative strategic vision for value added impact on practice and education (Mitroff et al, 2015). But, the ideal role in theory for management has not materialized into action. The American Academy of Management (AOM) has expressed a strategic desire for a scholarship of practice “that will enhance the world’s social and economic well-being” (AOM, 2014). Yet, AOM does not ask its members to be morally answerable in any binding sense to the needs of students, businesses, and society (Boje, 2006). If we cannot depend upon professional business associations to lead the way, then who should be responsible for setting a new course for management scholarship? Perhaps it is unrealistic to expect the Academy to mandate conduct that can really only be chosen by individuals and/or their colleges.

Kalika et al (2016) discovered that the choice of a business school to be relevant in its community works best as a voluntary commitment. As a practical course of action, a Bakhtinian moral answerability (1990) seems to require this voluntary commitment in order to have a local and immediate focus to entreat the world of practice to define the important topics of research and teaching. Following this local thread would allow us to create the sort of strategically purposeful and ongoing collaborative complex problem-solving research partnerships envisioned by Kuh’s (2008) concept of impact. Further, enacted answerability emphasizes the critical role of individual scholars and their schools to intentionally plan impact into research from the beginning (Kalika, 2018).

The creators of the Business School Impact System (BSIS) in France had not intended the initiative as a soul-searching exercise, but Kalika and Shenton (2017) reported that more than half of the schools adopting the BSIS reflected deeply on their purpose, role, and stakeholders. The major question to arise from such reflection concerns the orientations for educational programs and research. Should they market and translate existing programs more effectively with no substantive changes? Or, should they engage actively with ecosystem stakeholders to revise the curriculum to meet workforce needs and to co-create a regionally relevant research agenda?

This finding of reflection appears to recast the fundamental motive underlying the BSIS from whether a business school *has* an impact on its regional ecosystem to whether it *chooses* to have an impact. Roughly half of the schools contemplating the BSIS have thus far chosen to make no changes, while

the other half engages in reflection on their understanding of impact. Of this reflective half, some choose to change only their marketing and translation efforts, while the final group chooses to make substantive changes to support their intent to become an active participant of the life of their regional ecosystem. Kalika and Shenton (2017) did not provide exact numbers of schools falling into each category, but they noted the controversial nature of the question, thereby suggesting that a smaller percentage of BSIS candidates ultimately decides on a strategy of relevance. For a relatively recent and voluntary initiative, these early results are encouraging, but also point to some necessary changes if the desire is for business schools to fundamentally re-build the practice of impact.

The next step in the quest for relevance and impact is to make the BSIS's unintended reflection and active participative ecosystem engagement intentional. This would involve reorienting the BSIS from an assessment scheme with score-based outcomes to a process ontology with the purpose of awakening and becoming. Also, Kalika and Shenton (2017) inadvertently revealed another necessary change when they reported that schools adopting the BSIS created new internal positions to professionalize the management of the initiative. This need for increased staffing suggests that "impact" was to be added on to everything the school was currently doing, rather than stop doing research intended only for other academics and similar activities that have no impact on the school's regional ecosystem.

Business schools tend to have college level curriculum committees in place in addition to discipline-specific committees, so impact is not dependent upon acquiring new resources, but rather depends upon a change in strategic direction. Without a conscious choice to re-define impact, no substantive change is possible. Business-as-usual plus a new "impact department" is a structure that answers the wish of many AOM survey respondents (Haley et al, 2017) for someone else to worry about impact, just as someone else should promote academic offerings as they are and recruit students to fill the seats. Ironically, the school of management in our case study had a traditional business school and an innovative management program uneasily existing side by side for years before they decided to adopt the BSIS initiative. Thus, the school had already tried the "impact department" approach, but found that it could not sufficiently inoculate its host against irrelevance.

Although definitely a step in the right direction, the BSIS still appears to be viewed by many as an addition, a new initiative to be added onto the RORI system without necessarily discontinuing any current activities that lack demonstrable benefit to anyone outside of academia. To be fair and clear, this perception of business-as-usual is not the fault of the BSIS initiative creators. They should be praised for their efforts to chart a new path for impact.

In the RORI approach to impact, the focus on citation data rarely moves beyond academia to explore applications in practice because the system was designed to encourage and measure research within academia, not beyond. Management scholars tend to accept a forced choice between theory *or* practice, but that has not helped either side. Kalika (2018) found that the overall level of impact - whether academic or practical - was quite low, thereby indicating that neither extreme was doing a very good job of having impact on its intended audience or stakeholder group.

Van Fleet and Wren's (2005: 54) survey of AACSB member institutions found a decline in knowledge of management history, what the authors defined as "an unfolding story of events, people, and ideas that define who we are and how we understand our discipline." McQuarrie (2005: 241) juxtaposed these survey responses with her discovery of a rather wide range of basic historical errors presented in introductory management textbooks and she concluded: "omissions, errors, or inaccuracies in accounts of historical events create a flawed foundation underlying the presentation of more contemporary material, and that a flawed foundation brings the accuracy of the entire discussion into question."

In the process of forgetting our origins, we became absorbed by the bureaucracy of higher education, an intricate system of rule by nobody in which "there is no one left who could even be asked to answer for what is being done...making it impossible to localize responsibility and to identify the enemy" (Arendt, 1970: 38-39). What can be done to encourage answerability for meaningful impact of management research on education and practice? We suggest that a social contract for cooperation and reciprocity among business schools and their regional ecosystem partners might offer the best path in the search for mutual interests and benefits. An ecosystem approach forces us to ground management research and teaching in a very particular physical and social context, providing an immediacy that might help us recover our lost sense of responsibility and dignity of our work.

WHAT HAPPENS IF A BUSINESS SCHOOL DISAPPEARS?

Kalika et al (2016) conceived their new approach to impact by simply imagining what would be lost if a business school were to disappear from its local landscape. This method is essentially the plot of films like *It's a Wonderful Life*, but instead of following the parallel reality timeline minus the impact of George Bailey's life on the little town of Bedford Falls, the BSIS began by removing the business school.

The first phase of the BSIS process was to create an information system to gather data on seven categories of impact. From Kalika et al (2016), the categories are financial, educational, business development, intellectual, regional ecosystem, societal, and image and attractiveness. Table 1 lists these categories with a brief explanation of their content. To illustrate the BSIS process, we present a case example of a European school of management (hereafter known as ESM), one of approximately thirty schools that has followed a BSIS-inspired process through successive phases of their program's development. This case illustrates how intellectual impact is much easier to quantify with academic publications and conference presentations than with applied intellectual action for business development and the betterment of society.

On average, each faculty member of ESM produces one publication and makes one presentation per year. However, there is a causal gap in reasoning from these academic measures to contemplating meaningful impact on the regional ecosystem. It is possible to relate both current and potential micro-level value-added performances to macro phenomena, but this requires a thorough intervention to gather and assess qualitative, quantitative, and financial data

(Savall & Zardet, 2008). Ultimately, ESM realized in the course of its reflection that they could not teach management in a responsible way without a parallel effort to learn how to manage their own affairs.

The value of the BSIS, as Kalika et al (2016) observed, is that it begins a process of learning, first with an information system, then with deep reflection on who we are and what we hope to do as a business school in our region. Business schools tend to have information systems designed for accreditation compliance (e.g. AACSB), with categories for teaching, research, and service. Assessment grid examples are included as appendices to the accreditation standards such that re-accreditation becomes a fill-in-the-blanks exercise. Thus, the path toward reflection on impact tends to begin by attempting to fit the information that they already have on hand into each of the BSIS categories. If the learning process goes well, then the school soon realizes that the BSIS requires new information.

Table 1: BSIS Impact Categories (Kalika et al, 2016)

Type of Impact	Description
Financial	Direct budget, payroll, and other expenditures
Educational	Annual numbers of regional, national, and international students; Graduates entering the job market annually; Managerial impact in region of executive education programs
Business Development	Assistance with new business creation; Services to the local economy: Internships, apprenticeships, market studies, and projects to existing businesses
Intellectual	Publications, research chairs, specialized programs, conferences, workshops, and research partnerships with the managerial and business community of the region – All “specifically related to the concerns of the region or carried out in collaboration with local companies”
Regional Ecosystem	Engagement of faculty and students in public life: Professional associations, economic development bodies, local government agencies
Societal	Content of educational programs includes responsible management and sustainable development; Management of the school highlights diversity, equal access, responsible/sustainable practices
Image & Attractiveness	The school attracts companies to the region (Kalika et al, 2016 note that this is harder to measure than the ability to attract non-local students and talented faculty)

To focus efforts in creating an information system, ESM identified specific stakeholder groups with different perspectives of the school’s impact. These groups overlapped in their knowledge of impact, and thus did not correspond neatly to single BSIS categories, but that was to be expected in moving beyond a purely internal academic form of impact. Examples of stakeholders include students, alumni, faculty, staff, scholar-practitioners, managers of regional companies and organizations, officials of regional

government agencies, economic development professionals, and natural resource conservation personnel. The first phase of the process also involved gathering demographic data on the region to describe the macro context in which ESM is situated. That might be obvious advice for an entrepreneur, but surprisingly is not something that business schools tend to do.

The second phase of ESM's information system development process combined the impact categories with their existing strategic action plans. Table 2 details the integration of BSIS impact with stakeholders and strategic actions and illustrates how the initial information system has been refined to gather data and assess the school's specific performances.

Table 2: Integration of BSIS Impact, Stakeholders, and Strategic Action

Stakeholders & Type of Contribution	How is this measured?
Students & Alumni	
Student success in the educational process	Description of support programs
Education in social responsibility & business ethics	Specific required courses
Preparation of students for employment	Numbers of employed graduates
Diversity of cultural & international backgrounds	Demographic data
Executive education & life-long training	Numbers of participants
Companies & Organizations	
Skilled managers & experts provided to companies	Numbers of managers & experts
Development & application of innovative management methods & practices	Descriptions of practices
Assistance with cultural & international issues	Descriptions of assistance rendered
Faculty & Staff	
Socially responsible academic & administrative staff	Description of practices
Socially responsible management of the school	Description of practices
Academic & Scholar-Practitioners	
Research on social responsibility	Numbers of publications
Impactful research & engaged scholarship	Description of research partnerships
Local & National Territories	
Participation in regional planning	Faculty board memberships
Dissemination of socially responsible practices in the region	Numbers of partnerships
Impacts on value creation in the region	Employment of graduates
Society at Large	
Contribution to social mobility	Low tuition & financial aid

Education of socially responsible managers	Dedicated degree programs
Support for socially responsible activities of student associations	Descriptions of student associations
Contribution to sustainable & human global development	Specific required courses
Natural Environment	
Natural resource conservation	Description of initiatives
Purchasing decisions	Description of policy and review
Training students & staff in eco-friendly behaviors	Description of training programs

Careful examination of these contributions and measures reveals that most could be characterized as matters of internal policy and budget stewardship. At this stage of the information system process development, the deficit of quantifiable impact on the external ecosystem led ESM to make an analogy that their payroll and direct spending and their numbers of employees and students were proxies for impact. Unfortunately, this enterprise analogy is inappropriate on multiple levels.

On the surface of this analogy, consider that an enterprise with 1,000 employees spends \$400 million per year to serve 11,000 customers who pay less than half of the actual cost of the service. Thus, a business school is comparable to a startup business that never breaks even. Its continued success (i.e. making up the shortfall) depends upon government funding, charitable donations, and perhaps semi-commercial revenues from offering business development services. Further, the school generates no revenue beyond tuition and fees and if there is value added from the education they offer, it is not measured.

Contextually, we can compare the school's payroll and direct expenses with the regional gross domestic product. It is somewhat sobering in that a \$400 million budget has a definite and meaningful impact on faculty, staff, and students; however, annual combined economic activity in the region amounts to approximately \$280 billion, therefore, the school of management only contributes 0.14 % of this total. Also, the 1,000 employees and 11,000 students are just 0.15% of the regional population. These relative comparisons highlight the fact that the easiest-to-grasp proxy measures for impact are, from an accounting perspective, financially insignificant and well within the round-off error of the larger regional economy. The mere existence of a business school might allow its host terrain access to a share of provincial and national government educational funds. But, that sort of easily measured budget allocation is simply a redistribution or repatriation of taxpayer revenue and not a measure of the value added contribution of the business school to its ecosystem.

Related to the questions of scale and value creation is the finding that there is a threshold level of impact for practical significance that is quite a lot higher than the level needed to claim statistical significance. In accounting practice, we find a commonly accepted 5% of net income threshold for financial materiality (Elifisen & Messier, 2015). If we put this in terms of ESM's \$400 million school budget and \$280 billion regional economy, we see that a 5% threshold for impact would be \$20 million internally and \$14 billion in the broader ecosystem. Ory (2015) studied university social and environmental

responsibility initiatives and found a similar threshold concept while analyzing data from multiple entities to compile a tableau de bord (i.e. set of piloting indicators). This finding is intriguing because it suggests the existence of qualitative thresholds for material significance of management scholarship and education impact, thereby leading us back to the need for a business school to *choose* to have impact with a strategy of intentional relevance.

Kalika et al (2016) offer a starting place for reflection on current practices, for a business school to begin to assess its interdependencies with its host region. Naturally, the contemplation takes the perspective of the school looking outward for indicators that its presence is felt. However, from the ecosystem's macro economic perspective, the approach of imagining what would be lost if a business school disappeared (Kalika et al, 2016) has one unavoidable answer: The regional ecosystem would not notice the absence.

Distressing as this answer may be, it clearly points toward action: If relevance cannot be a function of overall economic contribution, then it must be derived from the qualitative uniqueness of the contribution on selective parts of the ecosystem. And this revelation brings us to the final problem with the business-school-as-enterprise analogy. On a theoretical level, the analogy lacks a causal explanation and a temporal dimension to account for how management research and education create future value added potential. Ijiri (1986) noted that financial accounting also suffers from this deficit, as a balance sheet reports present wealth without explaining the details of how it was produced, and without noting whether the firm has invested in its future capacity to continue creating wealth. The income statement provides some insight on revenues and expenses, but still cannot explain why wealth increased or decreased. We are missing an "action statement" to specifically explain how resources were used to maintain enterprise momentum, create value in the current period, and invest in future value added potential (Ijiri, 1986).

AN ECONOMIC BALANCE FOR ECOSYSTEM IMPACT

There is a need to critically assess how we measure impact because at present, we rely upon single-entry accounts of business school wealth disconnected from any meaningful causal value added processes. Intellectual impact is much more challenging to measure because the information systems of universities are generally not designed to assess time-delayed effects occurring within a large and complex tangled network of forces (Kalika et al, 2016). Methodology, therefore, has yet to catch up with the new concept of impact. While the imagined loss approach of the BSIS provides a baseline from which to begin work, it crucially sidesteps the question of whether the specific content of a business school's research and teaching creates or destroys value within its regional ecosystem. We shall ignore the possibility that a business school neither destroys nor creates value because consuming public resources to produce no net benefit is arguably a loss to everyone, including the business school faculty.

ESM translated the BSIS initiative into 21 strategic actions with proposed benefits distributed across 7 stakeholder groups (See Table 2). Most were matters of internal policy or budget stewardship and their measures were not causally relevant to the actions. Although most actions had no external

impact by themselves, some could easily be combined into an intentional systems approach to create impact. Coherent causal reasoning would also produce more appropriate measures. For instance, under “Society at Large: Contribution to Social Mobility,” low tuition and financial aid could be part of a project to increase social mobility, but the cost of the degree is not a measure of social mobility. The school would need to engage with regional enterprise to develop educational programs to produce employable graduates, followed by graduates finding work with regional enterprises and then earning more than if they had not chosen to pursue a business degree at the school. The causal reasoning is relatively simple, but the institutional barriers to implementation and measurement are formidable. The traditional business school organization structures split teaching from research and separate both from industry partnerships. That leaves a linear concept of impact as an action causally directed toward an anonymous recipient, with both parties unaware of the personal facts of each other’s existence.

For impact to be mutually determined, the business school and its environment must be viewed as one causally interrelated socio-ecology (Emery, 1993). ESM had a BSIS head start on other schools because they had a partnership with a longstanding research institute that operated a center for innovative management alongside ESM’s traditional business programs. Additionally, ESM offers optional programs in which students alternate weeks in the classroom with weeks at work in a continuous learn-and-do cycle. These offerings range from a professional certification to a full masters degree program. Student implementation of learning concepts forms an immediate, but indirect research partnership with future potential to engage faculty directly with the firm. Students also provide rapid feedback for faculty to address immediate questions and to adjust their longer-term programs of research.

We propose that one of ESM’s alternating innovative management masters programs could be evaluated for ecosystem impact in the context of a qualitative action statement of our causal reasoning (Ijiri, 1986). These programs have advantages in that they already exist, masters students are more likely to have an employment history for a before and after comparison, and an assessment could be designed to begin with a new cohort of students.

We will focus on five interrelated actions from the ESM case (See Table 2) to develop into an impact project basket with measurable costs and benefits for the school, its students, enterprise partners, and the broader regional society. Relevant qualitative, quantitative, and financial data will then be used to create an economic balance to evaluate project investments (e.g. wages, training, materials, equipment) against anticipated gains to value added, including hidden performances as well as reduction of value destruction (Savall & Zardet, 2008). Table 3 displays the components and estimated sums for the economic balance.

Planning for management scholarship impact is a deliberate process of engagement with enterprise collaborators to identify complex problems to solve as part of a long-term program of research (Hillon et al, 2019). The action statements in the first column of Table 3 provide an overview of this planning process followed by a qualitative description in the second column. The level of detail needed to create an innovative management program is beyond the scope of this article, but we hope that the reader can see how the actions to implement a strategy of impact unfold qualitatively into quantitative and financial indicators

that allow us to track progress and assess results. Moreover, this economic balance for one program in a business school should clearly demonstrate why the BSIS requires a new information system.

We have made assumptions for a conservative estimate of the value created among ecosystem stakeholders by an innovative management program that brought them all together for a common effort. And, it is impossible to arrive at the calculated \$14,480 net benefit at the bottom right corner of Table 3 without a thorough qualitative understanding of the strategy process. Likewise, Ijiri's (1986) qualitative action statement detailing strategy and implementation is the missing causal explanation for the macro financial measures of enterprise wealth that appear on balance sheets and income statements. As an accounting theorist, it was enough to know that there were hidden actions causing the visible results he saw, so he did not venture out to discuss these interrelationships with strategists and managers digging blissfully unaware in their own field.

Table 3: Economic Balance for Innovative Management Impact

Action Statement ¹	Qualitative	Quantitative	Financial ³
Impactful research & engaged scholarship	Problems to study are identified and diagnosed with each enterprise	2 FTE Faculty ² 1 FT Research staff School facility & equipment charge ²	- \$224,000 - 67,000 - 87,300
Development & application of innovative management methods & practices	Methods are developed and applied in partnership with each enterprise	10 FT Enterprise collaborators ² Enterprise facility & equipment charge	- \$670,000 - 201,000
Preparation of students for employment	Students learn to apply innovative management practices & participate in research with faculty & enterprise partners	Cohort of 20 students ² Student tuition paid Opportunity cost ⁴	- \$94,575 0
Impacts on value creation in the region	Enterprise momentum is maintained by reduction of friction. Current value creation & future potential are increased with innovative management.	10 enterprises per year Net change in value creation over traditional program ⁵	\$1,203,600
Contribution to Social Mobility	Graduates earn more than if they had chosen to pursue a traditional business masters degree. Their employers gain resiliency and competitive advantage. The region tax revenues increase.	Break-even salary increase is \$4,729 per graduate. Break-even benefit return to society is \$14,186 per graduate ⁶ Additional region taxes ⁶	\$60,180

Economic Balance		Business School	- \$283,725
		Students	-94,575
		Enterprise	332,600
		Regional Ecosystem	<u>60,180</u>
		Net Benefit	\$14,480

Notes

1 Action statements from Table 2

2 The same 2 full-time equivalent faculty and 1 full-time staff member support the research, development, and teaching of innovative management practices for an annual cohort of 20 students working with 10 enterprise partners (each contributing 1 full-time equivalent) in a single 2-year masters degree program (12 courses + Enterprise Apprenticeship + Research Participation). Facility and equipment charge is an estimate of school resources allocated to the program.

3 Conservative estimates using: Management faculty \$100,000 salary + 12% benefits; Research staff \$60,000 salary + 12% benefits; Facility & equipment charged at 30% of labor cost; Enterprise collaborator salary \$60,000 + 12% benefits; Enterprise facility and equipment charge 30% of labor cost; Low tuition = 25% of \$378,300 program cost to school

4 Student works half-time during the 2-year masters program, but gains training designed to increase their potential. Therefore, opportunity cost is assumed to be zero.

5 Assumes a traditional program offers no gain or destruction of value. Minimum hidden cost (i.e. friction) estimate of \$9,026 per person with 1/3 or \$3,009 recouped to the firm per year (Savall & Zardet, 2008). Assumes that each enterprise partner has 40 employees. No estimates are included for improvements to current value creation and future potential.

6 A masters program has the advantage of students with salary history, thereby allowing a pre and post calculation. Lacking salary data for this study, we solved for the necessary break-even increase. Region tax revenue assumes a 5% tax on net change in value creation. We have not calculated the increase to state/national tax to offset the cost of education to society.

One of Ijiri's writing co-authors, Robert S. Kaplan, sought to understand the empty quarter of action with activity-based accounting and a balanced scorecard. But, most firms have only shrugged at the competitive advantage of these improvements to performance measurement and have continued with traditional cost accounting developed for a bygone industrial commodity era (Kaplan, 2006). For the few firms that have seriously considered new perspectives, the tremendous learning curve deterred most from adopting a full scorecard, at best emphasizing only the financial metrics without the necessary activity-based costing data needed to give it life. However, activity-based accounting turned out to be only one of the essential changes to make a balance scorecard work in practice. The other essential change was to a systems perspective of the enterprise to account for internal and external factors steering performance. Within this systems perspective we find Ijiri's (1986) triple-entry momentum accounting method, which measures how the enterprise's capacity to create new value and realize wealth is changing to meet future challenges and opportunities. This sounds like a worthy purpose for strategy and management scholarship in the context of the high cost and declining market return on a college degree, conditions that will eventually force us to measure the actual value of our impact on students, businesses, and society.

CONCLUSION

A university is probably the only organization in the world today that

can spend hundreds of millions of dollars every year with only an unmeasured assumption about the value offered in return for their budget. Among all stakeholders, our economic balance calculations revealed that the business school is designed as a perpetual loss-making enterprise, but risks nothing, has incentives against moral answerability, because students, the state, and donors continue to pay our expenses. We actively pursue academic irrelevance and rank our journals to measure the prestige of the loss of dignity in our work.

Social scientists have always been infatuated with a pre-Newtonian doctrine of knowledge and the belief that science “is some kind of distorted distillation and watered-down and mixed-up words of Francis Bacon from some centuries ago, words which were then supposed to be the deep philosophy of science” (Feynman, 2011/1966: 315). Bacon’s speculation about what scientists do became the metaphysical spirit guide leading 20th century social scientists away from truth. Our mimicry of science intensified into a cult of statistical significance intended to fool the layman, perhaps also to fool ourselves that the “scientism” of business research was not actually failing so spectacularly to improve practice (Basu, 2012). The endeavor to find a better approach must be an act of consciously questioning our concept of responsibility, a new answerable beginning for living story of silent voices to emerge through critical reflexive deconstruction of the theoretic narratives held by management scholars to be unshakable truth (Boje & Jørgensen, 2008).

It is the need to make our profession meaningful that leads us into the third stage of our work. Changing the focus of study to the qualitative uniqueness of a contribution requires not just a different perspective of the business school and its ecosystem as one unit of analysis, but also a thorough knowledge through the eyes of the ecosystem. Dykeman (1955) offered this sort of figure-ground reversal when she explored the history, character, and activities of a watershed that had all contributed to the death of a river. The mutual interdependence of causal processes became apparent as the health of the river reflected back on the land and people living in the watershed. Most relevant to our topic of business school impact, economic activity produced benefits while contributing to the river’s death, which then enacted a balance of payments on the watershed in terms of lower quality of life and wastage of future opportunities.

These many flowing storylines were there long before the business school set foot in the waters. Conscious and intentional impact must find a peaceful home among the indigenous resources, knowledge, people, and values of the watershed. The task of our upcoming third paper in this series is to explore impact defined from the watershed ecosystem perspective by first assessing the character and history of the region, what it values and wants to preserve as it provides a sustainable livelihood for all life within its boundaries. Dykeman’s watershed ecosystem storytelling approach offers an ideal model for developing impactful management teaching and research because it is an open systems model that involves story-listening, community engagement, and co-creation of actionable knowledge.

Impact is not something that a school of management ever finishes – it is fundamentally a learning process to understand both past history and the changing face of its environment. Our never-finishing needs a new beginning. We are out of balance because we have forgotten our history of place and lost the

imagination to re-present its wisdom in calling the symbolic action of story into being.

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