CGIAR BETTER DIETS AND NUTRITION

Building MSME innovative capacity for healthier food supply

Learning from three MSME support mechanisms in Ethiopia

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Contents

Introduction

Micro, small, and medium enterprises (MSMEs) constitute the vast majority of firms operating in the food system, particularly so in LMICs (Reardon et al., 2021). In sub-Saharan Africa (SSA), MSMEs are strongly involved in each stage of the food value chain; at the retail stage, between 70% and 100% of food is sold by MSMEs (Demmler, 2020). Harnessing the potential of food related MSMEs and informal businesses is suggested as one of the pathways to improve the availability, accessibility, and affordability of healthy foods, especially for lower income consumers (IFAD, 2021). This is because MSMEs have the potential to, among others, produce differentiated products that are highly local and traditional; adapt to high transaction costs; and innovate and offer complementary services such as inputs, information and logistics to small-scale producers in informal arrangements (Reardon et al., 2021; Liverpool-Tasie et al. 2020). Further, MSMEs are often located closer to the consumer, in villages and street markets, and can facilitate increased consumption of healthy foods while also contributing to the reduction of food loss and waste by engaging in food processing and other activities (Mekonnen et al., 2022). A study in Tanzania found that the proximity of informal vegetable vendors to a household was associated with a higher likelihood of vegetable purchases and lower consumption of carbohydrates (Ambikapathi et al., 2021). Another study in Kenya found strong associations between longer travel times to markets and lower diet quality for both vendors and consumers (Demmler et al., 2025). It is believed that MSMEs, often being close to consumers, can be agents of change for increasing consumption of healthy foods, if they possess sufficient innovative capacity.

While consumption of nutritious foods being in SSA fall below WHO recommendations, a recent study suggests that there have been domestic supply booms in value chains (mainly involving MSMEs) of fruits, vegetables, and animal products, noting that public investments in wholesale markets, roads, and other infrastructure like electrification, and agricultural research/extension were important drivers (Reardon et al., 2024). While this is a positive development, the share of people in SSA who could not afford a healthy diet in 2022 was still 72% (FAO et al., 2024).

Translating policy ambitions on greater consumption of healthy foods into practice entails changes for MSMEs. Specifically, it implies changes to both long-term strategic focus as well as daily business practices, in terms of the range and types of products being designed, prepared, and sold. Such ambitions assume both a willingness and capacity of these firms to adapt and change, or in other words to innovate. Innovation, or, better, the capacity to innovate, by MSMEs is thus essential for food system transformation, which begs the question if the actual levels of MSME innovation or innovative capacity are sufficient, or can and should be further augmented by targeted policies.

Cognizant of this observation, and MSMEs' potential role in job creation for women and youth and social inclusion, there has been an increased attempt by development programs to enhance the contribution of MSMEs in food systems transformation in general and increased supply of healthy foods in particular. However, there is limited study and evidence on whether MSMEs truly can drive change in healthy food consumption; whether such interventions are effective; and whether they can respond effectively to interventions being trialled and proposed. In low-income markets in Kenya the introduction of a safe, nutritious, and affordable product (peanut butter) produced by an MSME led to an increase of its consumption; however, the overall consumption of items in this product category did not change, nor consumption of related but potentially less nutritious foods (Maredia et al., 2023). Within the same research project, an intervention that combined personalized technical assistance with major capital infusion to food SMEs in Kenya resulted in the development of new products and created additional jobs for workers (Nakasone et al., 2024), but hardly addressed the market-level impact.

In Ethiopia, various programs support or have supported MSMEs in food value chains to grow, innovate, and meet the needs of consumers. Such support programs offer basic business development training, technical assistance, and coaching to start-ups, as well as financial assistance in the form of grants, loans or "smart subsidy" for innovators. In this paper, we attempt to better understand the entry points of selected support programs in strengthening the innovation capacity of food MSMEs in Ethiopia. Specifically, this study validates the assumptions underlying these interventions and assesses the evidence on the effectiveness of interventions supporting MSMEs by addressing the following questions:

1. What characterizes the innovative capacity of consumer-oriented food MSMEs?
2. How to measure such innovative capacity?
3. How does innovative capacity vary across different MSMEs?
4. What are the implications for effective MSME support, considering the support programs considered?
5. What has been the effectiveness of such support programs in increasing the innovation capacity of MSMEs?
6. Has increased innovation capacity translated into healthier food supply and consumption?

Literature Review on Innovative Capacity of Food MSMEs

Determinants of innovation capacity

Innovation involves developing new methods, ideas, or products (Restrepo-Morales et al., 2019) and can include improvements in business models or processes (Aksoy, 2017; Caiazza et al., 2014)(See Annex 1 for a more detailed discussion of the concept). Innovation capacity can be broadly defined as a firm's set of resources, capabilities, and dynamic capabilities dedicated to the innovation process (Pierre & Fernandez, 2018). Innovation capacity has also been viewed in the literature in relation to both innovation as a process and as an outcome (Oanh et al., 2020). As the former, innovation capacity is the ability to continuously transfer knowledge and ideas to create new systems, processes, and products that benefit businesses and stakeholders. As the latter, innovation capacity is the ability to produce explicit types of innovation such as product, process, organizational, marketing and management innovations.

Recognising the role of knowledge in the economic well-being of nations and the need for better measures of innovation, the OECD, in collaboration with Eurostat, published the first Oslo Manual in 1992. Named after the Norwegian capital where the initial discussion took place, the manual serves as a guide for collecting and interpreting data on technological innovation. The latest version (OECD & Eurostat, 2018) does not specify an innovative capacity (or capability) but rather identifies the four types of business capabilities relevant to innovation, which include resources controlled by a firm, management capabilities, workforce skills, and technological capabilities. This categorization of business capabilities is similar to what is called innovation process input (e.g., financial resources committed to the innovation task or the number of people working in R&D) as reviewed by (Rosenbusch et al., 2011). As an example of innovation process input measurement, Vermeulen et al. (2003) used variables such as the share of employees participating in R&D activities or internal training activities, the participation of the SME in innovation cooperation networks, and the capacity of the firm to gather external information. It is then hypothesized that firms that invest more in innovation process input can achieve higher levels of innovation process outputs (number of patents, new services, products, or manufacturing processes), which in turn can be associated with improved performance (Vermeulen et al., 2003).

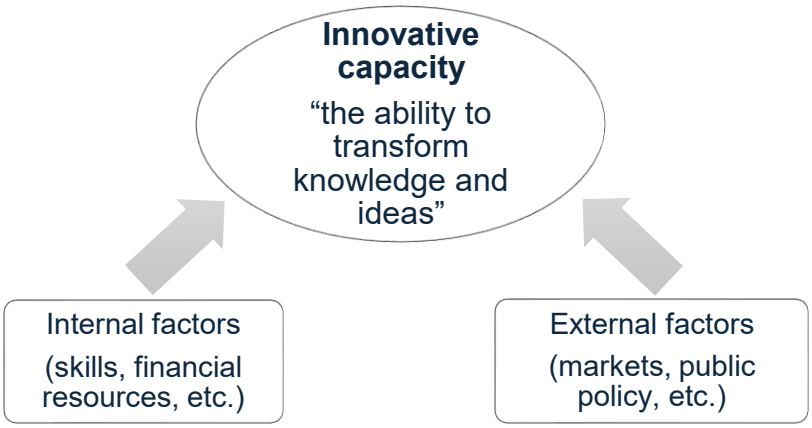

Figure 1. Conceptualising innovative capacity

Determinants of the innovation capability and activities by MSMEs can be categorized into internal factors or those about characteristics and capabilities of the MSMEs, and external factors which pertain to sources outside the establishments (Quimba & Rosellon, 2019) (see also Figure 1). Internal factors for MSMEs include those related to the characteristics and skills of the entrepreneur/business owner; the innovation planning and strategy; the organizational and innovation culture; the learning process and capability, as well as process re-evaluation; market orientation; and financial resources. Several studies have additionally provided empirical evidence that an entrepreneur's knowledge, collaboration, decision-making styles, communication, and other personal resources play a role in establishing innovation in MSMEs (Candra et al., 2022).

External factors also influence a firm's incentives to innovate and its innovation capabilities as its innovation activities are embedded in political, social, organisational, and economic systems (Edquist, 2005; OECD & Eurostat, 2018). The Oslo manual provides an overview of such external factors (Figure 2). Empirical studies, such as those by De Martino & Magnotti (2018), highlight the role of public funding in enhancing the innovation capacity of food SMEs and micro-enterprises in Italy through creating public-private partnerships (PPP) and

developing research projects. The presence of local knowledge providers, especially universities and research centres were also found important. Similarly, Sternberg & Arndt (2001) found that European small firms participating in innovation networks are more likely to generate process innovations, with external regional R&D spending positively impacting product innovation.

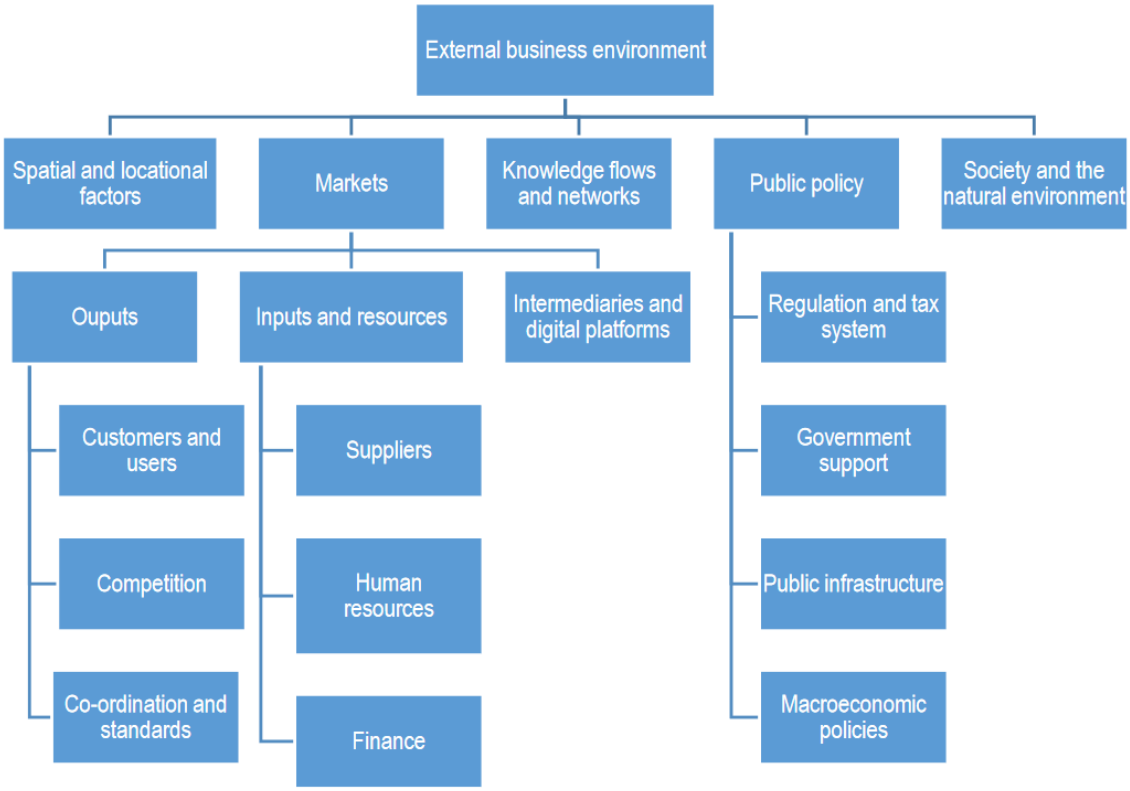

Figure 2. Elements of the external environment for business innovation (OECD, 2018: p. 147)

Not surprisingly, internal and external factors affect innovation capacity to different degrees (Figure 1). Restrepo-Morales et al. (2019) found that Colombian SMEs do not significantly benefit from participation in R&D alliances, but performance appears dependent on internal innovation efforts directed at product development. Similarly, de Martino & Magnotti (2018) found that the presence of internally qualified staff provides Italian food micro-enterprises an effective way to develop innovation, whereas innovation partners are few and not easily accessible. Aggarwal & Joshi (2024) found that internal factors such as top management, organizational structure, communication, and technological capability positively impact innovation among Indian MSMEs, while employee orientation and financial factors have a negative effect. Relevant external factors include industry analysis and engaging in international partner alliances, both enhancing innovation adaptation. To the contrary, and surprisingly, infrastructure and MSME support policies negatively influence innovation adaptation, raising further questions that remain unanswered. Using data from the nationally representative World Bank Enterprise Survey for Ethiopia (not focused on SMEs), Hussen & Çokgezen (2020) found that both internal factors, including the size of the firm, R&D expenditure, on-job training, and technology adoption capability of managers, and external factors including access to credit and competition are strongly associated with firms' innovation performance.

Innovation capacity has also often been commonly assessed in terms of innovation outcomes and include both objective and subjective measures. Objective measures include tangible inputs such as R&D investments, patents, and new products or processes introduced by the firm. R&D intensity is a common metric, though it is less frequently applicable in developing countries due to limited resources (Muzi & Cirera, 2016). Due to difficulties in accessing objective data, many studies rely on self-reported measures of innovation capacity. These include managers' perceptions of the firm's performance in areas like product quality, market adaptability, and technological advancements (Rosenbusch et al., 2011), or a firm market orientation and attitude on innovation "innovativeness" (Ajer et al., 2023). The subjective nature of these evaluations often includes qualitative rankings and ratings compared to competitors. Muzi & Cirera (2016), however, find that innovation activities and capacity is intrinsically more difficult to assess using self-reported data from firms in LMICs, particularly due to the more incremental nature of their innovation activities, such as introducing new organizational or marketing practices. As a result, particularly shorter surveys, with only a limited set of questions, tend to overestimate innovation rates It is also common amongst researchers to use secondary data and surveys, such as the World Bank's Enterprise Survey, to extract relevant data on innovation outcomes (Ali et al., 2021; Lim, 2022)

Innovative Capacity in Consumer-Oriented Food MSMEs in LMICs

There are limited studies on innovation (capacity or capability) of food-related MSMEs in low- and middle-income countries (LMICs), as most research in this area has focused on European or non-food contexts (Ajer et al., 2023). Among the few studies focusing on food in LMICs, Candra et al. (2022) found that centralised business decision-making by food enterprise leaders enhances innovation by improving collaboration and communication, which in turn affects the food entrepreneur's knowledge and collective entrepreneurship among MSMEs of food and beverages in Greater Jakarta, Indonesia (Candra et al., 2022). Ajer et al. (2023) found that customer-focused (product and market) innovation in Ugandan food MSMEs was primarily driven by the age of the firm, with newer businesses being more innovative in creating customer value, regardless of turnover. Additionally, MSMEs affected by policies supporting innovation exhibited higher levels of systems-focused innovation, while larger firms with more employees showed less customer-focused innovation, suggesting differences in employee productivity across firm sizes. Ali et al. (2021) found that among Indian food and agribusiness MSMEs, firms with sole proprietorship are more likely to adopt product innovation, particularly those firms investing in internal R&D. External collaboration, such as international certification, supplier partnerships, and trade associations, positively impacts product innovation, while market externalities (e.g., competition, political instability) negatively affect SMEs' ability to innovate, suggesting that smaller firms may struggle with collaboration and external challenges.

Some studies identified the specific constraints to developing innovation capacity for MSMEs. Nor et al. (2016) analysed innovation barriers for 247 food processing SMEs in Malaysia and found significant detrimental effects of financial barriers on innovation, particularly related to government financial assistance, high-interest rates, and a complicated loan application process. Although not focusing on food-related MSMEs, Mendi & Mudida (2018) found that past informality status negatively affects technological innovativeness among Kenyan firms, with particular differences in process innovations. They find that firms that started business operations informally, affects a firm's perception on the need to innovate, suggesting the existence of severe informational disadvantages of firms in the informal sector. The authors recommend putting in place policies to provide greater incentives for firms to formalize their operations.

Enhancing MSME innovative capacity and capability

In response to the barriers hampering MSME innovation, several types of interventions are being proposed to support firms and MSMEs in LMICs.

First, interventions focus on strengthening the internal factors defining innovative capacity through training and business support. Onah (2024) conducted a cost-benefit analysis of broad business support interventions for food MSMEs in LMICs modelled by six interventions (1) a low-cost intensive mentoring and training for female managers of micro and small enterprises in Peru (Valdivia, 2015) (2) low-cost business development services for food MSMEs (ISF Advisors, 2023); (3) peer-to-peer networking (Agridius, 2019) in Senegal and Moldova; (4) inter-firm relationship building and networking in China (Cai & Szeidl, 2018); (5) matching grants for obtaining management consulting services in Mexico (Bruhn et al., 2018); and (6) grants for capital expenditure complemented with technical assistance in Kenya (Nakasone et al., 2024). With the exception of the sixth intervention, the results indicate that benefits in improved sales outweigh implementation costs, suggesting these interventions can be economically viable under the right conditions. While providing business training may be necessary to enhance innovation capability, and deliver better incentives for greater investment in R&D and innovation by MSMEs, it may not be sufficient. For example, assuming managerial training is vital for enhancing innovation capacity of MSMEs, Taneo et al. (2022) found that the knowledge of food SME managers receiving business training in Indonesia displayed increasing knowledge on human resource management, but did not investigate if such increases translated into innovation capacity improvement. Hence, a wider set of innovation support measures is required (Altenburg & Von Drachenfels, 2006; Cynthia Chizoba Ekechi et al., 2024).

Hence, second, policies need to include (continued) investment in the general business environment, i.e. the external factors shaping innovative capacity, through physical infrastructure (roads) as well as soft infrastructure (safety, rule of law, setting of standards as well as in education) in addition to the provision of business (development) skills such as management or financial literacy training (AGRA, 2024). Some evidence from food MSMEs in LMICs shows that policies that promote and implement innovation-friendly regulations can drive innovation. Using data collected from 521 agri-food MSMEs in Uganda, Ajer et al. (2023) found that innovation policies rewarding creativity can stimulate innovations that enhance customer experience. Meanwhile, policies and principles that encourage internal product and process improvement research would promote system-focused innovations that boost operational efficiency. And while investments in the general business environment serve to provide necessary preconditions for strengthening innovative capacity, these are ideally complemented by policies that specifically nudge firms to innovate, or innovate for specific societal outcomes.

Hence, third, the academic literature distinguishes between so-called technology push and demand pull innovation policies. Both translate into different sets of policies, although the most successful cases on innovation are typically a combination of both (Mowery & Rosenberg, 1979). Technology-push stipulates the essential role of science and technological development in shaping (firm) innovation. Technology-push policies thus comprise a set of policies fostering fundamental research at universities matched with, for instance, associated knowledge

transfer programs to MSMEs (Cynthia Chizoba Ekechi et al., 2024) or the formation of R&D alliances (Restrepo-Morales et al., 2019). In doing so, such policies alter both the external as well as the internal factors of innovative capacity.

To the contrary, demand-pull thinking assumes innovation is to a large degree shaped by incentives offered in markets and, by consequence, a role for policy to stimulate innovation by providing better market incentives. Policies to foster demand-pull innovation include, a.o., prizes and advanced market commitments but also competitive grants, contests and tournaments (CGD, 2022; Elliott, 2010; Master & Delbecq, 2008). What such demand-pull policies have in common is to strengthen the financial incentive for firm-level innovation, including at MSMEs. Examples include prizes, with a set fixed financial reward when a firm delivers a specific innovation or technology (Gök, 2016). The innovation then typically remains in the public domain (i.e. is not being patented). Its use is rather limited although being advocated for incentivizing private research into novel crop varieties (Master & Delbecq, 2008). A closely related mechanism are so-called advanced market commitments, used and advocated for stimulation innovation in vaccine development (Berndt et al., 2007), with the key difference being that property rights remain private and can be patented. Both of these mechanisms focus on longer term innovation by altering the external factors that define innovative capacity.

Finance for MSME innovative capacity and capability

innovative capacity), both for financing day-to-day business operations as well as investment in innovation for new productive business opportunities (ADB, 2023; IFC, 2017). Unfortunately, such firms cannot secure regular loans to fund innovation. The majority of studies suggest that lenders consider finance for MSMEs in the food system as a high-risk investment that is not sufficiently compensated for by the expected returns (AGRA, 2024). While microfinance is sometimes considered, this is typically only relevant for micro-enterprises, primarily for funding day-to-day business operations; or for poorer households who use microcredit funds to smooth consumption during economic shocks, notably health-related ones, or, to purchase household goods (ADB, 2023). Rarely, if ever, is microfinance explicitly used to fund investment in innovation in SMEs (Dela Cruz et al., 2023).

To fill this capital gap for innovation, contests and tournaments are used to fund and stimulate research and innovation for specific, directed product and/or market development, typically focusing on products with a high technological readiness level. A simpler form of this mechanism can be used to target MSMEs directly through so-called challenge programs, which reward firms with the most promising and innovative business proposals. Firms are requested to submit a business proposal within a specific theme or sector, and the most promising proposal, evaluated against a pre-established list of criteria, is selected for funding. Such programs are now being trialled in various LMICs (Tambo 2018; Barnett and Brown 2022; USAID, 2024), including in Ethiopia (Section 4).

In addition to these financial transfers aimed at strengthening internal innovation capacity, efforts have also been made to improve the broader financing conditions for MSMEs. In various instances governments actively step in to compensate private investors for the low returns vis-à-vis the high risks for lending to MSMEs, leading to so-called blended finance funds. Blended finance comes in different shapes and flavours but the general principle is that public funding de-risks the investment of the private investor (AGRA, 2024; OECD, 2021). Such mechanisms can offer a means to make finance for innovation available to a larger cohort of MSMEs in LMICs. Yet the perceived gap in funding for MSMEs in LMIC is large, an observation itself calling for more innovation for linking investors with MSMEs. Meanwhile, digital finance developments, including mobile phone payment solutions like M-Pesa, or digital payment platforms tailored to MSME needs like Flutterwave, have caught the headlines on innovation in LMICs and their adoption can spur innovation and support MSME growth as suggested by a study from Nigeria (Effiom & Edet, 2022).

Another noteworthy innovation in the realm of blended finance has been around the theme of diaspora finance. This term is used to describe migrants investing in their countries of origin, including in country development bonds, venture capital, mutual funds, as well as direct peer-to-peer lending to MSMEs or startups in LMICs (European Commission. Joint Research Centre., 2021). From the purpose of supporting innovation at MSMEs, the latter is relevant to consider.

Solid impact assessments of both challenge programs and the innovative finance mechanisms are scarce and thus many questions remain. Are both mechanisms effective in achieving impact (i.e. stimulating firm-level innovation and growth)? And while many MSMEs in LMICs either operate out of bare economic necessity or face conditions that make day-to-day survival more prominent (Bekele & Worku, 2008; Edoho, 2016; Restrepo-Morales et al., 2019) it begs the question when, where and for whom such interventions could be effective. Such questions are further shaped by the observation, as argued above, that policies to foster innovation are no substitute for public investments in establishing a stable business environment.

The next sections explore these interventions in greater detail in the context of Ethiopia. Section 3 describes the data used for the analysis; Section 4 describes the experiences with two challenge programs implemented by two different organisations in Ethiopia, IDE Global and Stichting Wageningen Research; as well as a diaspora finance mechanism implemented by GiZ. The section explains the workings of the mechanisms in detail, and investigates how these have, or have not, stimulated innovative capacity and innovation in MSMEs in the food system. Based

on these insights we reflect, in Section 5, on the options to further propagate such a mechanism for Food System Transformation, particularly for stimulating a greater supply of healthy foods.

Data collection

In order to get a general overview of development programs supporting MSMEs at large, and MSMEs in the food system in particular, exploratory meetings were held between the authors and representatives of several organisations in Addis Ababa including Stichting Wageningen Research (SWR), SNV, IDE global, GIZ, AGRA as well as the private sector firm Shayashone plc active in consulting, agribusiness services and products. Based on these insights the authors narrowed down the focus on three MSME support programs based on (1) the relevance of their intervention to the objectives of this study; 2) jointly capturing a diversity of approaches and MSME typologies targeted; and their (3) willingness participate in the research activities underlying, in particular by sharing information and linking with beneficiaries and non-beneficiaries of their programs. The selected NGOs and interventions include WIDU.Africa (WIDU - Financial support for small businesses in Africa), a program implemented by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) and funded by Germany's Federal Ministry for Economic Cooperation and Development (BMZ)[1]; the Resilient Agriculture for Inclusive and Sustainable Ethiopian Food Systems (RAISE-FS) (raise-fs.org) implemented by Stichting Wageningen Research (SWR) and funded by the Netherlands Embassy in Addis Ababa[2]; and, Her Time to Grow - IDE implemented by iDE global and supported by Global Affairs Canada[3] with a focus on stimulating women's entrepreneurship in food production. Subsequently, qualitative interviews were conducted in Ethiopia from mid-November to mid-December 2024 with three groups of stakeholders (Table 1), using pre-designed interview guides (Annex 2).

Table 1: Summary of interviewees

Stakeholder	Notes	Total (3 case studies)	Female	Higher education
Project Manager/Implementing agency representative of the initiative/intervention	Respondents should have adequate knowledge of the intervention design, theory of change, etc. of the initiative, with experience working in innovation and MSME development	7	5	7
Beneficiary (representative of food-related MSMEs) and participants (e.g. those who joined the challenge but did not receive funding) of the initiative/intervention)	Priority is given to MSMEs that are closer to consumers e.g. retailers.	16	8	7
A national/local government representative working on MSME/entrepreneurship development	Representatives do not have to be familiar with the studied initiatives but should have knowledge and experience of the government innovation development and initiatives	5	1	5

The first group of stakeholders were implementers of the development programs run by these organisations that provide support for existing MSMEs and startups in the food value chain. The aim was to understand the Theory of Change underlying their interventions and the experiences and effectiveness in reaching stated goals, including enhancing the innovation capacity of beneficiaries. Details of these programs are explained in the next sections.

[1] https://widu.africa/
[2] https://raise-fs.org/
[3] https://idecanada.org/initiatives/hertime/

The second group of stakeholders were select entrepreneurs with novel business ideas in food value chains that responded to calls offered by one of the development programs described above. Two groups of entrepreneurs were interviewed for this study, including those whose business ideas were funded by the development programs and others whose application were not successful. In total, thirteen beneficiaries and three non-beneficiaries were interviewed.

The third group of stakeholders includes national and local government representatives working on entrepreneurship development in Ethiopia. Five experts were interviewed from the Ministry of Labor and Skills, which is responsible for overseeing national job creation, skills development, and labor concerns[4]; the Entrepreneurship Development Institute that provides various trainings in business development, financial and technical support services[5]; and local government officials from select places where some of the development programs are being implemented, including Weliso (*Wereda* Agricultural Extension, Oromia region), Addis Ababa (Yeka sub-city industry development office), and Hawassa (Sidama region industry development bureau). The aim was to understand their role in facilitating private sector development and innovations in food MSMEs, and their perceptions about the effectiveness of government policies and interventions by NGOs or development programs.

It is important to emphasize here that the purpose of the data collection was to better understand the precise workings of the interventions and how these could shape MSME business, innovation (capacity) and the eventual societal outcomes aimed for. And while some of the experiences documented in the next chapter are suggestive of a positive impact, these findings are not derived from well-designed impact studies. Hence, further study is required to establish the precise impacts resulting from the interventions consider over a longer time period.

The interviews were complemented by a workshop held in Addis Ababa in October 21st that brought together the authors of this study; representatives from the three organisations implementing MSME support programs surveyed in this study; as well as other organisations with similar programs; government representatives with a stake in MSME policy. The aim of the workshop was a.o. to reflect on preliminary findings from this study; reflect on lessons learned in MSME support policies and initiatives in Ethiopia and jointly reflect on emerging MSME policy and research questions with a particular focus on stimulating healthier diets and nutrition. Insights from this workshop are incorporated in Section 5.

[4] https://mols.gov.et/
[5] https://edi-ethiopia.org/index.html

Insights from three MSME support interventions in Ethiopia

This chapter presents detailed insights on the three MSME support interventions as outlined in the previous section. Key observations from the interviews are summarized in **Error! Reference source not found.**, structured along the six research questions introduced in Section 1. In the following three sub-sections, each initiative is discussed in more detail, including the experiences and perceptions of select entrepreneurs. The last sub-section discusses the interviews with policy makers.

The WIDU platform implemented by GiZ

The WIDU platform uses two innovative finance mechanisms to support the growth and sustainability of MSMEs. The overall objective is to enhance the contribution of MSMEs to employment, incomes, and livelihoods. First, grants are provided to selected businesses with the potential to contribute to change in a certain thematic area, for example, food security or women's empowerment. In this scheme, if the business plan passes the evaluation criteria set by WIDU, the own investment by the entrepreneur is matched by WIDU's grant by the amount of 2.5 times the investment, up to a maximum of € 2500. The second mechanism that WIDU implements is to leverage remittances from the Ethiopian diaspora in Europe. That is, an Ethiopian entrepreneur and a member of the diaspora willing to support his business jointly apply for a matching fund offered by WIDU to benefit the local entrepreneur. The member of the diaspora and the local entrepreneur each contribute 25% of the total investment needs, while WIDU matches the remaining 50%. The maximum amount of the matching fund is 2500 euros. In this scheme, WIDU requires the proposal to meet basic requirements, such as a clear business description and a valid investment plan. The subsequent willingness of the diaspora member to invest is considered a further proof of viability. The beneficiary can subsequently apply for an additional grant to expand their business if they can demonstrate that the initial business plan has been successfully implemented and shows potential for growth, for example, by employing additional staff.

To further support grant recipients, WIDU provides additional services including trainings in financial literacy, market linkages in both input and output markets, business coaching and follow-ups, as well as networking with financial institutions. The anticipated impacts of the overall support include improved incomes and profit; enlarged scale of business operations (for example graduating from micro to small enterprise); involvement of the enterprise in more value addition, job creation; and survival rate of the business. In what follows, we describe the characteristics of select businesses, their lived experiences and their perceptions about the enabling environment.

Business characteristics, innovative capacity and innovation

Six enterprises (five beneficiaries and one non-beneficiary) were interviewed for this study. These MSMEs were involved in one of the following: (1) the production of cookies rich in vitamin A where 40% of the raw material was orange-fleshed sweet potato blended with barley, oats, and sorghum; (2) the production of fava-bean-based crackers for children), (3) organic farming (cassava, banana, and vegetables); (4) ordinary bakery products; (5) restaurant/catering services (two firms). The number of employees in these businesses varies from one to eight persons besides the business owner. The MSMEs display varying degrees of innovative capacity, as reflected by contributions to product development or product reformulation where they try to enhance the nutritional profile, presentation/appearance, or in terms of improved agricultural practices as in the case of the enterprise that is involved in organic farming. Specific factors of innovative capacity, as listed by respondents, include: having a passion for food preparation, having the time available to think about new ideas, the influence of role models, experience from abroad (exposure), training, and interventions by NGOs

Strengthening innovative capacity: impact of the intervention

The beneficiaries of the WIDU platform mentioned that financial support integrated with coaching, strengthening internal factors of innovative capacity, helped them to realize some of their business ideas, for example, by acquiring important machinery, by improving their confidence in risk taking in their businesses. The beneficiaries stated that the intervention was effective in terms of job creation, increased incomes, and in keeping their businesses afloat which is in line with the objective of the two grant schemes described above. The importance of finance provision, combined with coaching support, in sustaining businesses can also be evaluated in view of the non-beneficiary entrepreneur with eight employees that had to close down the business after a year in operation for lack of such support, according to the entrepreneur. With a focus on strengthening internal factors of innovative capacity, like through technical capabilities in marketing or digital marketing, the experience from the beneficiaries seem to suggest that the grant may have thereby led to increased levels of innovation as demonstrated by the involvement of some of the MSMEs, for example, in new product development or product reformulation as described above.

Table 2: Summary of perspectives of three innovation initiative implementers, by research questions

Research questions	WIDU platform implemented by GiZ	RAISE-FS implemented by SWR	Her time to grow – implemented by iDE Global
1. What characterizes the innovative capacity of consumer-oriented food MSMEs? (What the implementers seek to enhance in their intervention)	• Financial literacy • Ability to create market linkages • Marketing or digital marketing capacities • New market search skills.	• Capacity to assess what technologies are in the market • Skills of technology development (the ins and outs of testing/developing a technology) • Documentation of each technology development step for others' use.	• Financial literacy • Ability to create market linkage • Market orientation: Farmers consider agriculture as a business • Market research skill • Technical practices related to farming and production • Nutrition knowledge
2. How to measure such innovative capacity? (How implementers identify firms with innovative capacity and monitor such capacity during the intervention)	• Trust-based initial assessment by diaspora • The coaching process reveals progress in the capacities (e.g. new linkages created) and entrepreneurs' confidence in such capacities	• Applicants who provide innovative solutions to sector challenges (identified by the project) will be considered as having innovative capacities. • Effectiveness is measured by the implementation of the innovation (value-addition); business performance, job creation, community involvement in the beneficiaries' supply chain, positive externalities, change in working practice, and linkage created.	• Those who are willing to try the innovative technology/idea promoted by the project are considered "innovative" – with an entrepreneurship tendency. • Proposed ideas are innovative if they can alleviate problems in the community (identified in a participatory manner by the project) and contribute to the food market. • Effectiveness indicators such as starting to save and taking loans (financial literacy)
3. How does innovative capacity vary across different MSMEs? (How the implementers target different segments of MSMEs with corresponding innovative capacity and whether they observe variation in each segment)	• The initiative supports micro and small businesses with less than 20 employees • Level of proactivity and dedication of businesses "correlates somehow with the success of the implementation"	• The fund supports mostly small and medium-size enterprises in the supported sectors (poultry, pulses, spices, oilseeds, potatoes, and vegetables) that can provide matching funds • Unsuccessful cases (40%) (where testing does not result in marketable products) were mainly due to external factors, and personal factors (not mentioned).	• The project supports individual smallholders and groups of women and men (25 people in a group) in 3 commodities.

4.	What are the implications for effective MSME-targeted policies/interventions, considering select initiatives by development programs?	• Combination of grant (financial support) and coaching (technical support) is critical • Considering the external barriers (e.g. policy environment, financial sector) is a success factor • To create an impact on the supply of healthy food/nutrition, awareness raising among consumers is necessary to create demand for healthier products. • The role of "classical" NGOs, development partners in interventions in diets and nutrition is still important	• Continuous coaching of the beneficiaries beyond the financial support is critical as most innovators struggle to implement their ideas. • External environment (government policies, unstable political environment) can break or make the business for MSMEs • Favourable market conditions are necessary to bring products from testing into incubating and successful launch.	• Awareness raising among consumers about healthy and nutritious diets, and facilitating retailers to support this process is critical • The private sector and NGOs must avoid free handouts and focus on capacity building with proper follow-up and coaching. • The financial sector needs products and services tailored to MSMEs (e.g. alternative collateral, targeting women) • Strengthening the existing local structure (e.g. local microfinance for revolving fund) can ensure sustainability
5.	What has been the effectiveness of such interventions to increase the innovation capacity of the MSMEs? (According to implementers)	• The grant has sparked the involvement of some of the MSMEs in new product development or product reformulation •	• Participation in the fund inspired most beneficiaries to hunt for other opportunities during the project time and beyond: "Entrepreneurial spirit" • MSMEs continued with innovative product development beyond SWR's support.	• Adoption of introduced new technologies among participants and spillover to other non-beneficiary communities
6.	Has this increased innovation capacity been translated into positive changes in food supply/food consumption? (According to implementers)	• Most applications come from poultry farms and the intervention increased chicken and egg production.	• Innovative (food) products are increasing in the market (with consumer awareness creation activities), and some sectors (e.g. spice) have started exporting their products • Some impact is indirect (e.g. innovative product is animal feed)	• Increased nutrition awareness led to a more diversified diet and better nutritional status among children and mothers. • Additional supply of vegetables, poultry, and small ruminants to the nearby market

Areas for improvement and limitations

While the beneficiaries appreciate the support from WIDU, which led some firms to be involved in innovations as described above, language and access to- and use of digital infrastructure appear to be key barriers for many businesses from participating in WIDU interventions – a concern that is recognized by WIDU. This includes the need for grant applications to be prepared in English, French or German and not in local languages, and the need to submit business plans online. The respondents suggest the intervention tends to favour urban businesses with better access to digital infrastructure and language support.

Beyond the impact of the intervention, several factors (internal and external) limiting innovative capacity and innovation remain, including a lack of finance (inaccessibility and high interest rate of formal loans); difficulty to find adequate working places (production and market place or farm land for expansion of production); unavailability of appropriate machinery; unavailability of raw materials needed for new products (for example to produce bakery products common in Europe); difficulty to create market networks, lack of a supportive policy environment for start-ups; bureaucracy related problems (e.g. bribes are often asked when a certain service is sought after); and a lack of stability in the general business environment (policy, destruction of working or market place for example due to the ongoing “corridor development program”[6]); lack of peace and security; and perception of the general public about MSME provisioned products to be less healthy and less-nutritious which affects the demand for their products. Respondents state that some of these challenges could be addressed by raising awareness about the importance of MSMEs in the food system and their products.

RAISE-FS implemented by SWR

The RAISE-FS program implemented by SWR, runs a grant scheme called “The Innovation Fund” as part of a package of interventions to promote private-sector driven innovation in the Ethiopian food system. It seeks to address the lack of technical skills, and access to finance as the key barriers to innovation. The fund was designed as a co-financing mechanism whereby grantee entrepreneurs shoulder varied financial responsibility depending on the project, either in cash or in-kind. SWR covers 50-75% of the matching fund, with a maximum amount of 25,000 Euros or 50,000 Euros in grant value[7]. This structure incentivises commitment while ensuring equitable resource allocation, although it also excludes micro-enterprises with insufficient matching funds. The supported sectors are poultry, pulses, spices, oilseeds, potato and vegetables. Technical support is provided during implementation at any segment of the value chain, including post-harvest loss reduction, processing and product development.

In responding to the call, the entrepreneurs identify challenges, propose innovative solutions to address these, and apply for the innovation challenge grant. SWR co-finances the testing process of successful applicants. Grantees can use the fund to test their innovation while receiving SWR technical support, resulting in several innovations ready for validation and demonstration. The innovations are expected to be ready for scale-up after being validated and demonstrated in sector associations and multi-stakeholder platforms.

The particular, mostly internal, innovative capacities the fund seeks to strengthen include the capacity to assess what technologies are in the market, the skills of technology development (the ins and outs of testing/developing a technology), and documentation of steps in technology development for others' use. Potential impacts include a better performance of the agrifood sectors where SWR provides support for technology development and testing, food and nutrition security, consumer safety, healthy and nutritious food production, and import substitution. It was expected that the innovative businesses also become role-models in the sector they operate in.

Pre-existing levels of innovative capacity explicitly served as selection criteria for proposal selection, whereby the fund considered criteria like the project objective, innovation type, potential impact, budget requirement, externalities, sustainability, and women ownership. Demand-driven projects were selected to ensure their sustainability.

Business characteristics, innovative capacity and innovation

Five firm representatives (four beneficiaries and 1 non-beneficiary applicant) were interviewed. Three firms were from Addis Ababa, one from the Oromia region Sheger sub-city (Sululta town), and one from the Central Ethiopia region Gurage zone. All of them were SMEs, employing between 11 and 43 workers, with owners holding master’s degrees. The firms had two to fifteen diverse products and had been operating for 5-17 years. Their products include fruit and vegetable planting materials and animal feed planting materials (2 beneficiaries), and

[6] An urban development project focused on upgrading key transportation routes, strengthening connectivity between major corridors, and enhancing broader urban infrastructure focusing on green spaces, improvements to public amenities, etc.

[7] https://raise-fs.org/wp-content/uploads/2023/09/250923-innovation-fund-manual.pdf

processed food products (2 beneficiaries). The non-beneficiary offers an agro-technology service that enables easy access to farm implements, such as tractors, through a one-call system.

During the application process and the launch of the challenge call, applicants were asked to present their innovative ideas in reference to challenges or gaps identified by SWR through sector assessments and stakeholder meetings. Applicants who proposed innovative ideas or solutions to these challenges in their concept notes and proposals were considered to have demonstrated sufficient innovative capacity.
Regarding their innovativeness, all four beneficiaries adopt digital and innovative practices like mobile payments and bookkeeping systems. Investment in food safety and waste reduction is also a priority for all four, and there is a strong emphasis on diversification (often based on consumer demand), value addition (for example creating essential oils from rosemary), and training (often supported by donors) to enhance productivity.

Strengthening innovative capacity: impact of the intervention

Participation in the challenge fund appears to be an eye-opener for the beneficiaries, as most beneficiaries mentioned that they started pursuing for similar opportunities during the project time and beyond and continued with innovation and product development, beyond those supported by SWR. This is suggestive evidence of enhanced innovation capacity and levels of innovation among the beneficiaries. SWR's innovation challenge fund supported businesses to convert own creative ideas into something tangible, a physical product or service, for example, by fulfilling the quality control process or demonstrating the commercial viability. This enabled them to create jobs, increase their incomes, and increase sales volume and profits.

The beneficiaries appreciated the fund's focus on innovations, given the lack of finance available for new ideas and business ventures especially in the agriculture sector since it is often considered risky by regular financial institutions in Ethiopia, a sentiment also shared by a non-beneficiary entrepreneur. The beneficiaries also highly regard the fund's transparency and accountability, as well as the close monitoring process. The businesses stated that own interest and early development of an innovative mindset, increased competitions, and the demand for innovations driven by societal needs, such as farmer-friendly technologies, are enablers of innovation. In addition, networking and collaboration (as examples of external innovative capacity) are growing, but results vary by participant. All respondents have joined new business networks, though one noted limited success due to limited follow up from the business network coordinators, themselves being business owners. Another respondent specifically mentioned joining one for the vegetable sector.

The interviewees listed several indicators that can demonstrate the fund's effectiveness, including reducing or maintaining production costs, demonstrating easy to grow products that can be of commercial value including for export market (e.g. rosemary production), enhancing profitability, creating jobs, fostering community involvement in beneficiaries' supply chains, generating positive externalities (such as addressing sector challenges) (for example, increased milk productivity among farmers due to their feed supply), early achievement of own goals and milestones, promoting changes in working practices, and establishing new linkages (e.g. with agricultural experts and model farmers).

Areas for improvement and limitations

One beneficiary thought that the amount of grant being offered is better determined by the potential impact of a certain project to society, rather than the size of a matching fund a business owner can mobilize or the pre-determined amount of fund, which limits the number of proposals that can be funded. Unsurprisingly, all the stakeholders interviewed for this case mentioned addressing the gaps in the financial sector as a key leverage. There is insufficient financial service support to improve financial literacy and the financial institutions still lack financial products tailored to MSMEs' needs. Current interest rates (15-16%) are too high.

Similar to respondents of beneficiaries of the other interventions, a lack of a supporting policy environment is a shared common concern. Key issues include insufficient production space, lengthy licensing and registration processes, absence of standards for innovative products, and delays in developing such standards. Additionally, there is limited public sector focus on innovative or emerging technologies in the food value chains. It is also suggested that government initiatives, such as corridor development projects in cities and towns (see footnote 6), along with internal conflict and political instability, have further disrupted many MSMEs. Such events led to highlighting issues on bureaucracy, including the misallocation of constructed spaces, unexpected evictions, and failure to adhere to policy directives.

All the stakeholders consider technical support (capacity building) by both the public (research and academic institutions) and development partners to be essential to the continued development of innovative capacities and an innovative environment at large. Measures to address the consumer side were also suggested. As the consumers' understanding and acceptance of new technologies, as well as knowledge of healthy and nutritious foods, are still low, increasing awareness among consumers is critical.

Her time to grow by iDE Global

In collaboration with Global Affairs Canada, iDE implements the project “Her time to Grow” to create income generating opportunities for at least 25,000 women working in agriculture across Ethiopia, Ghana and Zambia over the course of four years. To address the lack of access to finance, the project does not provide direct cash support, but organises a revolving fund where participants in the project can access loans from a local microfinance provider. Additionally, iDE provides training on nutrition as well as entrepreneurship, next to support for technology improvement, such as the provision of planting materials. It is expected that this diverse support helps smallholders to practice integrated production in the three focal commodities value chains (vegetable production, poultry, and small ruminant fattening). This in turn is expected to increase the supply of a diversified diet, improved incomes and livelihoods, and improved nutritional status.

The project has a strong focus on stakeholder engagement. From the project design stage, stakeholders such as government officials, community leaders, local leaders, and other key value chain actors were engaged to ensure ownership and sustainability. Implementation relies on local government structures and involves capacity-building efforts, such as strengthening farmer agencies, microfinance initiatives, and community facilitators.

Although innovation and innovative capacity building were not explicitly mentioned as an objective of the project, the project seeks to develop relevant innovative capacities of the participating smallholders: financial literacy (bookkeeping, saving, taking loans, and properly investing in their farm to transform from subsistence to commercial farming); market-orientation (consideration of agriculture as a business and capacity to do market research and create market linkages); and farming-related skills.

iDE used two approaches to identify beneficiaries with innovative capacity. In the proactive approach, iDE promotes an innovative technology or idea to the community. Those who are willing to try new ideas or technology will be identified as having innovative capacity. In the reactive approach, iDE supports entrepreneurs who come up with innovative ideas by identifying their challenges and help addressing these through capacity assessments. In both cases, the local government is involved in the selection process and assists in assessing the business viabilities and innovative capacities of beneficiaries.

Business characteristics, innovative capacity and innovation

All four interviewed beneficiaries are women from the Oromia region, South East Shewa Zone, Weliso Woreda. None of them attended higher education. The firms do not have employees but some of them receive labour support from family members and occasionally hire temporary labour. These beneficiaries are organized in a group of 25 members for the purpose of the intervention. However, each entrepreneur conducts their businesses individually according to their preferences and access to other resources. For example, those with access to irrigation schemes are involved in vegetable production while others are engaged in keeping small ruminants and poultry production, or both. The firms have one to three ranges of products and have been operating for a maximum of two years. The products the firms produce include vegetables, poultry, small ruminant (goat), and a mix of cereal and legume flours used for gruel preparation.
Key relevant factors of innovative capacity, according to the respondents, include having the land, time, and willingness to work on their production, besides the support they receive from the program. Limited access to irrigation schemes was the most commonly stated constraint to innovation (diversifying their production by integrating vegetable production to the existing farming practice).

Strengthening innovative capacity: impact of the intervention

The beneficiaries perceived the intervention very positively. All three components (technical and skills training, provision of technologies, and loan arrangement) were considered helpful in increasing their production and productivity, diversifying their diets, and improving their incomes.

The respondents reported several changes and improvements in their innovative capacities and innovation levels, over the past years. All respondents adopted better bookkeeping and inventory management practices, following the training provided by iDE. Some began delivering to retailers, but product diversification, packaging, and use of card/online payments were limited. Investments in food safety equipment were rare, and none joined new business networks.

The intervention appears to be effective in promoting the production of nutritious foods such as vegetables, the adoption of improved seeds and farming practices, and improving the risk-taking behaviour of the farmers demonstrated by their engagement in new business/product types. According to some beneficiaries, the production of diversified products like vegetables, poultry, small ruminants, pulses, etc., has increased the supply of a healthy diet for home consumption as well as for the local market, and nutrition education and cooking demonstrations contributed to increased nutritious and healthy diet consumption. Increased interest from neighbours to start similar businesses appears to be an additional positive externality of the intervention.

Areas for improvement and limitations

The intervention is appreciated by both beneficiaries and non-beneficiaries. A non-beneficiary thinks the project needs to expand its coverage and reach more farmers with an interest in similar activities. The beneficiaries think that the program would benefit them more if the support would also include the provision of irrigation infrastructures and improve their access to water as it is their key constraint besides finance. Relatedly, a beneficiary suggests that the government should allow the use of irrigation water during the dry season not just for wheat production but also for vegetable production. A timely supply of quality vegetable seeds is another area suggested for improvement.

Views on the policy environment and lessons from the implementation

Differences in perception on the functioning of the policy environment for MSMEs were observed among policy-makers, program implementers, and MSMEs interviewed. Policy-makers suggest that relevant policies aimed at supporting MSMEs, development of their innovative capacities and the business environment are in place and improving, even though they may not be tailored specifically to the food sector and still have implementation shortcomings. Policies and policy programs mentioned include the MSMEs Development Policy and Strategy[8], National Entrepreneurship Strategy[9], and more recently the Startup Ecosystem Development Policy Document[10], a draft policy framework aimed at supporting startups focusing on more innovative and highly scalable businesses in different sectors. It is stated that these policy packages are aimed at solving issues around access to finance, working premises, business development technical skills, removing bureaucratic hassles that hamper MSMEs' development, increasing employment, and enhancing scalability.

By contrast, the most common perception among the development partners and MSMEs is that the policy environment is not sufficiently supportive of MSMEs and start-ups. For example, according to a project manager, there is a policy that states financial institutions should dedicate 5% of their loans to MSMEs. This is hardly implemented, and when it is, the loan is given to just one client at a high interest rate, after which the financial institution can claim that MSMEs are being served. Thus, a lack of inclusive access to finance, poor governance, policy instability; a lack of peace and security; and a lack of working spaces remain major challenges to the success of MSMEs and innovations. For example, among businesses supported by SWR, it is estimated that close to 40% of the beneficiaries were unsuccessful mainly due to internal conflict and political unrest or the demolition of businesses due to construction projects that create additional insecurities for people to invest in, among others.

On the other hand, a lack of dedication and entrepreneurial mindset by some MSMEs is identified as a challenge for the growth of the private sector. These include using loans on unproductive activities or leaving the country after taking out loans, or even engaging in innovation testing of products for which there is little market. Nonetheless, program implementers do refer to suggestive evidence of the success of their interventions in strengthening the innovative capacities of MSMEs. Such evidence includes indicators such as increased demand for funding and other opportunities; improved working practices; jobs created; increased incomes; financial literacy; savings; productivity and product diversification; increased market participation and linkages. In addition, specific social outcomes are reported such as an increase in confidence of women participants to speaking in public, expressing their needs, reporting their successes, and setting their goals.

[8] Ethiopia Ministry of Urban Development and Housing. Micro and Small Enterprise Development Policy & Strategy, Second edition, 2016 Addis Ababa
[9] https://policyvault.africa/wp-content/uploads/policy/ETH71.pdf
[10] https://t.me/MinTEthiopia/5179

Key Lessons and Conclusions

This paper has studied three different interventions to support MSMEs, complemented with public sector insights into MSME support in Ethiopia. In particular, we are interested in understanding how these interventions translate into a strengthening of MSME innovation capacity, potentially leading to positive food systems outcomes, particularly in the realm of healthy diets and nutrition.

We find that there exists no blueprint for a single best intervention aimed at raising innovative capacity and innovation outcomes of MSMEs in the food value chains. Since access to finance is the most important barrier to MSMEs in LMICs, the three interventions considered all alleviate the finance gap, albeit with differences in their approaches, including different foci with respect to the types of enterprises they target, the specific elements of MSME's innovativeness the programs seek to strengthen, and the supplementary services they provide such as technical assistance on business development, networking, and continuous coaching beyond the initial financial support. These differences in approach appear to be driven by or correspond with the needs of different MSME typologies targeted.

On the one hand, enterprises supported by SWR are SMEs and are owned by entrepreneurs with post-graduate level education and with specified innovations developed that are almost ready for validation. The needs of this typology translate into an intervention with a specific focus on strengthening internal innovative capacity on the ability (of the firm) of product development and the needs of SMEs arising (addressed in the innovation challenge). Targeted firms are supported to further their innovations to be ready for scale-up after being validated and demonstrated in sector associations and multi-stakeholder platforms. Indeed, strengthening external factors of innovative capacity in networking, by joining relevant business networks, is actively supported.

On the other hand, enterprises supported by WIDU and iDE are micro enterprises who benefit not just from access to finance but also from continuous coaching and basic training including on business development, financial literacy, and market linkages. The focus of these interventions is the ability of firms to (better) pick up new ideas and work with the program implementers in their attempt to contribute to job creation and improved incomes for the beneficiaries.

While the focus of this paper rests with means to increase the supply and affordability of healthier foods, such an objective was not always a key objective of the initiatives studied, particularly in the WIDU platform. The eventual impact of these interventions on nutrition, diets, and health thus remains to be investigated. Even though some findings are suggestive of positive impact, establishing such causal impact in an impact assessment is complicated due to the lack of a clear counterfactual. First, given the structure of Ethiopia's economy, many of the recipient firms operate in the food system, and given the scope of this study, we purposively sampled WIDU beneficiaries that have foci on food and nutrition. Interviewed beneficiaries mostly reside in urban settings and were involved in micro-processing producing vitamin A-enriched cookies, nutritious crackers, bakery, and some are involved in the restaurant business. An interviewed beneficiary from a rural setting was involved in the primary production of cassava, banana, and vegetables. Various WIDU recipients had a focus on increasing the supply of nutritious products, even though the prime focus of the intervention was on contributing to job creation and increased incomes.

Similarly, some SWR recipients operate in food processing while others are involved in input supply, including planting materials for fruit, vegetable and animal feed. Overall, although implementers and beneficiaries experienced and perceived positive effects of the interventions on their businesses, including innovative capacity, again the eventual impact of nutrition, diets, and health remains to be investigated.

For example, recipients from iDE mostly reside in rural areas and often operate in primary production. iDE has preselected the sectors in which recipients operate and, in some cases, the types of technologies being promoted, thereby potentially increasing the production of nutritious foods such as vegetables and poultry. There is a perception among beneficiaries that this sharper focus has resulted in tangible changes in the supply and consumption of healthier foods in the local communities.

Clearly, the policy environment and support services are crucial for food MSMEs to better contribute to positive food systems outcomes, including improved availability, accessibility, and affordability of healthy foods, especially for lower-income consumers and other socio-economic benefits, such as increased incomes and employment. We found a discrepancy in perspectives among policy-makers, program implementers, and enterprises interviewed for this study regarding the effectiveness of MSME government policies vis-à-vis MSME support interventions implemented by other parties. Policy-makers suggest that relevant policies aimed at supporting MSMEs and the business environment are in place, even though they may not be specific to the food sector and may have implementation shortcomings. A strong consensus emerging from the workshop is that government finance policies may indeed be adequate on paper, but insufficient in practice, as evidenced by high interest rates and uncertainty whether banks actually comply with a stipulation of lending 5% to MSMEs. Policy-makers appear to perceive the role of other organisations supporting MSMEs, such as GiZ, SWR and iDE, as quite limited, mainly through capacity-building activities and seed money and a relatively small number of enterprises supported. In contrast, even though recipients identify areas for improvement among interventions, they tend to

have higher regard for the effectiveness of the MSME support interventions implemented by GiZ, SWR and iDE than the government policies.

Despite the lack of quantitative metrics to rely on and the sample size used in this study, several lessons can be drawn from the results of in-depth interviews held with policy-makers, MSME support program implementers and entrepreneurs. These lessons guide both more effective policy-making for MSME intervention strategies within the realm of FS transformation and guide future research.

More effective policy-making for support to MSMEs in Ethiopia's food system transformation agenda

First, results show the need to have a differentiated portfolio of support strategies. While finance constraints are ubiquitous, the specific needs for finance differ, next to needs for training business skills across size and type of firm, formality status, type of constraints to innovation, and variation in the technological readiness of intended products. In addition, securing working space and adequate rental protection is perceived to be a constraint for some MSMEs. Hence, a sound innovation strategy or policy should accommodate and target these differences in a portfolio of interventions and policies. And while NGOs, donors and the Ethiopian government are all supporting MSMEs, and building their innovative capacities, in various ways, more constructive efforts are required to bring lessons learned together, from both NGOs, donors and government agencies, for building a joint understanding of more effective support interventions for specific MSME typologies.

Second, a consensus emerged from the workshop in particular, that interventions to support MSMEs in a vacuum cannot lead to improved food system outcomes. The implementing organisations emphasised the need to understand the local context and leverage local social structure for the success of their programs. In this regard, for example, previous studies suggest that interventions in the food environment aimed at increasing the demand for healthy foods are likely to be more effective if they incorporate social and behavioural change interventions (Herrero et al., 2023; Litvin et al., 2024) as consumers' willingness to pay for healthier food products varies by age, gender, level of education, and other characteristics of the consumer (Alsubhi et al., 2023). It is also worth considering differences in consumer typologies with respect to the consumption of healthier diets. Innovative but healthy products can be expensive and inaccessible to the poorest, at least in the beginning, before scale-up can take place. Ensuring pro-poor nutrition as part of a longer-term support strategy requires improved understanding of the interactions between MSME and consumer typologies, alongside the design of interventions that address both simultaneously.

An updates research agenda supporting more effective MSME innovation interventions

First, considering the need for a differentiated portfolio for MSME typologies, the following research questions emerged. With budgets typically being a limiting factor, it serves to reflect on returns to investments. Considering the ambition of transforming the food system for healthier diets and nutrition, for some consumers perhaps more urgently than others, where and how can the support of MSMEs be more effective? Should support programs focus on informal micro-enterprises, more prominent in the food (retail) environment, or should the focus rather be on supporting SMEs, often more in processing in the midstream? Put differently, which entry points generate the largest returns to money spent?

Second, questions remain on establishing whether the different MSME typologies receive, always and everywhere, the right mix of finance and training to strengthen innovative capacity. Can more generalised lessons be drawn on apt combinations of finance and training for different typologies? And conversely, an equally relevant question is whether the right firms are being targeted. Implementing organisations expressed disappointing experiences with some MSMEs in some instances. All organisations used different methods to screen on pre-existing levels of innovative capacity amongst firms – even though levels of entrepreneurship are often unobserved. Are these screening methods good enough, or should better methods to screen on innovative capacity be developed?

Third and final, nutrition and health are typically not always the criteria by which to select proposals, and in some instances, operating in the food system was not even a criterion for eligibility. If better diets and nutrition is placed more prominently as a policy goal, how could and should criteria on diets, nutrition and health then be included explicitly? Would the inclusion of a 'do no harm' clause in such interventions be more apt, thereby excluding businesses and business proposals that clearly lead to a higher consumption of unhealthy food items? Or, rather, should a stronger contribution to diets and diet quality be anchored more prominently in support programs? A point of attention here relates to potential trade-offs in firm profits, whereby healthier food items could dent profits. In the long run, consumer awareness campaigns could mitigate such a trade-off, but it is important to understand if such trade-offs exist, how large they are and if and how they should be mitigated.

Annex 1: Key concepts

Innovation - Concepts and Definitions:

According to the Oslo Manual, a key guideline for data, indicators, and quantitative analyses on innovation, a (business) innovation is defined as:

“a new or improved product or business process (or combination thereof) that differs significantly from the firm’s previous products or processes and that has been introduced on the market or brought into use by the firm” (OECD & Eurostat, 2018: 68).

Innovation can take two main forms: product (or service) innovations and process innovations, which include the core business (production of goods or services) and supporting functions (distribution and logistics, marketing and sales, information and communication systems, etc.). Innovation can result from an original idea but can also emerge from the diffusion, absorption, or imitation of new methods developed elsewhere (Fu et al., 2018). Innovation activities “include all developmental, financial and commercial activities undertaken by a firm that is intended to result in an innovation for the firm” (OECD & Eurostat, 2018:68).

An important distinction is made between technological innovations (new products/processes) and non-technological innovations (organizational/marketing methods), which are driven by different factors (Fu et al., 2018). This distinction is particularly important for firms in the informal sector of developing countries, where evidence spanning various geographical areas has found management and managerial skills to be important factors in firms’ performances (references as in Fu et al., 2018, page 7).

For food-related MSMs, a business innovation can contribute to positive food system changes. In the context of food systems and from a dietary perspective, a food systems innovation is defined “as a policy or regulation, an institutional process, a change in knowledge, a technology, or combination thereof that is either not used or not widely used within a food system, but has the potential to change diets on a wider scale” (de Brauw et al., 2019). Accordingly, a business innovation can elevate to a food systems innovation if it has the potential to influence diets on a larger scale.

Related concepts: Entrepreneurship and technology adoption

Many interventions to foster innovation are often closely linked with initiatives that support entrepreneurship. The development of entrepreneurship and MSMEs has gained substantial international backing as a critical mechanism for poverty reduction and national economic development, particularly in economies transitioning away from state control. It promotes technological innovation, seizing new opportunities, and managing uncertainty and risk (Edoho, 2015). Reports from the Global Entrepreneurship Monitor (GEM) indicate that no country with high levels of entrepreneurship experiences low levels of economic growth. Although the definition and operationalization of entrepreneurship vary, it generally involves opportunity exploitation, calculated risk-taking, resource management, and the organization of efforts (Edoho, 2015).

Innovation, MSMEs, and entrepreneurship are closely tied: Entrepreneurs typically start businesses to develop new ideas, use innovation to compete with larger firms, and have the agility of small businesses to adapt to environmental changes compared with slower, more hierarchical competitors (Restrepo-Morales et al., 2019).

In the literature, innovation is closely linked to technology adoption, which is about implementing and using those (technical) innovations. For example, total factor productivity growth can be decomposed into two mutually exclusive and exhaustive components; innovation (technical change) and adoption of technology (efficiency change) (Danquah & Amankwah-Amoah, 2017). SME’s innovativeness, which is a latent, non-observable characteristic of the firm can be captured by the capabilities for core/internal innovation and the capabilities for technology adoption (Martínez-Román & Romero, 2017).

Annex 2: Interview guidelines

Introduction (for all stakeholders):

Purpose of the Interview: A brief overview of the research objectives and the purpose of the interview, including its benefit (or lack thereof) to the participant, the community and the research team (see the Consent form/Research Approach).

Informed Consent: Ask for consent (including permission to record the conversation if needed). The agreement to join the research should also be recorded if the interview is conducted online.

Structure of the Interview: Briefly explain the flow of the interview to manage the respondent's expectations.

Key questions

Follows are the specific questions for each group of respondents:

1. Project Manager/Implementing agency representative of the initiative/intervention
    a. Can you tell us about your experience in developing/implementing/evaluating interventions and initiatives targeting MSMEs, in particular to foster their innovativeness?
2. The following questions are about the specific initiative:
    a. Can you briefly describe the set-up of intervention?
    b. *(This question can be skipped if sufficient detail has been provided in previous communications. Instead, provide a brief summary of the intervention for the respondent to start reflecting on it).*
    c. What is the motivation for designing /implementing such an intervention and the associated theory of change:
        i. What barriers /drivers of innovation were the initiative trying to address?
        ii. What innovation capacities were you hoping to build?
        iii. What potential impacts?
        iv. Are there specific typologies of MSMEs targeted?
        v. How do you identify the innovative capacities of these MSMEs, and the constraints they face?
        vi. What criterion did (do) you follow to identify beneficiaries?
        vii. Have you conducted SWOT analysis before interventions?
        viii. Did you consider potential externalities (both positive and negative) of your interventions? And remedial measures for potentially unwanted consequences?
        ix. Are there mechanisms in place that can help ensure sustainability and/or continuity of innovations among beneficiaries? (for example, incentive structure that would encourage innovation and growth but that avoids dependency?)
    d. What have been the impacts of such interventions, if known?
        i. What have been the effectiveness of such interventions to increase innovation capacity of the MSMEs?
        ii. How is such effectiveness measured? (any observed changes in working practices, new linkages created, etc among beneficiaries?)
        iii. How has this supported the MSMEs in their business? For example, in terms of firm size, job creation, and scale of operations?

iv. Has the (anticipated) increased innovation capacity been translated into positive changes in food supply or supply induced demand for healthier foods/food consumption? If yes, can you give examples?

3. The following questions are general observations and opinions of the respondent:

    a. What have been the key lessons learned in supporting MSMEs to develop their innovative capacities? (i.e. in the context of your interventions, what has worked and what has not?)

    b. What would be needed to target food-related MSMEs, with a priority for those that are closer to consumers e.g. retailers, to promote nutritious and healthy foods provision?

    c. Do you think the policy environment is sufficiently supportive of food related MSMEs? How can that be described? If not, what needs to change/improve to foster innovation with healthy food MSMEs? *[Probe if the respondent thinks whether policy (un)predictability is a major factor for innovativeness among food MSMEs]*

    d. In your opinion, what do you think are the roles of the food related MSMEs themselves, and other actors including the public sector/governance, private sector, financial institutions, etc to promote innovation capacity among MSMEs?

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