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Abstract

This paper calls for an evolution towards "business for good" among leading firms. We highlight the necessary shift from linearity towards circular value creation and stress the adaptation of current performance assessments in order to move away from a shareholder primacy towards a holistic evaluation taking into account social and environmental performance. We first illustrate this point with a marginally known initiative set up in the early 2010s between two MNEs that started to integrate the principles of circular economy into their supply chains. H.J Heinz and Ford Motors aspired to pursue social and environmental objectives as part of their activities, but ultimately had to abandon this initiative due to the profit-driven vision of the groups' major shareholders. We then call for a holistic performance evaluation approach and emphasize the usefulness of circularity indicators, to help businesses maintain multifaceted objectives.

Keywords: Mission-driven business, Circular economy, Performance measurement, Triple bottom line, Circularity indicators

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Beyond financial value: A call for circularity indicators to support mission-driven business

As this paper goes to press, the world is still reeling from the health crisis, caused by the significant impact of humans on the Earth's ecosystems (Acquier and Carbone, 2020). This impact comes in various forms of overexploitation of natural environments and the need for wild and domesticated species to coexist, producing viral bridges that eventually cause human infections. The current pandemic thus stresses the need for all actors to acknowledge their responsibility for ameliorating their environmental and social impacts. In this context, businesses are under rising scrutiny. In the media, it is usually social entrepreneurs and positive-impact start-ups that are associated with innovative solutions, whereas multinational enterprises (MNEs) often make gloomy headlines related to window-dressing, or to unaccounted negative externalities. One of the few counter-examples is Danone, the first CAC40 enterprise that in June 2020, under the direction of Emmanuel Faber, became a mission-driven company. This company status (enabled by the French PACTE law) integrates social and environmental objectives into the firm's business purpose. Yet, a few weeks ago, the business world was rattled by the ousting of Faber. His dismissal, rooted in pressures from profit-driven decision-makers, has been interpreted by many experts as a defeat in the battle between environmental and social stakes and an exclusively financial rationale (Barthélemy, 2021).

This paper calls for an evolution towards "business for good" among leading firms. We highlight the necessary shift from linearity towards circular value creation and stress the need to adapt current performance assessments in order to move away from a shareholder primacy towards a holistic evaluation taking into account social and environmental performance. We first illustrate this point with a marginally known initiative set up in the early 2010s between two MNEs that started to integrate the principles of circular economy into their supply chains. Like Danone, H.J Heinz and Ford Motors aspired to pursue social and environmental objectives as part of their activities, but ultimately had to abandon this initiative due to the profit-driven vision of the groups' major shareholders. We call for a holistic performance evaluation approach and emphasize the usefulness of circularity indicators to help businesses maintain multifaceted objectives.

An unexpected "mission-driven" collaboration

In nature, "symbiosis" designates an interaction between two different species living closely together in a mutually beneficial association. In warm waters, an example of such a relationship exists between the cleaner wrasses, marine fishes, living on the coral reefs and other larger local fish. The former feed on parasites and the dead tissues of the latter, thereby converting unwanted matter into food, while providing health advantages for the bigger fish. In the business world, an analogy for these types of interactions is called "industrial symbiosis". Firms involved in industrial symbiosis create value from their waste or by-products by forming creative interorganizational relationships (Bansal and McKnight, 2009). These synergies belong to the broader class of circular models, which propose a sustainable alternative to our contemporary linear economy. Currently, our value creation model follows a pattern where resources are extracted, transformed into products, used during consumption, and then discarded when consumers no longer perceive any utility. The circular economy breaks with this pattern by suggesting keeping resources and energy in closed loops using various strategies of return flows and extending the value of inputs as much as possible inside production systems. These models promise to diminish the use of new materials in production systems, thus decreasing the need to extract resources and ultimately reducing the impact on our planet (Ghisellini et al., 2016). In this paper, we present an example set up between H.J. Heinz and Ford Motors: tomato peels, organic by-products

generated from Heinz's production, became the raw material for the plastic embedded in Ford vehicles. To recount the story behind this circular project, we refer to press releases communicated by Ford and Heinz (Fernandez, 2014) as well as to the insights gathered from an interview we conducted with the then R&D director of H. J. Heinz at the commencement of the partnership.

In the early 2010s five MNEs, Heinz, Ford, Coca-Cola, Nike, and Procter & Gamble, began a technical collaboration to develop sustainable materials that could be used by each of them in their respective production. Instead of working exclusively towards profit maximization they explicitly tried to harvest economic benefits while reducing pollution and resource depletion by a decreased usage of petroleum-based plastics. The specific innovation the group was working on was an evolution in the composition of the PET plastics used in their products by increasing the integration of plant-based materials. Eventually, the answer would come not from newly sourced "virgin" materials, but from waste generated by the multinationals themselves and the application of circular economy principles. During the production process of its flagship product, ketchup, Heinz consumed more than two million tons of tomatoes per year. The raw material processing involved removing the tomato skins, which then became "tomato pomace". This by-product, having no intrinsic value for Heinz, was treated as a factory waste. Heinz's scientists identified that tomato pomace contained a considerable amount of fibres that could be recycled and subsequently used to replace the expensive petrol-based polymer fibres in plastics. Heinz presented this pomace-based composite to Ford to discuss potential applications for the automotive industry. In Ford's laboratories, they investigate the usage of these fibres for materials destined for vehicle manufacturing. Ultimately, as the saying goes, one man's trash became another's treasure.

The material was tested in vehicle wiring racks and storage bins. The results indicated that plastics in vehicles could be effectively replaced by tomato fibres, reducing the amount of plastic by 20% for this equipment. On Ford's side, this innovation reduced its dependency on petrochemicals in vehicle manufacturing, thus reducing petroleum sourcing and, by extension, decreasing the associated environmental impact. In addition, cost benefits were achieved, as the vegetal fibres were significantly cheaper than those based on petroleum. For Heinz, the external use of its by-products created a subsidiary revenue stream along with a significant reduction in waste volume. Like any waste, the pomace generated costs relating to its transport, storage, and processing, not to mention the environmental stress generated by these steps. Given that the automotive industry and even the apparently benign ketchup supply chain are not without their own controversies (Malet, 2017), these latter benefits, both financial and especially environmental, were welcome as they enabled the firms to better respond to customer expectations and create competitive advantages.

Unfortunately, this nascent partnership was short-lived. Two years after the start of this collaboration, two funds, 3G Capital and Berkshire Hathaway, revealed their plans to acquire Heinz. This was followed by many transformational changes in the company, one of them consisting in cutting off projects that could not quickly generate profits. The Heinz and Ford collaboration still needed additional investments and time for testing to be fully operational and hence was cancelled due to the lack of immediate returns on investment. Since its creation, 3G Capital has built a reputation as a "cost-cutting machine" (Solomon, 2017). A telling example is its practice of the Zero-Based Budgeting Method, questioning all expenditures independently of the budget that was set aside during previous periods. Analysing 3G's acquisitions, Professor Solomon of The University of Berkeley said: "One has to wonder if a firm can succeed simply by cutting. [...] eventually part of running a business means actually building something. Like it or not, that will require spending on new products and the business itself, something 3G's managers appear to hate above all else." (Solomon, 2017).

This implicitly “mission-driven” collaboration says a lot about corporate sustainability initiatives: contrary to widespread belief, even large mass-market multinationals are beginning to work on innovative solutions to address resource scarcity and pollution. In the present case, rather than performing window-dressing activities on the periphery of the value creation process, Ford and Heinz rethought in depth the design of their supply chains in order to reuse waste in closed loops and improve their societal impacts. Yet, when tensions between financial and non-financial performances arose, these companies found themselves under the obligation to protect shareholder value and abandon their ambitious collaboration. Sustainable objectives could not be achieved due to poor management control systems and skewed performance assessments failing to protect them.

To the rescue of “mission-driven” business

To encourage a shift towards more circularity in our value creation models and support “mission-driven” initiatives, we call for the adaptation of performance indicators so that financial, social, and environmental progress is taken into account. We detail these broader performance dimensions and propose a brief overview of such indicators. We further argue for the usefulness of circularity indicators and propose a selection of them that could have been applied to the Heinz-Ford example.

Across businesses, performance indicators have a dual purpose. On the one hand, they are used to report to stakeholders, such as shareholders and investors, enabling them to evaluate the progress of the organization. On the other hand, these indicators also provide internal support for more operational objectives (Neely et al., 1995). They are part of the management control mechanisms that aim to steer an organization to assure efficient resource usage and alignment of the company’s behaviour with its strategic goals. Historically, scholars and practitioners agreed that the sole objective of a corporation was to make profits and thereby increase shareholder value. Consequently, the traditional single bottom line exclusively accounts for financial results and often has a methodological bias towards recognising only what can be monetised, whereas it completely ignores externalities (i.e., additional costs or benefits caused by corporate activity which are not reflected in the market price) (Elkington, 1997).

Nevertheless, time has brought a substantial change within society’s expectations towards firms, which are now accountable for their societal impacts. MNEs, like Danone, Ford, and Heinz, have proactively started to include extra-financial objectives in their strategies. Acknowledging that the traditional bottom line accounts poorly for undesirable effects in other domains of value by obscuring trade-offs and problem shifting, scholars and practitioners also found that it hinders the exploitation of hidden beneficial synergies along the supply chain. In short, it fails to cut through the systemic complexity of companies (Iacovidou et al., 2017). In the case of the Heinz-Ford collaboration this had important implications for the project. As the performance indicators were not adapted to the changes towards circularity along the supply chain, they could not comprehensively provide reliable and convincing information on the multi-dimensional performance of this “mission-driven” partnership. On the contrary, the financial performance-driven evaluation delivered enough evidence to the decision-makers to abandon the project and favour other financially more promising projects.

The transformation towards circular supply chains therefore requires a shift in the way we think about performance evaluation. Recent decades have given rise to a broader accounting framework comprising more value domains: economic, environmental, and social. Economic metrics remain critical not only for ensuring a business’s financial viability, but also for fulfilling wider economic objectives such as the contribution to sustainable prosperity. Environmental metrics are important for ensuring the protection of human

health and ecosystems. In general, they measure carbon emissions, pollutant emissions to water, soil, and air, and resource depletion of water, minerals, metals, or land. Materials and products also have an impact on society. These impacts are the result of social interactions and relationships created in the context of resource extraction, processing, manufacturing, assembly, marketing, sale, use, recycling, and disposal, amongst others. The social domain can cover a wide range of topics, including human rights adherence, working hours, health and safety, employment creation, job quality, or participation rate in sustainability (Iacovidou et al., 2017).

These three performance dimensions (economic, environmental, and social) can be summarized as sustainability performance. Research has shown that the circular economy can be applied as a “toolbox” for improving a number of sustainability-related indicators (Schroeder et al., 2018). Indeed, scholars agree that the ultimate goal of the circular economy is sustainable development. The integration of circular economy principles into the Heinz-Ford collaboration therefore demanded new indicators to monitor progress towards circularity, generate a deeper understanding of circular supply chains, and set suitable and quantified targets (Saidani et al., 2019). Such circularity indicators have been designed to evaluate complex networks and enhance the multi-dimensional performance of firms. More than 50 of these measurement instruments have been developed by academics, consultants, and governmental agencies, encompassing different scopes and purposes to support businesses and their decision-makers (Howard et al., 2019; Saidani et al., 2019). For the Heinz-Ford case, we selected three exemplary circularity indicators:

- Total use and depletion of stocks of natural resources, notably critical and at-risk resources.

The aim of this indicator is to account for the total quantities of natural materials necessary for production. In the case at hand, Ford produces plastic parts for its vehicles, which requires multiple materials, such as cellulose, coal, natural gas, salt, and crude oil. Using this indicator could have accounted for environmental objectives and progress towards sustainability.

- Quantities of recirculated biological materials.

A key aim of Heinz was to maximize the usage of its tomatoes by recirculating the pomace. Hence, they could have used this indicator to measure the total quantity of materials used within products that are recirculated relative to the total flows of materials, thereby accounting for progress towards the circular economy.

- Value of recirculated biological materials.

The circulation of materials at their highest value is based on the twin notion of reduced costs of inputs, but also the opportunity for new sales. An indicator based on total sales revenue of Heinz’s pomace as well as on Ford’s reduced costs of plastic inputs provides a simple but clear measure of the overall financial value of this collaboration.

These three measurements demonstrate the usefulness of circularity indicators in this “mission-driven” collaboration. By combining financial and extra-financial measurements, they help create a holistic view of performance. From a strategic perspective, we argue that these indicators should be used both as operational indicators to control management operations and for reporting purposes to provide transparency to powerful shareholders, such as large investment funds. To efficiently integrate the circular economy, these operational and reporting indicators must be aligned. This aligning is key to driving the sustainability agenda forward and helps decision-makers to evaluate mission-driven business, such as the Heinz-Ford partnership.

Numerous companies are reflecting upon their role within society and are revising their company objectives. Some multinationals such as Danone even went beyond this exercise and changed their legal status to a mission-driven company, clearly stating that its purpose was not to maximize shareholder profits, but to work towards a more sustainable society. Likewise, the “mission-driven” collaboration between Heinz and Ford presented in this paper clearly intended to go beyond profit maximization and to make a positive impact on society by reducing the companies’ pollution and resource depletion. Yet, those initiatives have been sharply repelled by exclusively profit-driven decision-makers. This paper emphasizes the crucial role of performance measurement for the transition towards sustainability. Acknowledging the limitations of the traditional bottom line and highlighting its misfit with “mission-driven” corporate activities, we point to the necessity of using a triple bottom approach. In the context of the Heinz and Ford collaboration which took place in the realm of industrial symbiosis, we further propose the usage of circularity indicators to evaluate progress towards the circular economy. Using these indicators both for management control and reporting can drive the implementation of the circular economy and help decision-makers to evaluate complex projects with multi-dimensional objectives. In the case of Heinz and Ford, such an approach might have led to a different outcome. A range of such circularity indicators has already been developed; the time has come to apply them.

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