

“Cooperate to Transform”:

Understanding SMEs’ Sustainability Transition



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This speech was published on the occasion of the inauguration of Dr. Ir. Nikos Kalogeras on 20 May 2022 as professor at Zuyd University of Applied Sciences.

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1. Introduction

Dear Board,

Dear Deans,

Dear ladies and gentlemen Professors and other members of the academic staff,

Dear Ladies and gentlemen of the staff of Int Bus. & Communication domain/
Zuyd Univeristy,

Dear Ladies and gentlemen students and alumni,

Dear Friends,

and all of you, furthermore, who by your presence give expression to your interest.

As a child, I remember explaining to adults that I would love the idea of spending my life in a lime green environment wherein people cooperate properly, support each other, do not have conflicts, share their surplus for the common good, and enjoy a happy life. Were you also fascinated by such a green, peaceful, and inclusive lifestyle? Were you also such naïve schoolboy and girls? I have recently found a faded handwritten note inside one of my tattered primary school notebooks that goes like this:

Nikolas, Amades village, Chios Island, Greece, 1985:

I want to be in a lime green landscape where people live happily without borders and wars... A place where everyone is voluntarily committed to the collective good.

To be honest, I can still feel such a sensation, and I still desire to live in such a green and peaceful world. Is it a coincidence that I have been living in such a beautiful and green country as the Netherlands? Is it another coincidence that I have been studying the drivers of the green (sustainable) production and consumption behavior of various market participants for the last 22 years of my life? And is it a coincidence, a sign, or fate that I am standing before an audience at this very moment, ready to express my green sensations, my scientific expertise on drivers of sustainable and cooperative entrepreneurship, and my professional experiences acquired from the field of sustainable international business? Who has actually heard of or believes in so many coincidences? Yet, it is no coincidence, for sure, that I am feeling so honored that so many students,

colleagues, family, and friends are here to attend my inaugural address following my invitation. I am so happy that we are hosting you today in the International Business School Maastricht at the International Business & Communication domain of Zuyd University of Applied Sciences. The main focus of my presentation will be the Small Medium Enterprises' sustainability transition and green transformation through sustainable cooperation. This is the theme that so clearly ties together my childhood sensations, acquired scientific expertise, and teaching aspirations and philosophy on sustainable development.

An applied business approach to address sustainable development has gained substantial interest in applied management literature and business practice over the past 25 years. Since the Brundtland Commission's definition of sustainable development, "*development which meets the needs of the present without compromising the ability of future generations to meet their own needs*" (UN, 1987, p. 8), the term corporate or business sustainability has emerged. This term entails integrating economic, ecological, and social aspects in an organization's short and long-term planning (Dyllick and Hockerts, 2002). It has been imperative for organizations to reimagine their growth strategies to attach greater importance to ecological issues, ranging from environmental protection, sustainable technology and clean product development to the application of ethical and responsible principles in strategic, tactical and operational decision-making of entrepreneurs (Martinez-Ferrero & García- Sánchez, 2015).

Almost 30 years later and following the first introduction of the UN definition, the leaders of 193 nations participated in the United Nations (UN) General Assembly in 2015. They adopted an ambitious set of 17 global Sustainable Development Goals (SDGs). These goals aim to combat poverty, inequality, and discrimination. Essential shifts in stakeholder views on enabling and using ethical, responsible, and sustainable (ERS) management strategies and tools have also emerged. For example, supply chain partners and end-customers across industries and sectors have been increasingly interested in implementing such ERS strategies and tools in various activities for minimizing product-emission rates, increase production transparency, use more environmentally friendly packaging and lower carbon footprints, and for safeguarding the respect for human dignity along market channel processes (Ruyter *et al.*, 2022).

Several related notions to corporate sustainability (e.g., corporate social responsibility; corporate governance; corporate social performance, corporate philanthropy) have been discussed and described as important facets of large-sized corporations and SMEs to address particular aspects of their sustainable development. SMEs contribute to society and economies in various ways. In particular,

SMEs play a decisive role in the European Union's (EU's) economy and society. They are drivers of innovations across many industries and ensure social and regional stability. According to EC (2021), SMEs account for 99,8% (22 526 457) of all enterprises, 2/3 or 65,2% (83 397 501) of total employment, and close to 53% (3 338 billion) of the added value – in the “non-financial business economy” - created across the 27 member states. Undoubtedly, SMEs play an momentous role in the business economy of the EU-27. The average SME labour productivity, calculated as value added per person employed, was approximately EUR 40 000, and the average number of employees was 3.7. Dutch SMEs outperform some of these EU figures but underperform in others. In 2020, Dutch SMEs generated 62% of overall value added in the 'non-financial business economy' (EU average 53%) and their average productivity was approximately EUR 63 400. Yet, the willingness of Dutch banks to provide financing to SMEs remains well below the EU average (17.23% of Dutch SMEs see a deterioration, against 8.71% in the EU) (EC, 2021).

Despite these benefits, SMEs are confronted with many challenges. It should be pointed out that SMEs collectively contribute up to 70% of global pollution (Johnson & Schallenger, 2016). Also, the Covid-19 pandemic had a substantial impact on SMEs' value creation in Europe and globally. Two of the most affected sectors in the EU were accommodation and food services, in which SME value added dropped by 37.8% and SME employment by 11.1%. The same goes for transportation, administration and support services as well as manufacturing, which experienced decreases of 16.1%, 13.3% and 9.8%, respectively (EC 2021). Furthermore, pressing environmental and social issues (e.g., increasing energy prices and raw materials; effective waste and resources management, ensuring the wellbeing of citizens and employees) are posing significant challenges as well as excellent opportunities for European SMEs to engage in sustainable production processes and market systems.

A 2020 Eurobarometer survey manifests that EU SMEs have stalled regarding progress to green transition. Around a third of EU Member States have not adopted support measures to help SMEs comply with environmental and energy regulations, and green public procurement is still not yet widely adopted. Sustainability management requires that entrepreneurs and managers are able to evaluate and monitor SMEs' environmental and social performance and engage in a dialogue with external stakeholders on sustainable developments in the industry in which they are established and operate. Also, effective and efficient sustainability management requires the acquisition of entrepreneurial, risk management, technical skills (e.g., ICT skills), and skills related to professional communication in a digitalising society.

It is our mission as “Sustainable International Business” (SIB) research centre to facilitate the development of sustainability management frameworks. This development includes the co-creation of strategies and practical decision-support tools for the design of sustainable products/services, the implementation of sustainable processes and tactics, and the development of entrepreneurial professional programmes, which are also helpful in the process of organizational change and learning. The development of such entrepreneurial competencies will not only boost SMEs’ financial viability but also encourage them to contribute to an inclusive and sustainable society. We do this by employing knowledge dissemination and applied research, practice-based development of the “Student in the Lead” inclusive didactical approach, and coach/expert professionalization and training. In the remainder of this address, I will point out how we conceptualise SMEs’ sustainability transition and how strategic organizational settings (i.e., community-oriented business models such as cooperatives) allow for SMEs transformation and contribution towards a sustainable and inclusive economy and society.

Furthermore, as the International Business School Maastricht, domain of International Business & Communication, hosts our research centre, I will highlight the interfaces between SMEs’ sustainable behavior, knowledge transfer, and education for sustainable development. Finally, I will be showcasing the research and education agenda of our Sustainable International Business centre that substantiates our vision to *achieve transformation and innovation in international business education and SMEs with the aim of contributing to the “health and well-being” of SMEs and citizens in the Euregion, now and in the future.*

2. Conceptualizing SMEs' Sustainability Transition

2.1 Drivers of SMEs' Sustainability Transition

SMEs have been promoted as a critical component in the EU's attempt for a paradigm shift in sustainable production & consumption. This is mainly due to their insistence on employing non-sustainable production means due to their size that does not offer opportunities and investment capabilities (Ormazabal *et al.*, 2018). In 2020, 43% of EU SMEs were selling sustainable products and services, which makes up not more than 10% of their most recent annual turnover. About one in five SMEs (21%) sell sustainable products and services, representing between 11% and 50% of their annual turnover. A slightly higher number of EU SMEs (23%) sell such products and services, making up more than 50% of their turnover (EC, 2021). To achieve SMEs' total shift, and hence transformation, to sustainability, further changes in policy and funding mobilization are required. Thus, EU policy agencies embrace and suggest the implementation of the concept of Circular Economy in order to foster even greener and sustainable production and consumption systems. To this end, the 2020 Circular Economy Action Plan was introduced by the European Commission (EC,COM/2020/98).

The concept of the circular economy is currently gaining impetus as a way to move towards sustainable, low-carbon, resource-efficient, and competitive economies. The implementation of circular economy aims to prolong the life cycle of products and preserve scarce resources by retaining the economic value of the inputs and raw materials in the system (Prieto-Sandoval *et al.*, 2018). Recent studies (Esposito *et al.*, 2018; García-Quevedo *et al.*, 2020) show how a favourable policy environment can support changes in the sourcing and designing of products and production processes as well as creating an appropriate business and policy environment in terms of regulations. In turn, this is expected to drive decisions regarding SMEs strategy, as improved institutional mechanisms and a

stable production environment enhance the flow of information in the SMEs' participating networks and market systems.

Despite the potential economic, social, and environmental benefits of circular activities, their implementation among SMEs remains relatively rare. Hence, a relevant and practical question is what drives SMEs' transition to sustainable production systems (SPSs), which can be viewed as the creation of goods and services using processes and procedures that are non-polluting, conserve energy and natural resources, provide economic viability, safeguard the healthfulness of works, communities and consumers, and reward socially and creatively all working people and stakeholders. If production is sustainable, then the environment, employees, communities and organizations - all - benefit. These conditions can lead to more economically viable and productive enterprises, always in the long term and often in the short term. Thus, the conceptual spark of sustainable production lies in valuing longer-term consequences and benefits over short-term profits. Organizations can thrive by investing in well-designed safer products, resource efficient technologies and processes, and trained and empowered employees.

The transition to SPSs has received much attention from entrepreneurs, applied business researchers, and policy makers in recent years. For an SME, switching to an SPS is a strategic decision. Strategic decisions may affect the whole company or a significant part of its objectives and policies for an extended time (up to a period of 3-5 years). These decisions tend to deal with the resources needed to achieve organizational goals, and involve long-term relationships between the organization and its environment.

Moreover, strategic decisions entail investment opportunities with high risk levels. An example in the context of our domain would be a hog farmer's decision of whether or not to switch to organic hog production in order to get a preferred supplier relationship with a retailer. Such a decision will have a great impact on the whole firm for an extended period of time and entails a high degree of risk (e.g., Kalogeras *et al.* 2005).

Research has been conducted on the economic viability of SPSs. However, much of this research has been fragmented with little coordination and integration. Most empirical studies have taken the researcher's or professional conservationist's perspective, instead of that of the decision process of real decision-makers of SMEs. Hence, there is a need to better understand the SME's decision-making processes in order to explain and predict whether or not SMEs may adopt a SPS. From now on, I will attempt to shed light on the drivers of SMEs' transition to sustainable entrepreneurship by using the decision context of sustainable farming.

SMEs' Risk Behaviour

The agricultural domain is an excellent example of SMEs confronted with the question of whether or not to make a strategic decision toward SPSs. An agricultural SPS can be viewed as a production system that operates in such a way that does not harm the environment, biodiversity, and quality of crops. Nowadays, the agricultural sector in the EU-27 countries has been confronted with numerous questions from society about its production practices. For instance, a recent article from the *The Guardian* (November, 2021) reveals that Dutch politicians are considering plans to force hundreds of farmers to sell up and cut livestock numbers to reduce damaging ammonia pollution. The Netherlands has one of Europe's largest livestock industries, with more than 100 million cattle, chickens and pigs. It is also the EU's biggest meat exporter. Such a relatively small country with many inhabitants, industry, transport and agriculture, seems to reach the limits of what nature can take. Livestock produces manure that releases ammonia, a nitrogen compound, when mixed with urine. If this gets into lakes and streams via farm runoff, excessive nitrogen can damage sensitive natural habitats by, for example, encouraging algae blooms that deplete oxygen in surface waters. Therefore, it seems that large-scale commercial farms in the Netherlands employ production systems that use a lot of scarce resources and produce negative externalities. These resource and environmental issues, in combination with the fact that many of these production systems are not sustainable, have raised concerns on the part of policy makers, agribusiness companies, activist groups, farm community and consumers.

The notable work of Arrow (1971) and Pratt (1964) provides insight into the relationships between risk perceptions, risk attitudes (RA), and risk behaviour of market participants. Let's define the two main drivers of risk behaviour. *Risk perception* (RP) reflects the SME's interpretation of the likelihood of exposure to the content of the risk - e.g., uncertain payoffs when switching to a SPS - and is defined as a SME's assessment of the risk inherent in a particular decision situation. On the other hand, *risk attitude* (RA) reflects the SME's general or consistent predisposition toward the risk content - e.g., uncertain payoffs when switching to a SPS. It is important to emphasize that RA and RP are two different concepts. Whereas RA deals with the decision-makers's interpretation of the content of the risk, and how much they dislike risk, RP deals with the decision-maker's interpretation of the likelihood of being exposed to the content of a particular risk. Yet, the interaction of RA and RP can also drive behaviour.

In Pratt and Arrow's work, risk behaviour, reflected in the risk premium, is a function of risk aversion and the variance in additional wealth. Pennings and Wansink (2004) and Kalogeras (2010) showed that the Pratt and Arrow frame-

work implies that the interaction between RA and RP - the latter being reflected in the variance of additional wealth - drives the risk premium and hence, risk behaviour. That is, the greater the risk perceived, the more risk-averse SMEs will be. In comparison, less risk-averse SMEs will be less prone to avoiding risk. Hence, RP may be a driver of risk behaviour, but it may also strengthen or weaken the relationship between RA and risk behaviour. Thus, a more robust conceptualization and prediction of decision-makers' behaviour can be obtained by de-coupling risk behaviour into the separate components of RP and RA.

Risk may be perceived differently across SMEs, and their RA will depend on how SMEs cope with perceived risk. Before an SME can respond to risk, risk must first be perceived or identified (Trimpop, 1994). Identifying risks can be viewed as a cognitive process of identification, storage, and retrieval. While a transition to an SPS might be retrieved and hence considered risky by economic standards, the level of risk that the adoption of a SPS presents to a SME depends on its RP. There is a wide variety of research propositions on how risk preferences influence producers' behaviour. The utility concept plays a crucial role in this literature. In managerial and decision economics and management science literature, utility is derived from outcomes such as wealth, income, profit, selling price, among others. That is, the outcome domain is a monetary one. The utility function provides information about the utility that decision-makers derive from the different outcomes (wealth, income, profit, selling price, among others) levels (Pennings and Smidts, 2001). In the expected utility framework, the shape of the utility function is assumed to reflect a decision maker's risk preference (Pratt 1964; Arrow, 1971). Therefore, the expected subjective utility function of any prospect reveals an individual's attitudes towards risk.

One of the most commonly used techniques to measure risk attitudes rooted in the expected utility framework is the Certainty Equivalence (CE) technique. The respondents are presented with an uncertain prospect, usually a binary lottery (e.g., lottery with two outcomes) and they are asked to state a certain outcome w (payoff), called certainty equivalent (CE).¹ Each choice situation requires that the

1 A *binary lottery* (i.e., lotteries with two outcomes) is denoted as $[x_1, p, x_2]$ which stands for a lottery which yields outcome x_1 with probability p and outcome x_2 with probability $(1-p)$. If either $p=0$, $p=1$ or $x_1=x_2$, the lottery is degenerate because the outcome is certain. A preference comparison of two binary lotteries involves the following expression: $[x_1, p, x_2] R [x_3, q, x_4]$ which denotes the preference relation between the lotteries, and consist of: $>$ (is more preferred than), $<$ (is less preferred than) or $=$ (is indifferent to). For example if the respondent is offered two lotteries in which four outcomes as the probabilities p and q are fixed, he has then to specify the unspecified item: the preference relation R between the two lotteries. If, on the other hand, the four outcomes (x_1 to x_4) and probabilities of them are fixed and if R is specified as $=$, then the respondent has to specify probability q so that he is indifferent between the lotteries.

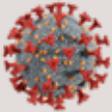
respondents choose between a certain outcome and a binary lottery (Keeney and Raiffa, 1976). The respondents keep specifying w , until they become indifferent to both, the lottery and the certain outcome. This indifference is attained in an iterative manner. A sequence of points is successively adjusted until indifference is established. After the respondents have indicated that they are indifferent to the certain outcome and the uncertain prospect, a point at the respondent's utility function is obtained. A sequence of successive bisections results in a number of points of the utility function. The curvature of the utility function that is obtained from these utility points is a measure of risk attitude. Therefore, measuring risk attitude of SMEs helps us explain the decision-making process of entrepreneurs that opt for SPSs. Particularly, an SME that believes that it can predict the payoffs of such a transition will perceive that transition as less risky than an SME that feels that it cannot predict the expected payoffs.

Transition to SPSs: A Risky Decision-Context

The results of an empirical study conducted by our research centre (SIB, 2022) about the drivers of SMEs in the agri-food and hospitality sector in Limburg, in which third-year IB and Zuyd students attending the minor Applied Business Sustainability were highly engaged, confirmed the substantial role of risk variables as drivers of SMEs' strategic decision to opt for SPSs. Specifically, IB students, coaches and experts examined the impact of SMEs' risk perceptions, risk attitudes, market orientation, level of understanding, and characteristics on their willingness to switch to/invest in SPSs. To the best of our knowledge, this is the first empirical study that focuses on the impact of unobservable and observable factors on SMEs' strategic decision-making regarding the adoption of SPSs. Thereby, recognizing the dilemma of SMEs to make such a strategic decision (to opt for an SPS) since they may be confronted with unexpected market constraints and uncertainty regarding their investment outputs, we explored the barriers to SMEs' transition to SPSs. We hypothesized that several observable (e.g., size of the firm) and unobservable factors (risk perception) drive SMEs' willingness to switch to/invest in (or not) SPSs.

Box 1 summarizes the barriers and key challenges that SMEs in Limburg (NL) are confronted with based on the results of SIB's study. The results of SIB's empirical study show the context specificity of the strategic decision of SMEs in Limburg to sustainability transition. Forces from the broader market environment of SMEs (e.g., covid-19 pandemic, regulatory burden) and SMEs' specific characteristics (e.g., lack of technical and digital skills) seem to play an essential role in their efforts towards sustainability.

Box 1: Barriers and Key-Challenges of SMEs in Limburg, the Netherlands (2022)

	Covid Pandemic	Besides the EU-27 support measures aimed at maintaining employment and helping SMEs address liquidity needs and get access to finance, most SMEs perceive high risk for investing in SPSS in the recovery phase of the pandemic.
	Regulatory Burden	Compliance with environmental and energy regulations and green public procurement is still not yet widely adopted by SMEs. Consultation for SME stakeholders on new legislative proposals is required.
	Access to Finance	Covid-19 has negatively affected their access to finance. Most SMEs perceive that accessing funding is a complicated process and is risky in the recovery phase of the pandemic.
	Start-up Environment	The start-up environment has been extremely risky during the Covid-19 period. Most SMEs and start-ups have been confronted with solvency problems during the last 2,5 years.
	Digitalisation	The lack of adequate access to technical and digital skills or highly skilled workers is a commonly identified challenge for almost all SMEs.
	Managerial Competences	Investing into the development of managerial competencies, skills and training of SMEs' personnel is a primary challenge for all SMEs.

Source: SIB (2022)

Further, using validated measurement scales based on the psychometric literature, we empirically examined the impact of these factors on SMEs' willingness to switch to/invest in SPSS. With data from 47 in-depth interviews and 215 individual survey interviews with SMEs in agri-food and hospitality markets in the province of Limburg (NL), we demonstrate that almost 80% of SMEs are in favour of

adopting an SPS and 75% of them has accepted or will accept to participating in shared responsibility initiatives throughout the supply chain (e.g., participation in a quality national/local scheme and/or owning a quality, sustainability-related certificate).

Interestingly, our results provide evidence that the RP is the most important driver of SMEs' decision-making structure. Thus, SMEs' RP and the interaction of RA and RP negatively impact their decision to switch to/invest in SPSs, while innovativeness, market-orientation, education, age, and turnover of SMEs increase the likelihood of switching to/investing in SPSs. However, the importance and the magnitude of the impact of risk factors differ among the SMEs in the agri-food and the hospitality markets. SMEs such as hotels and restaurants seem to be more prone to taking risks and engaging in SPSs rather than SMEs in the agri-food industry such as farmers. This may be due to the fact that open-air cultivations need, on average, 3 to 5 years to totally transform, say from conventional to organic, compared to hotels and restaurants where investments into SPSs are more direct, e.g., purchasing a waste management technology or using sustainable energy sources, once funding is available.

Understanding the factors that play a crucial role in the willingness of SMEs to switch/invest in SPSs reveals insights critical to policy-makers and managers in the agri-food and hospitality markets, who wish to increase the likelihood of SMEs' switching to SPSs. Hence, more informed decisions regarding the design of policies and strategies to increase SPS adoption can be made. For example, our results indicate that the risk perception of SMEs, level of understanding, financial as well as information needs regarding new legislations and technologies, and professional (online) communication needs seem to be the main barriers to the adoption of SPSs. Such barriers may be removed when SMEs receive education and training on how to evaluate, manage and mitigate the potential risks when opting to change their production practices. In addition, governmental agencies and public policy initiatives may provide them with a minimum return, e.g., tax allowances, for their investment in sustainable practices during a specific time window and, by doing so, temporarily reduce the risk-adjusted cost of capital for SMEs that make the switch to SPSs. Also, Regional Development Offices and the government of provinces, such as Provincie Limburg and LIOF, in collaboration with knowledge institutions in the region such as Zuyd UAS, may develop experienced-based life-long training programmes for SME owners and managers as well as develop a monitoring system that will support the evaluation of sustainability performance over time. These programmes may enable SMEs to overcome several barriers to adopting SPSs and motivate them to explore further synergies that will have a payoff in the long-run.

Overall, one may support that in order to facilitate SMEs to overcome their barriers and transit smoothly to SPSs, they need to be engaged in a sustainable business mechanism that considers their special characteristics and acts as a risk mitigating mechanism for them.

2.2 Co-operative: A Vehicle for SMEs' Sustainable Transformation

Considering business performance in a sustainability-driven context, in which social and environmental values are essential, a new perspective of business profitability has emerged. Nowadays, businesses need to change the way of creating, delivering, and capturing values from economic, social, and environmental perspectives. Their business model needs to transform towards a sustainable business model (SBM), which allows them to run their business towards sustainability principles, processes, strategies and policies (MuñozTorres *et al.*, 2019; Shakeel *et al.*, 2020). According to Geissdoerfer *et al.*, (2016, p. 410) a SBM can be viewed as a *"simplified representation of the elements, the interrelationship between these elements, and the interactions with its stakeholders that an organisational unit uses to create, deliver, capture, and exchange sustainable value.* This change can be realized by embedding sustainability into the value chains of an organisation (Geissdoerfer *et al.*, 2018) and infers innovation activities to create sustainable value for stakeholders and adaptation to new multi-dimensional aspects of sustainability (Goni, 2021). In academic literature and practice, it has been evident that conventional business models are insufficient to address sustainable business challenges. Unfortunately, governmental institutions and intergovernmental organisations have been unable to strictly implement sustainability regulations such as drastic revisions of tax systems. Thus, practitioners have been struggling for years to understand what aspects have to be considered in order to achieve effective sustainability implementation.

This section will present the evolution of CBMs and how value-and-principle-driven businesses such as co-operatives (co-ops) may act as risk mitigating mechanisms for SMEs' transition to sustainability.

Evolution of Sustainable Business Models

In search of viable solutions to develop their organizations, multinational enterprises (MNEs) and entrepreneurs have become more open to societal and environmental issues during the last 30 years. They have been trying to adjust the way in which products and services are created and delivered by using fewer resources, and generating less waste, emissions, and pollution. For example, the implementation of cradle-to-cradle models has helped many businesses optimise their value creation processes' material and energy efficiency by controlling and avoiding pollution (Khalil, 2017). There has also been an increased effort of

businesses to use and engage in the production of renewable energy production. Melissen (2016) presents a range of four SBMs based on initiatives adopted and their business focus on sustainability underlined aspects. Such efforts to tackle the environment-related challenges led to the formation of first-generation SBMs. These models have emerged in response to the public's awareness of environmental issues such as global warming, air pollution, and climate change that have harmful effects on humans and the environment. The second generation of SBMs has been applied by businesses to address both their environmental impact and social impact.

Many businesses worldwide have adopted or created CSR programmes and corporate sustainability initiatives and engaged in integrated reporting in order to focus on minimizing the environmental impact as well as investing in the health and overall wellbeing of their employees, living conditions in communities, or setting up philanthropic and charity projects across the globe. Some businesses take and implement such initiatives based on good intentions, while other businesses do so in order to persuade existing and potential customers of their genuine intentions and morals and hence expand their market shares and profitability (Marques and Mintzberg, 2016).

However, considering the reluctance of governments and consumers to support sustainable business practices, these second-generation SBMs are regarded as simple add-ons to existing sustainability initiatives and policies and lead to the emergence of the so-called social or societal business models (third-generation SBMs). A social business model mainly aims to create economic value by creating societal value (Porter and Kramer, 2011). For example, *Danone* provided healthy nutrition to low-income families in France at much lower prices than its competitors. This implies that the third generation SBMs will offer lower financial returns on their investments in order to support and stimulate the creation of higher environmental and societal benefits. Derwall *et al.*, (2011) provide empirical evidence about the prevalence of values-driven investors in the long run and highlight the need for research that rethinks the role of values in the investment management context. However, free markets and the regulatory and tax systems do not seem to reward such societal entrepreneurial initiatives as much as they do, actually, for businesses applying traditional profit-focused business models. Many third-generation SBMs have proved to be extremely fragile. They have not survived or managed to serve a niche market because the end customers of these products appear to prefer short-term rather than long-collective payoffs.

In order to convince consumers to accept sustainable products and services, many applied business researchers (e.g., Melissen, 2016; Ruyter, et al., 2022)

suggest that responsible, resilient, and respectful principles should be integrated into SBMs' structure and marketing strategies. The notion and practice of stewardship entail these principles. The notion of stewardship highlights the importance of balancing personal goals with goals of a larger entity (Hernandez, 2008). If individual market participants such as suppliers and customers are to assume responsibility for supporting long-term collective payoffs, they do so based on the development of an ideological and relational commitment. Thus, there is an opportunity for businesses to identify practices that can promote collective solutions that benefit both society and itself. Accounting for an equilibrium between personal and collective interests leads to the formation of fourth-generation SBMs. These models require viewing an SBM as a community of stakeholders who aspire to use their resources for a collective good. Participation of entrepreneurs (e.g., SMEs) in such communities requires long-term commitment and true reciprocity rather than short-term gain and opportunism.

SMEs worldwide often join existing or collectively shape new community-oriented business models to tackle specific environmental and social problems. A dominant and highly sustainable organizational model of such a community-oriented business is the co-operative (co-op) firm. A co-op is a self-governing institution. It enjoys the status of autonomy because it is a self-sufficient, self-renewing, and self-controlling organization. Often, it has a long-term existence because it is not affected by the death of any member of society. A co-op membership is voluntary and open to all market participants having common interests. There are three main principles that distinguish the organizational structure of co-op business models' (CBMs) from other business structures (e.g., from an Investor-owned firm/IOF or a corporate firm): user-owner, use-controller, and user-benefit principles.

In most countries SMEs as members of co-ops are those entrepreneurs or market participants who own, control and use a co-op and receive benefits based on their use. The user-owner principle simply means that users are owners of the risk-bearing capital to a dominating degree. First, the member ownership takes the unique form of direct investments, retained patronage refunds, per unit capital retained, long term loans, or bonds issued among members with fixed returns. Over the last decades, many co-ops in several Western countries have relaxed this exclusive member ownership principle in response of tremendous equity needs. In fact, many non-member parties have been invited to finance part of their operations. This non-member participation can take various forms: local parties (France), non-member patrons (USA), institutional investors (in the Netherlands), and public-listed shares (Ireland).

Second, the user-controller principle implies that, in contrast with other organizations, members-users are the ones that control fundamental co-op policies. Member-users exercise authority by electing the members of the Board of Directors. Traditionally, co-ops have strictly adhered to democratic control that refers to the "one-member, one-vote" principle. This decision-making rule has a certain ideological appeal. Staatz (1984) supports that the ability of co-ops to attract an initial membership and win concessions from the political system may depend on the promotion of democratic ideals aimed at tempering the rapaciousness of capitalism. Further, proportional controlling, which allows voting to be a rough function of patronage (i.e., extent of ownership), has been suggested as another form of voting rights' allocation rule. However, very few co-ops worldwide have replaced the "one-member, one-vote" rule in practice. Of course, complexity and the required expertise for fulfilling the various management functions have brought the need for delegation to professional management (Kalogeras *et al.*, 2007).

Third, the user-benefit principle is one of the idiosyncrasies of co-op finance. The net income can be returned as a price adjustment or a dividend on an individual stock. Most co-ops in the EU and the USA distribute part of the net income back to their member-firms as a price adjustment that takes premiums and discounts for marketing and supply co-ops paid at the end of year, meant to supplement advance payments once the transaction has been completed. However, many co-ops that allowed individualized stock have recently allocated part of net income as dividend on members' invested capital. In addition, setting prices for products marketed, services provided, and supplies sold is the most crucial dimension of member benefits. In contrast with corporate firms, co-ops determine their price level with the aim not to make profits but to optimize the benefits to their members. Co-ops offer high prices for raw materials marketed (marketing co-ops) and low prices for supplies (supply co-ops). This business-at-cost principle builds on the unique feature of co-ops' marketing policy and makes co-ops differ in the per unit of raw materials' handled pricing.

Co-operative & Corporate Structure

The difference between a co-op and a corporate firm - i.e., IOFs - cannot be found in how business operations, including legal form, participation, marketing, and supply chain operations, are organized. The difference can be found in the business aims and in the place of the risk bearing capital (van Dijk, 1997). The three main principles (user-owner, user-controller, user-beneficiary) determine that member firms bear risks, share in the results, and have a say in the co-op's management in proportion to the product relations. The aim of a co-op firm is formulated by the member firms, which are often a coalition of SMEs. From a

return on investment perspective, SMEs as members of co-ops develop financial relations and make entrepreneurial decisions, meaning product-related and control-related decisions, concerning the benefits derived from their participation in a collective equity pool. Their choices determine what a co-op firm has to deal with. Thus, the turnover of a co-op is a derivative of what happens within the member firms and the return on the co-op capital, too. This is a derivative aim with a pure focus on member-benefits, which entails an exact proportion between the risk of a member and the supply of this member to a co-operation (van Dijk, 1997). However, the aim of a corporation is well known that is expressed in output and price, and it is directed to its shareholders, who are a society of capital suppliers.

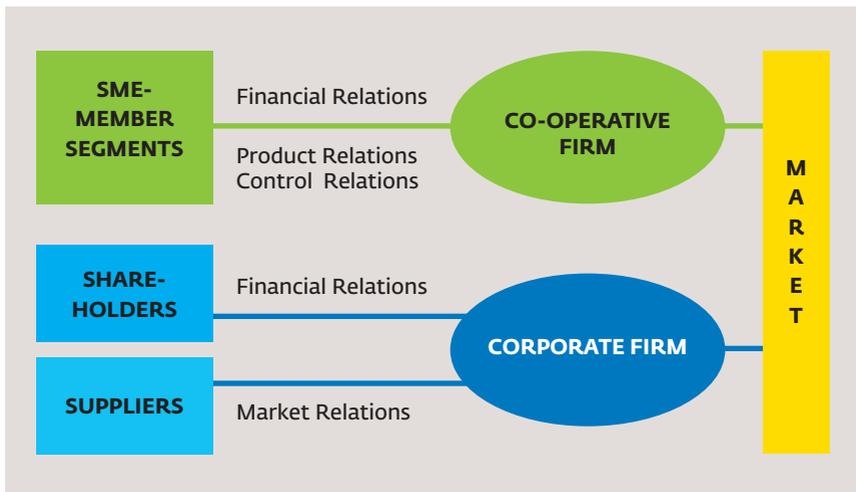


Figure 1: Co-operative Entrepreneurship and Corporate Entrepreneurship.

Source: Based on van Dijk, G., (1997).

From such an entrepreneurial point of view, a co-op firm can be seen as an organizational form with two layers of entrepreneurship: one of the member firms and the co-op firm. Co-op members, for example SMEs, typically maintain the entrepreneurial lead for themselves i.e., their own business – the first layer of entrepreneurship. They view the co-op firm as a task organization in a common front-office, i.e., marketing co-op firm – the second layer of entrepreneurship, which achieves differentiation in response to rapid market challenges (Kalogeras *et al.*, 2022). This two-layered entrepreneurial lead is based on the development of shared responsibility and the relational commitment among SMEs to participate in co-operations.

When SMEs (co-op members) perceive that a co-op is a high-quality organization representing their interest, allows them to realize a high return on their investments, and mitigates their risks, they commit higher to the co-op aim and its operations (Kalogeras *et al.*, 2009). A recent stream of literature focusing on the behavioural aspects of CBMs (e.g., Kyriakopoulos *et al.*, 2004; Kalogeras *et al.*, 2007; Benos *et al.*, 2016) has conceptualized and provided evidence that a co-op's structural design is based on member preferences for specific intra-organizational and strategic attributes. Evaluating member preferences reveals crucial information about the level of utility that member firms derive from these inter-dependent and complementary attributes that drive SMEs' two-layered entrepreneurial lead, their decisions, as well as their commitment to a co-op. Thus, both the derivative aim focusing purely on member benefits and the solid relational commitment developed among members enable the creation of efficiency-oriented CBMs.

However, member preferences may be diverse. SMEs-members involved in collective actions often strive to influence co-op structure and decisions to reflect their interest. Conflicting priorities can generate problems in co-op setting: e.g., declining member commitment; the decreasing willingness of members to provide equity capital, and laborious decision-making. Kalogeras *et al.*, (2009), show that SMEs-members of a horticultural marketing co-op value the attributes of its structure differently, i.e., management control and benefit allocations. Their findings emphasize the emergence of a multi-string governance structure that embodies a wide range of ownership agreements. In that respect, a co-op can be viewed as a portfolio of contract relationships with SMEs-members that has a co-variance - i.e., diversified - ownership structure (Pennings & Kalogeras, 2021). A co-op is an input (cost)-output (revenues) system like any other business organisation. Volatility in input (prices) and output (prices) results in volatility in net cash flows, resulting in residual risks and cost of capital of co-ops. Hence, a co-op should manage to hedge output and input-prices. Co-op is actually a natural-hedger that acts on behalf of SMEs-members interests. Its diversified ownership structure allows for reducing the risk that can arise from its normal operating procedures. A "natural hedge" takes place when low (high) production costs and high (low) prices are realized. It is a strategy that seeks to mitigate risk by investing in assets whose performance is negatively correlated through some intrinsic or natural mechanism. Natural hedges can also occur within a co-op, where losses for a segment of its SMEs-members business operations conducted by a segment of its SMEs are offset by benefits achieved by other SMEs-segments, and vice-versa.

Not surprisingly, one may wonder what happens with the remaining residual risk that is the risk "left over" after security controls and process improvements have

been applied by a co-op. This requires a risk-shifting instrument such as insurance. Is a co-op able actually to offer extra management services to its SMEs-members, and hence, additional investment opportunities? Many co-ops in the US and the EU provide risk management services to members - by means of hedging - and combining this with physical flow challenges using financial derivative instruments such as futures contracts. This is a legal agreement to buy or sell a particular commodity asset, or security at a predetermined price at a specified time in the future. Futures contracts are standardized for quality and quantity to facilitate trading on a futures exchange. Therefore, SMEs-members can reduce their cost of capital by extra risk management services offered to them by their co-op, which acts on behalf of their interests in globalised commodity markets. For example, several grain co-ops in the US have offered a variety of contractual relationships to their member-segments, including spot, pool, futures, or storage-based contracts, among others. No actual storage costs are required, but instead, a co-op goes long in futures markets on behalf of its SME-producers, and the storage capacity can be used for other reasons.

Reasoning for Co-operative Formation & Evolution

While neoclassical economics stresses that CBMs deal with market failure in terms of production efficiency (Sexton & Iskow, 1988), transaction cost economics explain the formation of co-ops in terms of transactional efficiency that lead to vertical integration of members' equity and operations (Staatz, 1984). Transaction costs include gathering and processing the information needed to carry out a transaction, reaching decisions within the organization, negotiating contracts with other parties, and policing and enforcing these contracts (Williamson, 1981). Co-ops can minimize these costs compared to corporate firms because they are owned by members and hence have less incentive to default on their agreements. Therefore, SMEs as members of co-ops can join a vertical business model that minimizes the degree of losses incurred when an asset is redeployed in an alternative use, i.e., asset specificity property, reduces uncertainty about future economic outcomes, and establish a presence in national and foreign markets.

Overall economic analysis stresses that co-ops emerged due to the need to coordinate the efficiency of complex production and transaction tasks. However, other streams of literature (e.g., sociological) emphasize the institutional, social, and ideological motives of SMEs to join co-ops. Bagger (1996) views a co-op as a sustainable business that is intended to serve both its members and the community as a whole. It offers life meaning and represents a way of living, emphasizing the sense of community and individual growth. Social inequalities and power differences experienced in the marketplace by individual market participants provide the impetus for collective action that lies in the set of values of equality,

democracy, solidarity, social justice, and mutual help (Hakelius, 1996). These values are derived by the three co-op structural principles of co-op organizations: user-owned, user-controlled, user-beneficiary. Yet, Box 2 displays a comprehensive view of seven co-op principles as defined by the International Cooperative Alliance (ICA).

All seven co-op principles serve as guidelines by which co-ops put their values into practice. They emphasize collective actions that originate from member firms' class interests and less from the selfish individual, which only seeks optimal output and price rewards in the marketplace. Thus, members share common economic interests and social and cultural backgrounds. These social interests as well as the fundamental co-op values, not only incentivize members (e.g., SMEs) to invest in co-ops, but they also help co-ops gain support and legitimacy from social and governmental institutions since they appear to serve collectively accepted values. This is the underlined notion of the neo-institutional economics view on co-op entrepreneurship (Cook, 1995).

The economic and institutional environment of agribusiness co-ops has changed dramatically (Cook, 1995; Benos *et al.*, 2018): The markets have been liberalized, consumer demands have become more stringent, legislation on food quality and safety has been tightened, technological development is not standing still, and global agricultural food grades and standards are being introduced. As a result, co-ops have become more market-oriented, instead of producer-driven, adapting to industrialisation, meeting the new standards within the food supply chain, and competing in globalized liberal markets (Cook & Chaddad, 2004).

Box 2: Seven Co-op Principles Enabling Collective Values

	Voluntarily & Open Membership	Co-ops are voluntary organisations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination
	Democratic Member Control	Co-ops are democratic organisations controlled by their members (one member, one vote), who actively participate in setting their policies and making decisions. Members serving as elected representatives are accountable to the membership.
	Member Economic Participation	Members contribute equitably to, and democratically control, the capital of their co-op. At least part of that capital is usually the common property of the co-op. Member benefits are in proportion to their transactions with the co-op.
	Autonomy & Independence	Co-ops are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.
	Education, Training, & Information	Co-ops provide education and training for their members, elected representatives, managers, and employees to contribute effectively to the development of their co-ops. They also inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation.
	Cooperation among Co-operatives	Co-ops serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.
	Concern for Community	Co-ops work for the sustainable development of their communities through policies approved by their members.

Source: ICA (<https://www.ica.com>)

According to Cook (1997), the success of user-oriented agricultural firms (i.e., co-ops) depends on their ability to (a) understand the property-rights constraints faced in

attempting internationalization, (b) upgrade their sustainable competitive advantages, (c) develop globalization or multi-domestic strategies, and (d) create new institutions that simultaneously facilitate the enhancement of member-investor needs. Therefore, competitive strategies are launched, such as value-added processing, global expansion, and brand-name development (Bijman & Ruben, 2005). Yet, the adaptation to these new strategies requires restructuring of the co-ops' financial structure and substantial capital investments (Kalogeras *et al.*, 2009).

Several co-op scholars have addressed the emergence of new co-op structures over the last 30 years (Benos *et al.*, 2016; Kalogeras, *et al.*, 2013; Chaddad & Cook, 2004; van Bekkum & Bijman, 2006). Most of these studies examine the re-engineering of co-ops organizational forms from various theoretical angles: transaction-cost economics (e.g., Hendrikse & Veerman, 2001a), agency theory (Vitaliano, 1983), incomplete contracting theory (e.g., Hendrikse & Veerman, 2001b), industrial organization economics (e.g., Bijman, 2002), and behavioural economics (e.g., Kalogeras *et al.*, 2007; 2009; Benos *et al.*, 2016; 2018). Chaddad & Cook (2004) discuss new co-op models based on (residual) control rights' and claim rights' typologies. Their work distinguishes seven organizational models. The first model is the traditional co-op, which is restricted to members only, where shares are redeemable, the benefits go to members, and non-proportional member investments. The extent to which co-ops relax their defined financial principle influences their ownership/financial structure, ranging from a traditional (collective) to a more individualized ownership model (proportional; member-investor; new generation co-op; co-op with profit-seeking units; investor-share; and demutualized-IOF alike model).

Co-operatives: Facts & Figures

The collectively accepted values and co-op principles have mobilized one in every six people on earth to be a member of any of the 2.94 million co-ops, which employ almost 10% of the working population (CICOPA, 2017). In total, about one billion people are involved in co-ops in some way, either as members / customers, as employees / participants, or both. Co-ops employ at least 100 million people worldwide. It has been estimated that co-ops secure the livelihoods of nearly half the world's population. The world's 300 largest co-ops have collective revenues of USD 1.6 trillion, comparable to the GDP of the world's ninth largest economy, Spain (ICA, 2021). In practice, however, a consumer often does not know whether she is dealing with a co-op that serves collectively accepted values by its members. Most consumers are not even aware that they use the products and services of co-ops in their daily life. Let me prove this to you by doing this simple test. Could those of you who own a VISA or a Mastercard raise your hand please? Thank you! It may be news to you, however, large multinational credit organiza-

tions, such as VISA, and MASTERCARD had been organized as co-ops for years, with commercial banks as members. The primary sector is no exception, as in 2018, just the 10 largest agricultural co-ops generated a turnover of 232.43 billion US\$ and provided employment for about 150,000 people (World Cooperative Monitor, 2021). The largest agri-food giants are also co-ops, such as ARLA Foods, with members in Denmark, Sweden, Germany, and the UK, and CAMPINA in Europe, or the New Zealand-based co-op FONTERRA with subsidiaries in many countries around the globe. Admittedly, agri-food co-ops habitually improve their members' livelihoods, stimulate job creation, and shelter rural communities and areas worldwide (Garcia-Alvarez-Coque *et al.*, 2021).

In the Netherlands, co-ops are dominant organizational forms in agriculture, banking, and insurance. The rural and agri-food co-ops became one of the most important vehicles for the modernisation and sustainable development of the Dutch countryside and the empowerment of the farmers themselves for almost the last 200 hundred years. According to the Dutch Council for Co-ops - NCR (2017), the top 100 Dutch co-ops and mutuals together had a turnover of € 107 billion, employed 140,000 persons, and owned 30 million members including double accounts. This is an interesting figure, given that it is almost double the Dutch population (17.2 million) in 2022 (CBS, 2022). Nowadays, in the most common food retailing chains in the Netherlands, e.g., Albert Heijn, Jumbo, a wide range of food products, raw or processed, are supplied by Dutch agri-food co-ops. I would like to challenge you once more. May you please check how many food items you will buy for your dinner tonight, or your weekend groceries are produced and marketed by co-ops? Do so, please, and you may be surprised!

NCR is the center of the debate when it comes to implementing the CBM in the Netherlands. As a strong supporter of the CBM, NCR believes in its benefits and operates on behalf of its members through professional development activities and awareness, particularly among stakeholders. Thus, it strengthens co-ops' aims, values, identity, and principles. Further, it provides the necessary preparation to seize opportunities and overcome the challenges ahead. This federated organization is a member of Copa-Cogeca, the General Confederation of Agricultural Cooperatives in the European Union, and of Cooperatives Europe; the European branch of the International Cooperative Alliance (ICA). In addition, NCR is one of the founders of Agriterra, a cooperation that provides expert advice to farmer organisations and co-ops in developing economies. The NCR code aims to improve the level of co-op entrepreneurship, members', such as SMEs', involvement, and the collectively shared values and ethics. The Code does not have an extensive checklist of dos and don'ts, but is based on principles. This aligns with

the current social views on such codes and co-op ideology. The social role of co-op organizations, especially in building social capital, is highly emphasized. The co-op approach to sustainable use of natural resources and preservation of the natural environment is well recognized in the academic literature and practice. In these times of global economy, co-ops face new challenges, where both organizational structures and strategies need to adapt to forces that cross borders, such as financial and food crises, price volatility, macroeconomic instability, climate change, newly-enforced liberalized trade regulations, new banking environment, covid-pandemic, the recent war in Ukraine and, in the case of Europe, the reformed Common Agricultural Policy (CAP).

Co-operative's Sustainable Business Model

Overall, as values-based and principle driven organizations, co-ops are, by nature, a sustainable and participatory, community-oriented form of business. Co-ops promote additional income through profit-sharing and distribution of dividends to many SMEs worldwide, provide democratic knowledge and practices, eliminate race and gender discrimination, secure and offer jobs, enable improved working conditions. They also support community facilities and services such as health clinics and schools, enhance social inclusion, and they have shown resilience in times of economic and financial crises (ILO, 2017). Therefore, CBMs can be considered as practical vehicles for co-operation and collective action, both of which are crucial to sustainable development since they build and reinforce community. They increase the community's economic development and sustainability and re-circulate resources (Gordon-Nembhard, 2015). Thus, co-ops can be viewed as those community-oriented business models that act as change makers towards sustainable transformation.

Indeed, several international organizations confirm that a CBM offers an alternative model for sustainable entrepreneurship. Its promotion and expansion could be a vital instrument for achieving the realization of several SDGs in developed and developing countries. The UN General Assembly Resolution 70/128 concludes that *"co-op enterprises have a strong potential to alleviate poverty and hunger, stimulate economic growth, create employment and decent work opportunities, build social capital, address inequality and empower women. Such power of co-ops is particularly important for the achievement of the Sustainable Development Goals (SDGs) in the least developed countries"*. In addition, International Cooperative Alliance (ICA) insisted on the idea that *"the co-op model of business is based on ethics, values and principles that put the needs and aspirations of their members above the simple goal of maximizing profit. Through self-help and empowerment, reinvesting in their communities and their concern for the well-being of people and the world in which we live, co-ops nurture a long-term vision for sustainable economic growth, social development and environmental responsibility"*.

But what is actually in it for SMEs' participation in a co-op's SBM? First, co-ops enhance SMEs transition by helping them overcome their barriers and enabling their sustainable transformation. Well beyond transactional and operational efficiency, co-ops can contribute to sustainable development's triple bottom line because they are such a community-oriented business forms that endeavour to meet the economic progress of their participating SMEs, while satisfying their socio-cultural interests and protecting the environment. From an applied managerial perspective, SMEs can overcome their barriers, such as regulatory burdens, to transit to SPSs by participating in information sharing, product innovation development, and responsible investing services offered by co-ops. At the same time, social and environmental benefits for them as well as society at large are achieved. For example, the *Vereniging Eastermar's Lansdouwe* (VEL) and the *Vereniging Agrarisch Natuur en Landschapsbeheer Achtkarspelen* (VANLA) founded in the early 90s, are among the first environmental co-ops in the Netherlands. Environmental co-ops are often regional groups of agricultural entrepreneurs that aim to integrate environment, nature and landscape objectives into the farming practice from a regional perspective in a proactive way, and they do not wait for specific government directives. They often include citizens and other rural stakeholders, e.g. environmental organisations, local authorities and animal welfare groups. Hence, one may support that such a CBM is not simply a people-centred model, i.e. anthropo-centred, but it is rather an anthropo-harmonic business model. Co-ops harmonize the economic interest of their membership along with societal and environmental benefits for society at large (Wiskerke, *et al.*, 2003).

Secondly, a co-op is a risk-mitigating organisation, which is a value-based and principle-based organisation that besides offering business efficiency to its SMEs'-members, also expands their countervailing power, market access and risk-management capacities. It carries such a risk-shared responsibility mechanism that defines the DNA of its structure. A co-op informs its SMEs-members by continuous investments in their education and training and co-creates innovative projects with them. Thus, it fosters the managerial competencies of its SMEs-members. Since a co-op is also able to act as an innovator and socially responsible institutional investor on behalf of its SMEs-members' interests, it can provide them with access to funding. For example, the networking platform Foodbytes, which is a Finance & Accounting (F&A) networking and consulting platform owned by Rabobank, the largest agricultural co-op bank in the world, connects its start-ups- and other SMEs-members working on sustainable innovation in the F&A sector with large corporates and investors, who are looking for new ideas and energy and can help the start-ups scale their business and impact. Therefore, Rabobank acts as both a co-op broker and an innovation broker to facilitate SMEs' sustainable growth in global markets.

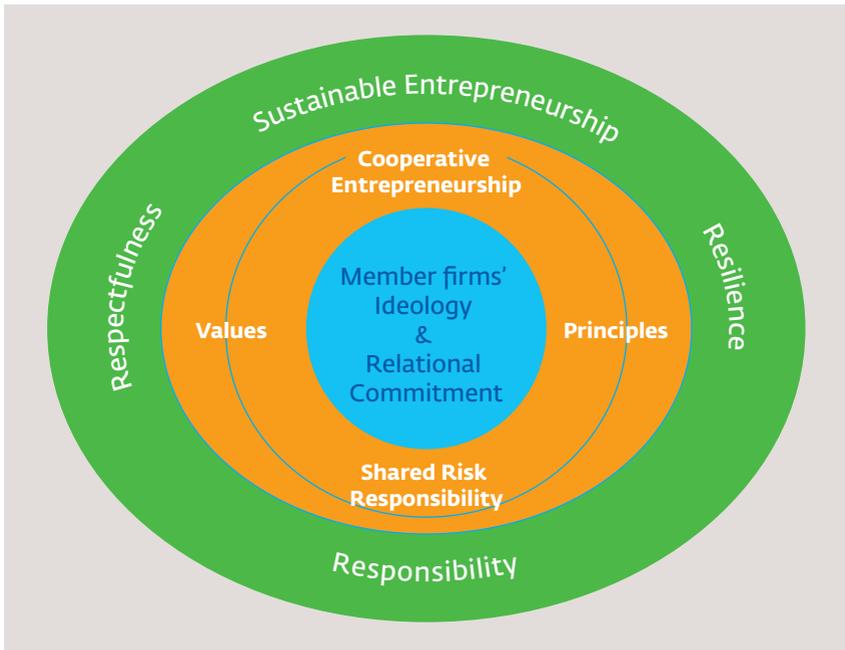


Figure 2: Image of a Co-operative's Sustainable Business Model

Source: see text

Figure 2 illustrates the image of a co-op's SBM. Its formation's "heart and soul" relies on the interrelated and inter-dependent organizational elements that reflect collective members' values, accepted principles, and shared responsibility in the supply chain. These elements (or attributes) drive the end-user utility (e.g., preferences) of individual market participants that co-create sustainable value through co-operations voluntarily. Hence, member firms such as SMEs' and/or end-customers' societies share capital risk responsibility in order to support long-term collective payoffs. They do so based on the co-creation of an ideological and relational commitment. SMEs' bonding is rooted in their ideological background. According to ICA, SMEs as co-op members believe in the ethical values of honesty, openness, social responsibility, inclusiveness, democracy, and caring for others. Rather than chasing short-term profits, SMEs develop and commit to relationships with other SMEs and forge long-lasting bonds with their customers. The result of such relationships, which are based on common ideology, relational commitment and trust, allows the formation of a co-op's SBM, wherein SMEs can transform the total of entrepreneurial activities to sustainability. This relational commitment seems to be one of the main drivers of co-ops' entrepreneurship (Kalogeras *et al.*, 2007) and longevity and success

(Iliopoulos & Vladislav, 2018). Co-op entrepreneurship is based on recognising the importance of balancing personal ERS goals with the ERS goals of a larger entity. This is the central theme of stewardship theory (Hernandez, 2008).

There is an opportunity for international businesses and SMEs to identify business practices that can promote collective solutions and a broader collective focus on business practices. Based on the stewardship argument, Ruyter *et al.*, (2021) suggest that the development of sustainable entrepreneurship consists of implementing a 3Rs' principle framework: *Respectful, Resilient, Responsible*. The *Resilient* principle reflects the continuous improvement through market participants' self and group reflections. To ensure operational effectiveness and sustainability, the establishment of infrastructure and supply chains and harnessing innovation and entrepreneurship are required. The Covid-19 crisis has exposed the vulnerability of product, cash and information flows worldwide. Firms aiming to create superior value are currently revisiting their (ethical) sourcing and procuring, so e.g., support of local suppliers, and manufacturing and contactless delivering systems, e.g., Amazon's last mile concept, to fulfil the changing needs of channel. By extending the focus of businesses, the *Responsible* principle requires to include themes that are traditionally not considered by giving voice to all market participants as part of a shared vision of offering sustainable products and services. For example, applied marketing analysts may collaborate with organizations to understand how digital-based service firms can adapt to support refugees and how novel digital tools can also strengthen relationships with existing customers. Thereby, the application of novel approaches will help advance UN SDGs, such as promoting good health and well-being (SDG 3) and responsible consumption and production (SDG 12). Finally, the *Respectful* principle is underpinned by the values of equality, diversity, and social inclusion to ensure that previously marginalized communities are now empowered to make their own meaningful contributions to marketplaces. There is an increased tendency of international businesses to rebrand and invest in ad-campaigns in times of increased sociopolitical movements, e.g., #MeToo, Black Lives Matter.

The 3Rs framework appears to foster even more co-op values, principles, and shared-risk responsibility among its SMEs-members in several ways. First, the harnessing of innovation and entrepreneurship enables SMEs to seize extra growth opportunities to invest further in upstream or downstream in the supply chain and become more resilient in times of crises. Second, the business focus of co-ops rooted in ethics and responsibility is further extended and signalled in the market place. In turn, this may provide opportunities for enhancing their brand-awareness and strengthening their links with their existing or niche end-user segments. Third, the 3Rs framework help co-ops to follow the sociopo-

litical trends by re-branding and re-designing their promotional strategies and act as a respectful organization, which is highly engaged in socially responsible investments. Thus, business sustainability managers of co-ops - and not only these - are challenged more than ever to acquire such competencies that underlie the importance of these 3 principles. I will present the conditions for integrating ERS and global mind competencies in the next section.

2.3 Integrating ERS's & Global Minds' Lens

Most definitions of competency found in the sustainability literature reference characteristics such as knowledge, skills, and abilities (e.g., Thomas *et al.*, 2013) as well as values and attitudes (e.g., Besong & Holland, 2015) that may enable task performance with respect to addressing sustainability challenges or implementing ERS-related initiatives. Hence, competency in business sustainability includes problem-solving skills related to real-world sustainability problems, hard - meaning knowledge-based skills - and soft such as critical thinking, collaboration, or intercultural competence skills, and a leadership attitude that enables successful task performance. Thus, highly co-operative learning approaches within an international and intercultural setting, which foster shared responsibility among students, coaches, experts and stakeholders should be adopted. In order to set a higher education agenda as well as to develop professionalization workshops for stakeholders, four conditions are essential.

The first to learn about business sustainability should be student or professional, and entrepreneurs-driven. Didactical approaches such as the *High Impact Learning* (HILL) (Dochy, 2018) and *Student in the Lead* (SITL) (IBMS, 2022), wherein business students / young professionals are able to identify their own urgency inspired by a real-life business challenges should be adopted. IB students take the lead to plan their learning process and consider by default the sustainability relevance of what they are challenged and puzzled by. Learning should be practice-based, transformative, and dynamic, implying that IB students and professionals gain crucial insights through real worldviews and critical thinking. Diversity of students' own learning interests can be realized within internationalised *Communities of Learning* and/or *Living Labs*, wherein students conduct hands-on work, coached and supported by multi-disciplinary experts through exposure to other/new realities in practice. Such actual disclosure is essential to help a learner develop cognitive understanding and empathic attachments to a new / different reality and the people affected by it, locally as well as globally. Experiential learning can be especially effective in this respect, as it provides learners with new situations with which they can interact, research, and test their thinking against, developing, at the same time, deeper empathic concerns. Our research center contributes to IB's mission to educate resilient business graduates with a global mind, by supporting

the development of the SITL didactical approach and offering minors on applied business sustainability. In addition, SIB provides IB students at all levels with events and workshops that holistically integrate business sustainability, international and intercultural dimensions. The IB-student in the lead symposium that has run during the last two days in the IB & C domain is a prominent example. In addition, we have been studying the drivers of IB students identification with the concept and practice of sustainability to indicate necessary changes and enhance the implementation of our SITL approach.

Secondly, sustainability competency requires insights from an enlarged set of competencies that combine both soft - e.g., ways of thinking; working, collaborating; co-creating - and hard skills - e.g., business subjects & sustainability knowledge; tools for working - derived from both a multidisciplinary and interdisciplinary perspective. IB students should not only possess solid knowledge of sustainability principles and issues on the interfaces of disciplines and applied sciences, but they should also be able to collaborate effectively and appropriately across cultures with students from other disciplines and applied scientific fields. In order to do so, they need to communicate professionally, adjust their messages to different stakeholder audiences, and speak with confidence about sustainability interventions. It is of utmost importance be able to listen to and understand the diverse perspectives and needs of different stakeholders, adjust plans to accommodate these needs and adapt plans to respond to changing situational factors. Acquiring inter-personal and change-management skills will enable them to communicate effectively the positive aspects of the proposed change to influence stakeholder perceptions. Since the beginning of the current academic year, our research centre, in collaboration with the research centre Professional Communication in a Digitalising Society (PROCODIS) has been examining how SMEs in Limburg can communicate the value of their sustainability efforts by means of (digital) communication professionally. In addition, in close collaboration with the research Material Sciences and Smart Urban redesign, SIB has engaged in the co-creation of highly multidisciplinary and interdisciplinary minors and business challenges. Business and engineering students are engaged in multidisciplinary collaboration to formulate and implement sustainable solutions.

Thirdly, business sustainability competency should not be considered as a silo subject in the design of a pedagogical approach and/or in a curriculum for international business studies and professional training workshops. It should be an integrative part of each applied business subject (business management & organization, marketing, finance, and supply chain management) and practical training to contribute to the professional expertise. Acquiring leadership experiences for providing solutions to real-world business challenges regarding sustain-

ability problems and developing skills about ways of thinking and ways of working embedding the responsible, resilient, and respectful principles, can further foster the sustainability competency of IB students and international business professionals. The development of a link between the global competency with the sustainability competency emerges. In that respect, our research centre, SIB, has been engaged in a dialogue with the research centre Global Minds @ work to identify and co-create this link (e.g., Gregersen-Hermans & Boonen, 2021).

Fourthly, sustainable international business coaches and experts need to develop their own sustainability and global competence and skills in order to foster transformative learning for their students. They should continuously reflect on their international and sustainability learning in coaching IB students. This raises the need for the academies of our university to support coaches and experts through the offering of sustainability training workshops and to help develop self-efficacy in facilitating students to experience practice-based business sustainability challenges through co-creation within the communities of learning. Therefore, the professional development of coaches and experts is an important condition for educating sustainability-minded managers (Gregersen-Hermans, 2021), and it is also part of our educational and research agenda. SIB has offered several professionalization seminars to IB&C coaches and experts during the last 2 years. These workshops aim to promote the agenda of Education for Sustainable Development (ESD) by deepening and expanding coaches and experts as well as IB students' knowledge about new paradigms of education associated with education for sustainability, sustainable lifestyles, education for global citizenship and transformative education. Further, they enable the strengthening of capacities and skills of Zuyd educators to integrate the values of sustainability in their areas of expertise and develop educational programmes that promote a new awareness of our relationship with the environment and sustainable lifestyles.

According to Gregersen-Hermans and De Vries (2022), IB's holistic approach to embedding the learning outcomes associated with the domain of "*Living in the World*" in the Dutch Framework for IB at bachelor level (Sijben *et al.*, 2018) can be considered distinctive and innovative. In contrast to the framework, which lists the 24 programme learning outcomes (PLOs) according to four generic competence domains, IB in collaboration with SIB is developing a conceptual model, which links the various separate PLOs into an integrated and holistic approach to business challenges. In our education approach, IB works to strengthen the personality and professionalism of our students in a way that fits their uniqueness, inside out. Per definition, for a more traditional learning approach to learning the opposite holds. Developing expertise outside in does not actively support the cultivation of intrinsic motivation and resilience. In contact with

strategic HR field professionals, we have come to learn that strengthening inside out cultivates hearts and minds, attitudes and behaviours of resilience. Figure 3 illustrates this evolving conceptual model.

At the heart of the figure sits the IB student and his or her professional and personal development as game changer. The *first circle* constitutes an integrated and holistic view on ERS, and international, intercultural and global dimensions (Global Minds). This view is aligned to the mission and vision of IB to 'guide our young professionals to become resilient business leaders with a global mind' (IB, 2020, p1.). This view is embedded in the four main competency domains of IB situated in the *second cycle*: living and working in the world, ways of thinking and a research based attitude. Together the first and second circle form the lens, which characterise IB's approach to business challenges.

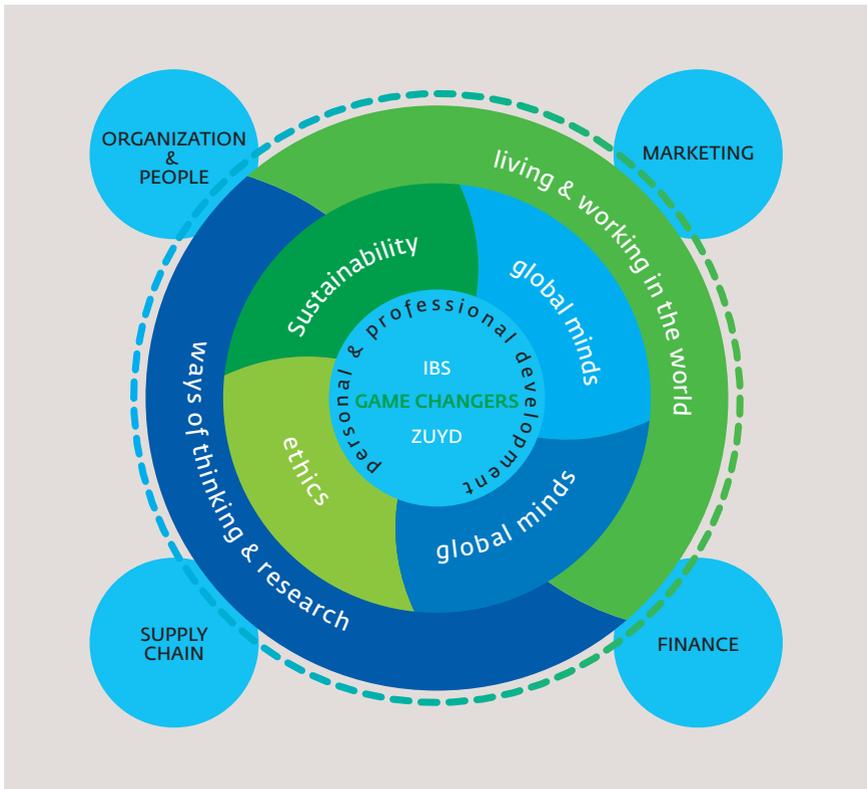


Figure 3: An Integrated ERS and Global Minds Lens to the international Business Field

Source: Vries, M., Gregersen-Hermans, J., Seriere, J., Keulers, F., Benedik, S., & Kalogeris, N., (2022).

The *third and outer circle* consists of the IB practice and the disciplinary international business fields (marketing, finance, management and organisation, and supply chain management). Within the IB's SITL approach, our ambition is that students learn to address real life business problems through this integrated and holistic lens depicted in the first and second cycle. Thereby, students are supported to connect the dots between ERS, international, intercultural and global dimensions and the disciplinary international business fields, enhancing their capability to address the current and future needs of businesses and society, and students' employability.

Now that I have hopefully shown you why we need to examine the decision-making process of SMEs in transition to sustainability, how co-ops as risk mitigating mechanisms can enable SMEs transformation to sustainability, and how education can help foster the sustainability competence of young professionals, I would like to turn to the implications for the research and education agenda of our research centre SIB.

3. SIB's Research Framework & Lines

In order to cope with recent and the challenges surrounding the “sustainability business of tomorrow” as well as to meet the present and the future needs, SIB may need to balance its research objectives between the different types of capital.

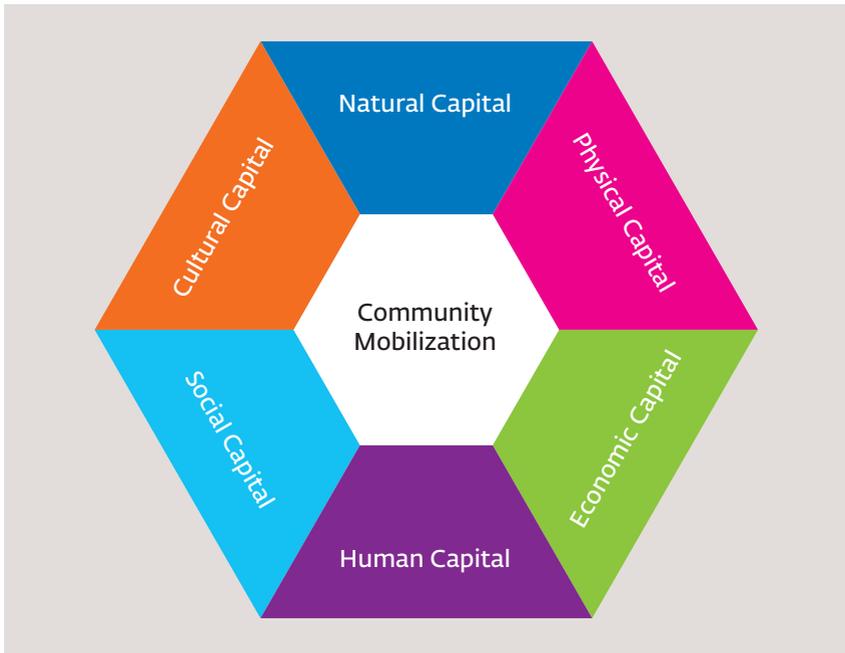


Figure 4: *Types of Capital as Enablers of Sustainable Community Mobilization.*

Source: Rosendal & Spiliotopoulou (2016).

Following closely Rosendal & Spiliotopoulou (2016), we identify six types of capital: a) natural; b) physical; c) economic; d) human; e) social; f) and cultural (see figure 4 please). These capital types are interconnected and interdependent. The extent to which a business invests in and develops these capital types drives the successful design, development, and implementation of its sustainability performance. It also ensures its continuity and enables community's mobilization

(Rollins and Castillo, 2020). The integrated research framework of SIB (see figure 5 please) accounts for the impact of six interdependent types of capital that drive community's mobilization and inter-cultural awareness of the design and development of sustainable business strategies in the lens of management and organization; marketing, finance, and supply chain. Implementing these strategies is expected to influence and enable a holistic transformation, so re-defining and engineering, of businesses' strategic, tactical and operational focus. The aim of this transformation will result in the formation of innovative champion strategies that will enhance the IB academy's pedagogical approach and curriculum design as well as support the economic, social, and environmental fabric of SMEs' sustainable behaviour (e.g., Molloy *et al.*, 2020; Kalogeras & Pennings, 2007).

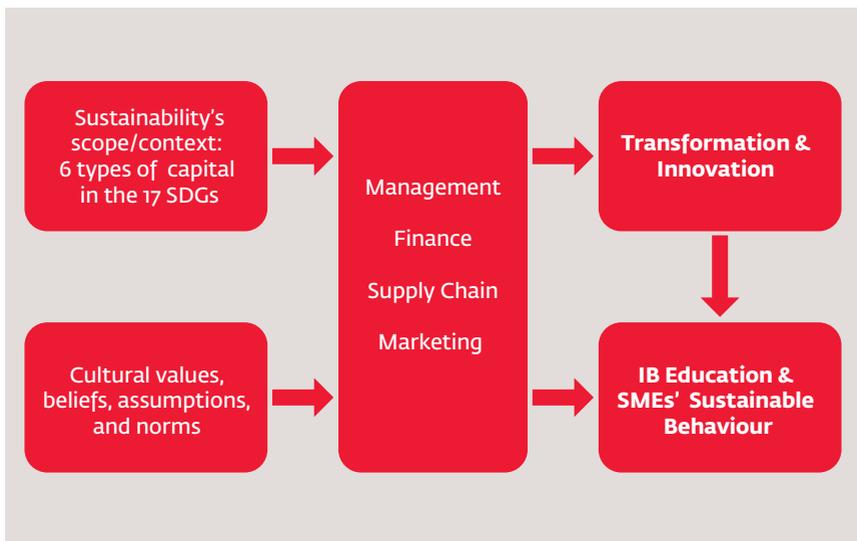


Figure 5: SIB's Integrated Research Framework.

Source: SIB Research Centre's Plan (2020).

In line with the rationale of this multidisciplinary and integrated framework, SIB intends to work on the following three research theme lines (RTLs) that are interconnected in scale and position in the IB environment:

Research Theme Line 1: SMEs' Sustainable Behaviour

The SMEs' sustainable behaviour line aims to develop a knowledge framework that will focus on the (empirical) study of innovative ways of strengthening the

SMEs' economic, social, and natural types of capital. The emphasis of this research line is thus placed on designing, implementing and monitoring sustainable systems that improve the continuity in terms of SME's efficiency, productivity, growth, performance, and, hence, profitability (WEOF, 2020). The (voluntary) CBM is a prominent decision context in commodities and services markets. The emerging questions regarding the development of SMEs' sustainable synergies and strategies will be addressed within this research line.

Research Theme Line 2: SMEs' Knowledge Transfer, Conversion, Co-creation & Innovation

This research theme line aims at the development of SMEs' knowledge transfer, internalization and intercultural awareness through the multidisciplinary (management; finance, supply chain, and marketing) study of human, physical, and cultural types of capital that enforce the development of sustainable communities' mobilization across boundaries (Gregersen-Hermans, 2019). The emphasis of this research line is, therefore, placed on the connection of the concepts of intercultural and global competence and sustainability to the behaviour of various market participants, e.g., employees, managers, consumers, producers, traders, investors and SMEs (Kalogeras, 2010). Improving physical capital relates to community (tangible and intangible) assets such as public facilities - e.g., hospitals and schools, transportation, telecommunications and infrastructure - while increasing human capital relates to decision contexts such as health, education, nutrition, and improved workplace dynamics. The diversity across borders and cultures should capitalize on efficient governance, competence-building, capacity-building, participatory planning, access to information, collaboration, cooperation, and partnerships (e.g., creation of business clusters; Khalil, 2017). Within this line, the research questions will be addressed regarding the development of global competencies of business leaders and employees, so human capital, in order to ensure the implementation of sustainable business strategies, as well as SMEs' competence and capacity to manage and invest in the dissemination of implicit and explicit knowledge through the partnerships.

Research Theme Line 3: Innovating International Business Education

The aim of this research line is the design and development of an innovative didactical approach to teaching sustainability-related subjects in the IBSM community. The main focus relies on the development and implementation of a sustainable internationalised approach to business challenges and topics. Such an approach is expected to add value and produce the intercultural and global intended learning outcomes for the students and faculty members of the IBSM. Thus, in this research line, SIB's ambition to contribute to the IBMS' mission and vision of educating resilient business graduates with a global mind and how this

can be implemented with IB's pedagogical approach of 'Student in the Lead', which is inspired by the HILL approach (Dochy and Segers, 2018). IBSM's mission and vision are leading and they are closely connected to the values aligned with ERS and international global and intercultural dimensions regarding the internationalisation of the curriculum.

Further, and aligned to the Internationalisation Agenda for Higher Education (2018), IB and SIB have further invested in realizing inclusive communities of learning aimed at the academic and social integration of students and staff, language policies and coaches'/experts' training for teaching in the international classroom. Also, through the development and application of models that rely on the *Research Informed Teaching* (RIT) framework (AHEA; 2016), SIB has been and will deal with (evidence-based) studies focusing firstly on how to promote IBSM coaches/experts-researchers-student collaboration to integrate research-based learning across domains of Zuyd UAS, and secondly on how to utilize self-reflective learning to encourage excellent teaching through the offering of scholarships of teaching and learning both for IBSM students and staff in the field of sustainable community mobilization.

The three suggested research themes are in line with the transition themes of Zuyd UAS as defined and determined by the Regional Transition & Innovation Guide (*Regionale Transitie en Innovatie*) of Zuyd UAS. Themes 1 and 2 are in line with the transition themes regarding the creation of valuable (sustainable) communities in the Limburg region (transition theme 2) and the development of sustainable production systems (transition theme 3). In the SIB's context, this relates to developing SMEs' sustainable production and market structures and eco-systems. The third theme aligns with transition theme 1 (strengthening the population's participation supported by the innovative technologies) and 4 (stimulating the intelligent use of data for professionals and businesses). That is, the study on ERS-related topics relating to student and faculty populations is expected to contribute to the viability and further sustainable development of the IB's pedagogical approach and IB&C domain's community mobilisation.

In terms of applied research, we would like to study the decision-making behaviour of SMEs in Limburg for adopting SPSSs, at first, and next set up a 'Sustainability Monitor for SMEs in Limburg'. The effectiveness of our measurement tools in the field of sustainability competence will be tested in order to support transformative learning and enhance our stakeholders' – consisting of students, teaching staff, applied researchers and practitioners - sustainability literacy using research-based consulting skills. We are also seeking funding in collaboration with the research centres of Professional Communication in a Digitalising Society,

Global Minds @ Work, Future of Food, Material Sciences, and Smart Urban Redesign in order to develop synergies for international business learning in which students, educators, and SMEs can build their sustainability competence.

Our applied research portfolio starts with research questions based on practitioners' inputs and continues with iterative empirical testing and validation in different decision contexts. Both qualitative and quantitative research methods are and will be employed using a research-based consultancy framework that allows for iterative empirical testing and validation by engaging internal stakeholders - peer review with other applied researchers and students - as well as external stakeholders - businesses and policymakers. Despite the limitations imposed by Covid-19 in our first one and a half years of our existence, our team has managed to start up several research projects, contribute to the curricula of several academies and collaborate with different partners within and outside Zuyd. The following pages show the first (and ongoing) projects considered in our research portfolio.

Project 1

Migration and Sustainable Food Consumption Patterns.

Project Leader

Mrs. Nouran Ahmed Serag



Project 2

**Limburg 3S (Sustainability – Synergies – SIB):
A Sustainable Regional Partnership.**

Project Leader / RTL 1 Leader

Dr. Theo Benos



Project 3

Action Research for Developing a Talent Pool.

Project Leader

Mrs. Liesbeth Besselink



Project 4

**Performance Evaluation of Sustainable & Circular
Business Models.**

Project Leader

Dr. Norman Dytianquin



Project 5

**Development of a Business Maturity Scan
for SMEs' Sustainable Behaviour.**

Project Leader

Mrs. Gaby Gijsberts-Engstfeld



Project 6

**Innovating Business Education:
Internationalisation & Education for Sustainability.**

Project Leader & RTL 3 Leader

Dr. Jeanine Gregersen-Hermans

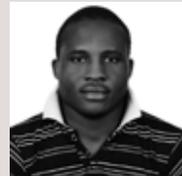


Project 7

**Sustainable Development & Cooperatives
in Developing Countries**

Project Leader

Dr. Ikejemba ChidieBere



Project 8

**Knowledge Conversion, Co-creation & Transfer
for SMEs' Sustainability Transition.**

Project Leader / RTL 2 Leader

Dr. Mohammed Khalil



Project 9

**Shared-Coordination of Applied Business
Sustainability Minors / Legal Aspects.**

Project Leader

Drs. Eliza Malathouni-Derwall



Project 8

**Stakeholders' Engagement Management
& Sustainable Marketing Communications**

Project Leader

Mr. Jo Spaubeck



Project 8

**Education for Sustainable Development
Professionalisation Seminars**

Project Leader

Dr. Quan Zhu





The first Sustainable International Business research team was formed in February 2020, a few days before the announcement of the first lockdown due to Covid 19-pandemic in the Netherlands (12th of March, 2020). From left to right: Prof. Dr. Ir. Nikos Kalogeras, Dr.Theo Benos, Mr. Karel Thomas, (†) Mr. Stephan Jacobs, Mrs. Liesbeth Besselink; Dr. Jeanine Gregersen-Hermans, Dr. Alexandra Montague, Dr. Norman Dytianquin, Dr. Quan Zhu, and Mr. Jo Spaubek (not present).

4. Our host: Domain of International Business & Communication

A final word on the host of our research centre, the Domain of International Business & Communication of Zuyd UAS. In our domain, Dutch and international students develop their professional skills and sustainability competency by putting business ideas into practice, including teamwork, conflict resolution, leadership, and presentation skills. In addition, our students gain practice-based and international experience by spending at least a semester studying or enrolling in an internship abroad, conducting applied research throughout their graduation project semester, and by implementing a research-based consulting approach for providing sustainable solutions to real-life business sustainability challenges. The programmes of IB&C's four academies (European Studies, International Business; Oriental Languages & Communication, and Translation Academy) in close collaboration with the domain's research centres (Sustainable International Business & Professional Communication in a Digitalising Society) prepare young professionals for a career in a variety of areas within international business, including marketing, management, finance, supply chain management, linguistics, politics, international cooperation, languages, professional communication, technical translation, legal translation, subtitling, interpreting, or even digital innovations and entrepreneurship, among others.

The academies and research centres of the IB&C domain seek to provide high-quality professional education and applied research, offering an international perspective in the fields of international business and communication. All IB&C's academies are relatively small, tight-knit communities where students find a personal and welcoming atmosphere. Actually, their didactical approaches offer students the best of both worlds: a small-scale learning environment with all the benefits of a larger institution. Experiential learning and applied knowledge dissemination in international classrooms is made by using highly interac-

tive didactical techniques, with room for personal guidance as well as the freedom given to students to develop into competent, skilled and creative international business and communication professionals. Of course, there are certain challenges, and there is much more room for improvement. Therefore, continuous dialogue with and professional development of students, teaching staff, and work-field stakeholders is a must-have ingredient in educating sustainable minds, and it is also part of our applied research agenda.

5. Acknowledgments

If you are wondering how that rather naïve schoolboy coming from Amades village on Chios island, Greece, is feeling just after having shared his experiences, expertise, and aspirations with you, I can certainly tell you one thing. I feel blessed for various reasons.

The first reason is about my personal and professional development as a human who started from that very small-sized community, the village of Amades, and has been continuously pursuing the same green vision and sensation by being a member, nowadays, of larger-sized communities such as the one of IBSM at the domain of International Business & Communication/Zuyd University. I perceive IB&C /Zuyd as a dynamic workplace that respects diversity and makes its own steps towards a sustainable tomorrow. I am proud and grateful that Zuyd University's Board of Governors has trusted me to serve, also, this aim and granted me the opportunity to chair the research centre of Sustainable International Business, a theme that is so close to my heart and that never ceases to fascinate me. In particular, I would like to take this opportunity to thank Saskia Brand-Gruwel for her support and advice. Further, my warmest gratitude goes out to Mrs. Yvette Froeling, Dean of the IB&C domain, as well as Mrs. Manon Niesten and Mrs. Eefje Willems, IB programme directors, whose continuous support and belief in our applied research agenda has made this research centre a reality. I owe, also, a lot to Prof. Dr. Mark Pluyamaekers, and head of the research center PROCODIS, who has offered so kindly and generously his help and advice on SIB's building up process. Dear Mark, I really hope that we will continue our collaboration at the interface of sustainable international business and digital communication for the coming years.

Secondly, If you are wondering whether I still have the same sensation and vision for building up and experiencing the benefits of a green world, wherein people live happily without being confronted with borders and wars, my answer is certainly a positive one. Yet, nobody can achieve this on their own. Everyone needs to co-operate in order to enjoy benefits provided by a values-and-principles-driven community-oriented organization. I hope that my speech has convinced you that this is a necessary and sufficient condition for making this

transition and finally transformation to a sustainable world. Thus, I really feel blessed for being surrounded and cooperating with so many and talented colleagues. I would like to express my heartfelt thanks to all IB colleagues and, particularly SIB team members, (Nouran, Theo, Liesbeth, Norman, Gaby, Jeanine, Chediebere, Mohammed, Elisa, Alexandra, Jo, Karel, Sanne and Quan). Thank you very much for co-creating SIB's research program and being so enthusiastic, for always working hard and delivering such high-quality applied research outputs besides the totally unexpected constraints we have dealt with in the last 2 years. Yet, at this point, I would like to specifically express my warmest and special thanks to Mrs. Liesbeth Besselink for the practical support in the organization of the research centre and the preparation of the inauguration. Dear Liesbeth, your input is indispensable! In addition, in the preparation of the inauguration I got to collaborate with a few Zuyd and non-Zuyd colleagues who have been so supportive and who deliver such quality work. Mrs. Lilian Pommé, Mrs. Gerty Louppen, Mrs. Ghislaine Starmans, Mrs. Corine Castenmiller, Mr. Peter Frambach, and Mr. Panos Tsiaras your inputs are highly appreciated!

I also want to warmly thank the Zuyd Professors, Prof. Dr. Ankie Hoefnagels, Prof. Dr. Nourhan Abujidi, Prof. Dr. Gino van Strydonck and Prof. Dr. Danny Han as well as Prof. Dr. Ir. Joost M.E. Pennings (Wageningen University & Maastricht University), Prof. Dr. Dimitris Skuras (University of Patras, GR), Dr. Jeroen Derwall (Utrecht University & Maastricht University), Dr. Kyriaki Glyptou (Leeds Beckett University, UK) and Dr. Gwen Noteborn (Maastricht University) for having with them inspirational conversations and providing us with their valuable advice. You are all great scholars and people of high integrity! I really hope that we will continue our collaborations in the coming years and inspire each other.

Finally, if you are also wondering how far the world is from achieving the SDGs, I have to kindly inform you that the UN and other organizations often frame the challenge in terms of a(n) financial or investment gap! They define this gap as a \$5 trillion to \$7 trillion problem. This figure may make you wonder even more and ask me: Nikos, do you really think there is hope left for this word? My answer is a straightforward one: Of course, there is! Always, I carry a sense of optimism for positive change. This is the third reason that I feel blessed! I have met thousands of international business students, real change-makers, from whom I have learned so much throughout the years. Their fresh mindsets and personal reflections on sustainable international business emerging topics have inspired me and have convinced me even more about the importance of studying the way in which we can make a positive impact on the transition to a sustainable society by means of cooperative synergies. A special thanks goes to many IB students-Leaders who have been members of SIB' Junior Research Team (JRT).

Kübra Büyüksari, Julia van Berlo and Philip Schell-Hammer thank you so much for taking the lead in organising the *Leading in Business Sustainability Symposium*, the first ever large-sized student-led symposium in the history of our domain! Great job! Great leadership! Your inspiring, highly creative, and fresh mindset gives us hope and make us believe that the future ahead will be certainly more sustainable! So let's have a round of applause please for our highly talented IB student-Leaders and fresh IB professionals!

And last, but not least, I feel blessed to be a member of such a wonderful family! I extend my most heartfelt gratitude and love to my mother (Evgenia), my father (Emmanuel), my sister (Kyriaki), my bother (Stelios-Rafael), and my grandmother (Maria), who have been always there to provide me with endless support.

Dixi et animam levavi!

I have spoken and relieved my soul!

Dear Ladies and Gentlemen, Thank you very much! Dank u wel! Ευχαριστώ πολύ!

Nikos Kalogeras,

Maastricht, The Netherlands, May 20, 2022

6. List of Abbreviations

3Rs	Respectful, Resilient, Responsible
CBM	Co-operative Business Model
CE	Certainty Equivalence / Certainty Equivalent
CSR	Corporate Social Responsibility
ERS	Ethical, Responsible, Sustainable
ESD	Education for Sustainable Development
HILL	High Impact Learning that Lasts
IB	International Business study programme
IB&C	International Business & Communication domain
IBSM	International Business School Maastricht
ICA	International Cooperative Alliance
IOF	Investor-owned Firm
MNE	Multinational Enterprise
PLOs	Programme Learning Outcomes
RA	Risk Attitude
RP	Risk Perception
RTL	Research Theme Line
RU	Research University
SBM	Sustainable Business Model
SDG	Sustainable Development Goals
SIB	Sustainable International Business research centre
SITL	Student in the Lead
SME	Small or Medium-sized Enterprise
SPS	Sustainable Production System
UAS	University of Applied Sciences

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About Prof. Dr. Ir. Nikos Kalogeras



Prof. Dr. Ir. Nikolaos (Nikos) Kalogeras holds the chair of Sustainable International Business (SIB) at International Business School Maastricht (IBSM), Zuyd University, the Netherlands (NL). He also serves as an associate and visiting professor at CORMEC-Dept. of Marketing & Consumer Behaviour, Wageningen University & Research (NL), MAICh-CIHEAM (FR), Neapolis University Pafos (CY) and Maastricht School of Management (MSM/NL). His professional interests are heavily inspired by business challenges regarding sustainable cooperation in contemporary product/service markets. Fascinated by managerial questions of how to invest, produce and market sustainable products / services in complex value chains in agribusiness, food, financial, and tourism markets, he enjoys developing new courses / seminars, embarking on innovative research projects, co-authoring academic papers & research-based consulting reports, and collaborating with industry stakeholders. His research has been published in leading international journals such as *Sustainability*, *European Journal of Marketing*, *European Journal of Operational Research*, *Journal of Service Management*, *Theory & Decision*, *Agribusiness: An International Journal*, *International Journal of Food & Agribusiness Marketing*, *Journal of Food Products Marketing*, *Food & Chemical Toxicology*, among others, in scientific book series such as *Routledge*, *Springer*, *World Scientific*, and proceedings of international conferences, symposiums and seminars. Prof. Kalogeras is passionate about (international) triple-helix sustainable co-operations involving universities, industries and governments. His participation as a researcher and partner in consortia as well as regional subsidy initiatives, enables him to transfer and validate his scientific knowledge. Moreover, Prof. Kalogeras is an experienced commissioner of large product/service organisations, governmental agencies in the US and EU, co-operative firms and SMEs.

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