

FACTORS FOR BOOSTING THE GREEN TRANSITION OF THE EUROPEAN MICRO, SMALL AND MEDIUM-SIZED ENTERPRISES²

Micro, small and medium-sized enterprises, be they traditional enterprises, family businesses, traders, social economy enterprises, crafts or liberal professions (referred to hereafter as MSMEs), are an essential part of the solution towards a competitive, climate-neutral, circular and inclusive European economy, provided that the right conditions are created and prevail. The positive impact is generated by MSMEs through improving their own environmental performance and through providing expertise and solutions to other enterprises, citizens and the public sector. While acknowledging and highlighting the diversity and different needs of the European MSMEs, the current paper focuses on identifying factors for boosting their green transition and mapping out the effects of the recent multiple crises on this process.

Keywords: micro enterprises; small and medium-sized enterprises; MSMEs; sustainability; digitalization; support policies; social responsibility

JEL: D83; H12; L25; M38; P18; Q56

Introduction

Tackling climate change is the biggest challenge that mankind faces nowadays. There is no doubt about how serious the situation is – as we are evidencing extreme weather phenomena and natural disasters, biodiversity loss, environmental pollution, and degradation of natural resources (EESC, 2022b). A positive and pragmatic approach suggests that ways shall be found to *turn these challenges to opportunities* by uptaking the green transition, and thus – moving the whole economy and society towards climate neutrality, circularity and overall sustainability.

On aggregate MSMEs contribute significantly to emissions and pollution and there are clear data on the contribution of MSMEs to pollution in its different forms (Aragón-Correa et al., 2008). While there are different methods applied to estimate the environmental footprint of SMEs and entrepreneurs (OECD, 2021b, p. 10), there are clear data showing that MSMEs

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contribute to 64% of industrial pollution in Europe, with differences in sectors between 60% and 70% (Calogirou et al., 2010). This makes it clear that realising the goal of climate neutrality is not possible without the active involvement of the MSMEs and their commitment to sustainability. While ‘sustainability³’ as a term supports a three-dimensional approach, i.e. economic, social and environmental, this paper focuses mainly on the environmental and economic dimensions, exploring the green transition (environmental sustainability) in the context of the current economic conditions. The social aspects are actually addressed too, e.g. in the context of corporate responsibility, skills development and response to stakeholders’ expectations.

Contributions of MSMEs towards Achieving Climate Sustainability

Positive impacts are generated through improvements in the performance of the MSMEs, and also through their actions – e.g., when providing expertise and solutions to other enterprises, citizens and the public sector. They have a unique role to play, being grass-rooted at each and every corner of the European Union (EU) and especially in the remote and rural areas, where quite often they are the only economic-activity-generating factor – especially for vulnerable communities in low-income countries (Dougherty-Choux, 2014). MSMEs form the overwhelming majority of European business. They are 99.8% of all non-financial enterprises in the EU-27, and 80-90% of them are micro companies (EC, 2022).

Recently, there has been an increasing appreciation of the role of MSMEs in contributing to climate neutrality, as the European Commission (EC) is undertaking a more ambitious approach towards accelerating the green transition, also embedded in the European SME Strategy (EC, 2020a), and consecutively translated into national strategies by many Member States (MS). Most of these documents highlight the vulnerability and special need for extra support for MSMEs, which was also underlined by the negative effects caused by the COVID-19 pandemic (EC, 2022) and aggravated further by the harmful direct and indirect effects of the Russian invasion of Ukraine.

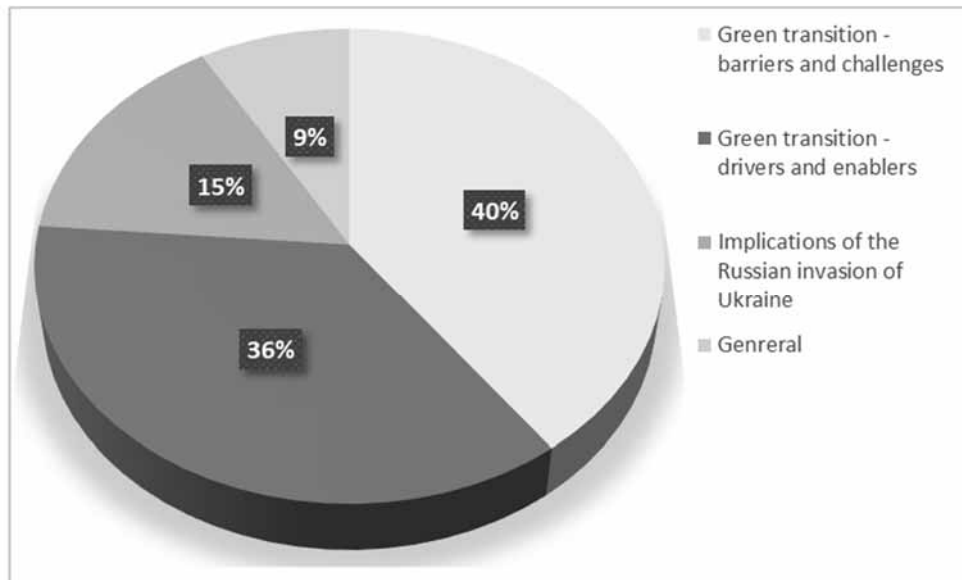
MSMEs with a business value proposition in the European Green Deal (EGD), such as: circular economy, climate, biodiversity, renewable energy, etc., have an inherent incentive to explore, invest and pursue new business opportunities in those areas. They have many opportunities, e.g., in the renovation of buildings, in the planning and construction of infrastructure, in industrial production and maintenance of equipment, in providing legal and accounting services, and in developing digital solutions. The transition process is, to a high degree, dependent on smart solutions, generated by the MSMEs. High-quality and relevant education, vocational education and training (VET) and constant upskilling are key for maintaining and increasing the skills and competencies of the human resources, who contribute for speeding up the green transition.

³ In 1987, the United Nations Brundtland Commission defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” The Sustainable Development Goals form the framework for improving the lives of populations around the world and mitigating the hazardous man-made effects of climate change.

Smaller firms, and especially start-ups, are in the best position to initiate radical and disruptive innovations by exploiting the market opportunities neglected by larger firms (OECD, 2013). Thus, they can lead to incremental changes and serve as a catalyst for radical eco-innovations. Therefore, disruptive or radical innovations tend to be pioneered by entrepreneurs, especially in smaller firms, or new entrants to a market, which often exploit technological or market opportunities that have been neglected by more established firms. Green innovation can give access to new and emerging markets, increase profitability along the value chain, help firms stay ahead of standards and regulations, help attract investment, and increase productivity and technical capacity (UNEP, 2014).

Climate- and environment-related issues are not only sustainability matters but are also, to a great extent, an essential part of the competitiveness, profitability and overall economic performance of enterprises. To effectively support MSMEs being successful in the transition towards climate neutrality, it is vital to help them addressing in the best possible way eventual challenges and overcoming potential barriers, while strengthening the effects of possible *drivers and enablers*. To achieve this goal, a devoted desk research was conducted, comprising nearly a hundred literature sources shedding light on different aspects of the theme (Figure 1).

Figure 1. Literature sources – relative share by covered aspects



Source: Desk research

Barriers and Challenges the MSMEs Face on the Way towards Achieving Climate Neutrality

Taking account of the *heterogeneity of the MSMEs*, an increasing number of scientific studies nowadays are focused on what *barriers and challenges* MSMEs face on their way towards successful green transition (Horbach, 2008; Montalvo, 2008; Horbach et al., 2012).

The size-related resource constraints are originating from the fact, that, because of their smaller size, MSMEs encounter specific difficulties, such as skills, investment capital, and information and knowledge deficits, and their operations are quite often limited in economic or geographic niches. Many recent studies focus on the resource-related barriers as they impede the environmental innovation for MSMEs more often and to a greater degree than when it comes to other types of innovation (OECD, 2018; Pinget IREGE, Bocquet, 2014; EC, 2020b; EC, 2022; Del Brio, Junquera, 2003; Revell et al., 2010; Garcia-Quevedo et al., 2020; De Jesus and Medonça, 2018; Rizos et al., 2015). Moreover, there is a risk that the limited size presupposes or requires too multi-level expertise. Because of their smaller size, MSMEs may be less able than larger firms to:

- 1) access environmental technologies to reduce emissions, including because of imperfections in capital markets, or because of difficulties in achieving economies of scale;
- 2) have the expertise or information on such new technologies;
- 3) access government policy support for the transition to more climate and environment-friendly societies;
- 4) find skilled labour and funding. It shall be noted that for the MSMEs, the lack of financial resources is a more important constraint for greening than for larger firms (OECD, 2018; Fleiter et al., 2012);
- 5) communicate and cooperate with each other.

Many MSMEs lack *knowledge* on the continuously evolving legislative requirements, established to deliver on achieving climate neutrality, and on how to respond to them. Furthermore, they have *difficulties in identifying potential business benefits and opportunities* provided by the green transition. These types of constraints are well documented in recent studies. Many of them (OECD, 2018; Fleiter et al., 2012) focus on *lack of information and awareness* of MSMEs on current and upcoming policy requirements, possibilities and opportunities to reduce resource use and available financial or advisory support measures to assist them. Other studies (Bodas-Freitas, Corrocher, 2019) focus on the *lack of knowledge and external advice*, or stress on the fact that *lack of cooperation* among MSMEs can represent a barrier to improving environmental performance (Triguero, Moreno-Mondéjar, Davia, 2013). *Lack of technology and/or technical expertise* is also seen as an important barrier (EC, 2019; EREK, 2019; Ormazabal et al., 2018; Rizos et al., 2016), together with the *organisational constraints* (De Haas et al., 2021).

MSMEs, in general, are not fully aware neither of the impacts of specific climate and environmental policies and requirements on their businesses and their supply and value chains, nor of how to adapt or convert products and services at an early stage to prevent later

losses or even market exclusion. A remarkable share of enterprises faces *difficulties due to the complexity of continuously evolving pieces of legislation, administrative burdens* (Garcia-Quevedo et al., 2020), *frequent changes in financial rules and high costs of funding, lack of specific environmental expertise and knowledge of how to choose the right actions* (EC, 2022), accompanied by *difficulties in accessing new value chains and new business models*, among others.

Green transition requires *large-scale adoption of clean technologies, which are currently not competitive* (Cecere et al., 2018). An important challenge is related to the *uncertainty* MSMEs face – stemming, for example, from technology: about the feasibility of adopting green technologies, while answering to the needs of the markets, complying with policy and regulations, and coping with the impact of climate itself (ITC, 2021; Brammer, Hoejmoose, Marchant, 2012; EC, 2022). While the lack of awareness of requirements and ways of responding to them is an important challenge, so too are the *difficulties in identifying potential business benefits and opportunities* such as: reduced energy and material costs, improved access to finances, higher demand, entry into new markets, and an improved image among stakeholders. The green transition is more complex for MSMEs, because *financing the green economy is more capital intensive and/or risky* (EC, 2022; Demriél, Danisman, 2019), because the return on green innovation, in general, is risky, uncertain and skewed and information about inputs and outputs can be asymmetric (Randa, Kerr, 2015; Aghion et al., 2009; Ghisetti et al., 2017; Cuerva et al., 2014).

Although there is a general understanding that the MSMEs *finance gap for net zero is quite large, it is difficult to quantify its precise size*. Based on the estimates of MSMEs' greenhouse gas emissions share of between 50 and 70%, of their energy consumption share between 10 and 30%, of the fact that MSMEs worldwide account for 13% of total energy use, and assuming constant investment costs per unit of energy, it can be projected that MSMEs energy use conforms to net zero could amount to between USD 550 and 650 billion per year (OECD, 2021b). MSMEs face a wide range of *difficulties related to access to finance*, such as (McDaniels, Robins, 2017; EC, 2022; Kapoor, Oksnes, 2011; Ghisetti et al., 2017; Demirel, Parris, 2015; Mina et al., 2013; Randa, Kerr, 2015; Hall et al., 2016; Cuerva et al., 2014; De Jesus, Medonça, 2018; Rizos et al., 2015):

- insufficient data on what they need;
- information asymmetries between MSMEs and financial institutions that make risk-assessment complex;
- insufficient availability of financial products for MSMEs in different stages of their development;
- institutional barriers;
- lack of awareness and capacity;
- payment delays;
- constrained liquidity;
- difficult access to loans.

Further, there are some specific elements regarding the required capital for MSMEs to finance their green transition, such as large upfront costs of changing to resource efficiency processes as to reduce environmental footprint by taking resource efficiency actions and low return in the short term when shifting to produce sustainable goods and services (EC, 2018, Fleitera, Schleich and Ravivanpong, 2013).

Effects of the Recent Crisis

During the last couple of years, *the COVID-19 crisis* (and its continuation) *has had a double knock-out effect on the global economy, conditioning both a crisis of supply and demand*. This is also complemented by *new disruptive impacts of the Ukrainian crisis* on businesses (e.g., steep raise of the inflation rates, a tangible increase of energy and fuel prices, higher cost of and barriers for accessing raw materials, further disruptions in certain supply chains). High energy prices and the lack of supply of materials and products are among recent issues that have significant negative impacts on MSMEs and their business. Their competitiveness, as well as the overall competitiveness of the EU economy, is further jeopardised by the sudden moves of China and other emerging markets, which also benefit from avoiding sanctions on Russia and following lower climate and environmental requirements.

The European MSMEs are exposed to a large degree to the economic consequences of the Russian invasion of Ukraine, which affect them through a number of channels, directly as well as indirectly. European MSMEs are likely to feel the effect more strongly than larger companies that often have higher overseas export intensity. They also tend to be more dependent on the domestic European market, which is more severely affected by the economic fallout from the Russian invasion, due to its close proximity.

It is evident that the above developments will cause ***significant economic damage to the EU economy and thus will hit the MSMEs***. Particular estimates are highly uncertain and contingent on the future trajectory of the war and further sanctions or other steps that may be taken by the EU (EC, 2022; OECD, 2022), but their negative effect is clear and it seems inevitable that European MSMEs will experience a gloomier economic outlook than expected before the war. ***MSMEs with exposure to the Russian and Ukrainian markets will be affected disproportionately by these adverse developments. Being less export-oriented than large companies*** (that often have more diversified sales), ***and having fewer resources and know how needed to establish alternative supply links or to expand into alternative markets, MSMEs are left with less possibilities to find ways out of the current difficulties***. In addition, financial and trade sanctions imposed on Russia, threaten to increase business bankruptcies of MSMEs, particularly in Europe, also due to its high reliance on Russia for energy and fuel. A prolonged escalation of the crisis will hurt businesses that are vulnerable to commodity shocks and it is likely to increase bankruptcy risks. This will require keen political attention and potentially new policy measures in response to the situation as it unfolds.

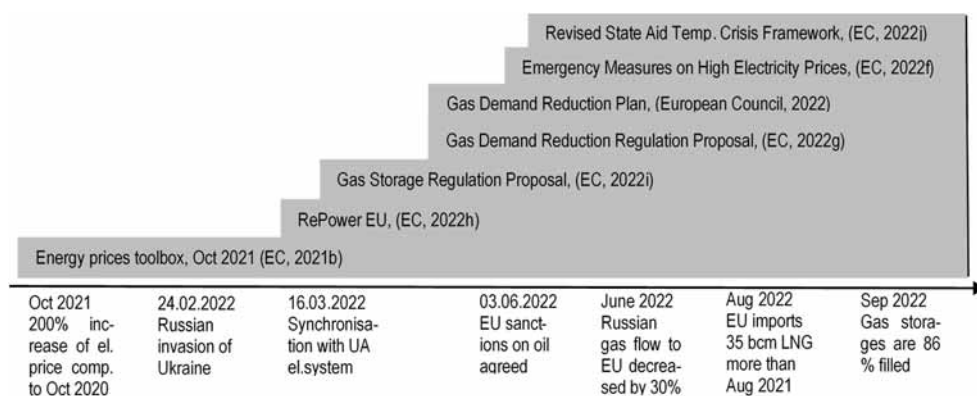
Whilst the Russian invasion of Ukraine has had immediate direct effects on trade, its indirect effects will probably have the largest impact on the EU economy and on the MSMEs. There have been steep increases in commodity prices, which in turn raise costs for businesses and

households (Kehayova-Stoycheva, Ivanov, 2022), as well as pronounced shortages of materials and labour, alongside other disruptions in global value chains (OECD, 2022). All these cause passing on higher costs to the European MSMEs through supply chains, and they find themselves having limited bargaining power to readjust. They also tend to have fewer resources and less global outreach and presence to identify alternative sources of supply. Finally, MSMEs find it harder than their larger peers to hedge against prolonged periods of high inflation as they often lack the financial acumen and resources of larger corporations.

Data illustrate further the negative indirect effects imposed on MSMEs because of the Russian invasion of Ukraine:

- **Energy price hikes** – some forecasts predict (World Bank, 2022) a 50% overall energy price increase in 2022, with natural gas prices in Europe set to rise 111%. Such energy price hikes will impose significant burdens and will, in turn, result in a relative loss of competitiveness for the EU. There is a clear risk that these soaring prices will be disproportionately harmful to MSMEs in comparison with larger enterprises, since MSMEs often lack the resources and global reach to seek out alternative suppliers and diversify their inputs, and have less bargaining power than bigger companies. Europe has done a lot so far (Figure 2), yet more efforts are urgently needed;

Figure 2. Political measures to address the energy crisis



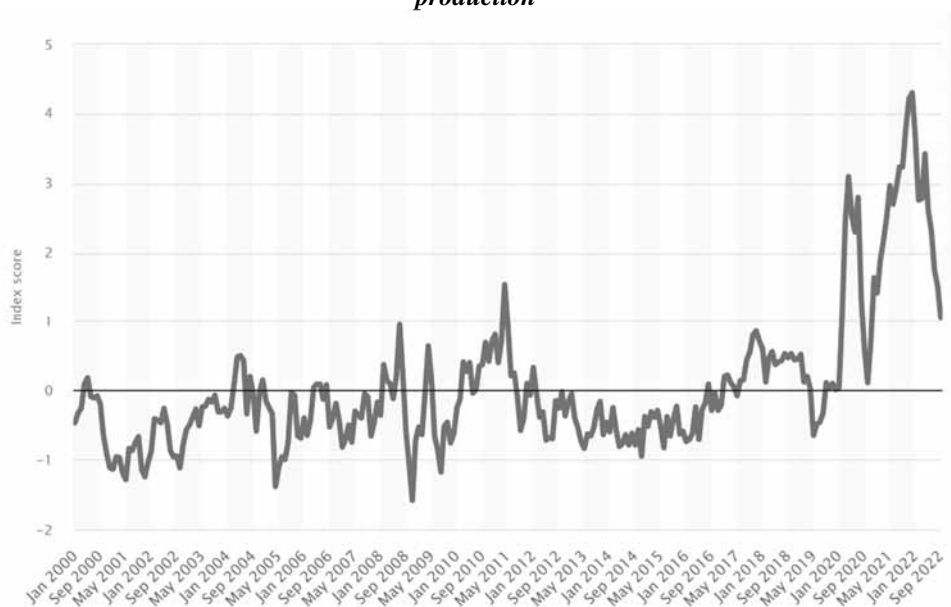
Source: Desk research.

- **Unpredictable price fluctuations in key commodities** – from energy to agricultural products such as wheat and corn, to raw materials such as zinc, platinum, palladium, and various minerals such as phosphate and potash that are used to produce fertilisers. In general, prices are expected to increase further (World bank, 2022). This causes massive ripple effects across industries. Higher input prices also spread downstream throughout value chains, as price hikes are passed on, fully or partially, to other sectors that then experience higher costs for various inputs, transportation and other services, energy consumption and other expenditures that they incur for their own production;
- **Labour shortages due to Ukrainian workers' mobilisation.** Many of the 1.35 million Ukrainians that were residing and working in the EU prior to the outbreak of the war (Eurostat, 2022) have returned home to join the war efforts. The negative effect has been

particularly pronounced in a number of male-dominated sectors such as construction and transportation (truck drivers), as well as ICT activities and outsourcing of software developments;

- **Bottlenecks, material shortages and global supply chain disruptions.** Before having the chance to recover from the bottlenecks and other disruptions caused by the COVID-19 pandemic, the MSMEs have now been put under increased strain due to the Russian aggression of Ukraine. Another negative factor is the reimposition of the pandemic lockdown in a number of Chinese provinces, including Shenzhen and Shanghai, that constitute key arteries in the world economy (Figure 3⁴).

Figure 3. Global Supply Chain Pressure Index (standard deviations from average value) and percentage of companies that report the following as a factor constraining their production



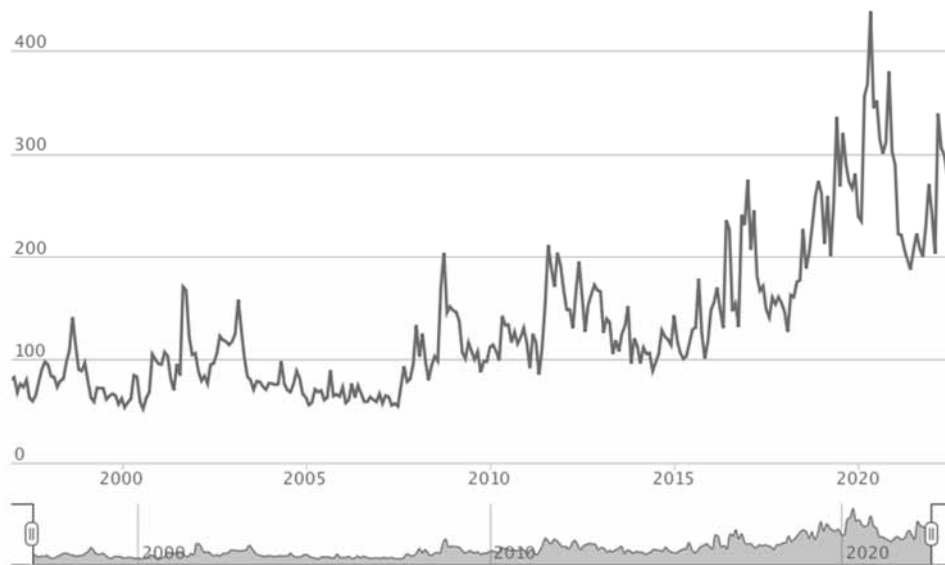
Source: Statista.

The macroeconomic environment was already precarious before the beginning of the Russian invasion, as central banks, including the European Central Bank (ECB), were preparing to tighten monetary policy in 2022 to combat unsustainably high inflationary pressures. Amid elevated uncertainty, high energy price pressures, erosion of households' purchasing power, a weaker external environment and tighter financing conditions are expected to tip the EU,

⁴ The Global Supply Chain Pressures Index measures global shipping costs and airfreight costs, delivery times, backlogs and purchased stocks from seven large economies including the Euro Area. The steep rise, as shown in the graph below, indicates a number of problems affecting large companies and SMEs alike.

the euro area and most MS into recession in the last quarter of the year. Higher-than-expected inflation readings throughout the first ten months of 2022 and broadening price pressures are expected to have moved the inflation peak to year-end and to have lifted the yearly inflation rate projection to 9.3% in the EU and 8.5% in the euro area. Inflation is expected to decline in 2023, but to remain high at 7% in the EU and 6.1% in the euro area, before moderating in 2024 to 3% and 2.6%, respectively (EC, 2022).

Figure 4. Economic Policy Uncertainty Index, 31.12.1996 – 31.07.2022



Global uncertainty is high, although lower than during the outbreak of the COVID-19 crisis, but still, current levels of economic and political risk are well above other previous periods of significant economic stress, such as the Financial Crisis and EU Sovereign Debt crisis⁵ (Figure 4).

Drivers and Enablers of the Green Transition of MSMEs

It is evident that the MSMEs nowadays face an unprecedentedly turbulent, uncertain and challenging business environment. In order to support them in finding the best avenue leading them towards accomplishing swiftly and successfully the green transition, the *drivers and enablers* of this process shall be identified and triggered. On the basis of their sources of origin, these drivers and enablers can be systematised as being induced by the:

⁵ Economic Policy Uncertainty Index.

- Consumer demand and influence from external stakeholders;
- Economic factors, efficiency gains, cost reduction;
- Access to finance;
- Policy and regulatory initiatives, modern business responsibility;
- Diversity and association.

Consumer demand pulls the green transition (EC, 2018; Nielsen, 2015; Koirala, 2019), as the majority of consumers are willing to pay more for green products (OECD, 2021b). To be able to benefit from this, competitive intellectual advantage in the green marketplace, created through developing green products or services, shall be secured via defending property rights (Horbach, 2008; Montalvo, 2008; Horbach et al., 2012). **Reputation and external pressure** – from employees, investors, legislators, environmental groups, suppliers, financial institutions, customers in the supply chain and the local communities in which MSMEs operate, also strongly motivate the green transition (Walker et al., 2008; Gadenne, Kennedy, McKeiver, 2009; Olmos et al., 2012; Veugelers, 2012; Horbach, 2008; Montalvo, 2008; Horbach et al., 2012). **Cooperation and participation in eco-systems, clusters and value chains** help limiting resource use, enhance by-products exchange (including waste heat), and enable infrastructure sharing and joint purchase (OECD, 2021b).

Although they cause a smaller effect for MSMEs than for larger entities, **high energy prices are a strong driver of eco-innovation** (OECD, 2013; Dussaux, 2020; Siedschlag, Yan, 2021). **Costs savings** potential of MSMEs is estimated to be between 10% and 30% of their energy demand and serves as the primary motivator for resource efficiency actions for 68% of MSMEs (OECD, 2021b; EC, 2015). These **cost reductions may be achieved by** (IEA, 2015; OECD, 2019):

- Increasing the process efficiency by minimising inputs and waste production;
- Improving the product design in order to reduce the required inputs;
- Optimising the waste disposal – by reducing waste and reusing already-generated waste or identifying other firms that may be able to use it;
- Using recycled materials to limit the need to purchase new raw materials and decrease the pressure coming through the supply chain;
- Using more energy-efficient technologies to improve infrastructure efficiency;
- Reducing the volume of packaging and shortening supply chains to reduce shipping and delivery costs.

Return on investment is a key driver for all size categories, but for MSMEs, the existence of public subsidies and financial support for technical assistance is far more important than other factors. In order to make the most of this enabler, the MSMEs need to have access to **quality advice** (EEFIG, 2015; Fleiter et al., 2012; Bodas-Freitas, Corrocher, 2019). The probability of eco-innovation increases with firm size and the expected increase in energy price (Cecere et al., 2018).

Easier access to financial resources, a combination of technical assistance, awareness-raising and advisory services, and proper public funding accelerate sustainable transition (EC, 2022; Popp et al., 2009; Olmos et al., 2012; Chatzistamoulou, Tyllianakis, 2022; Ghisetti, Montesor, 2020; Dulia et al., 2021).

Policy and regulation, initiatives in the field of *corporate social responsibility (CSR)*, *responsible business conduct (RBC)* and *environmental and social governance (ESG)* are changing business behaviour at a fast pace (OECD, 2021b; EC, 2022b; Horbach, 2008; Montalvo, 2008; Horbach et al., 2012). The Porter Hypothesis asserts that firms can benefit from environmental policies, arguing that well-designed environmental policy and regulation can stimulate innovation, which will, in turn, increase the productivity of firms or the product value for end users (Porter, 1991; Porter, Linde, 1995). While acknowledging the importance of the policy-induced drivers, it is vital to prevent MSMEs from being unfairly exposed by indirect effects through the supply chain to burdensome reporting obligations that are imposed on large enterprises. As a general rule, MSMEs shall be exempted from some specific obligations in justified cases, and it is necessary to offer them simplified voluntary tools and measures that allow them to demonstrate in a comfortable manner their sustainability commitments (EC, 2022b). *Positive stimuli and incentives* – such as green prizes and certification for MSMEs, can help them tapping into green markets through innovative products and services (EC, 2022b).

Adoption of good practices such as *quality control management and product differentiation* can further accelerate the green transition (Cuerva et al., 2014; Metcalfe, Ramlogan, 2005), alongside *promoting industrial symbiosis*. The latter can be achieved by: valuing the ‘waste’ of some companies as resources for others, creating joint value between companies, strengthening trust and transparency between potential partners, belonging to an industrial association, or other organisation, sharing infrastructure or services with industrial neighbours (Peitro-Sandoval et al., 2018).

The green transition is closely linked to digital transformation (EIB, 2021; Kesidou, Ri, 2021). Digitalisation serves as a tool for making business operations more efficient, helping new market expansion and internationalisation, and has the considerable potential to decrease emissions, waste and the use of natural resources. But digital services and equipment also cause environmental impacts which need to be managed simultaneously. Hence, MSMEs need to manage both parts of this twin transition – a very demanding double challenge because of the substantial need for resources.

The availability and development of new technologies, for instance, in digitalisation, may affect the barriers that MSMEs face in environmental issues and their ability to address them (OECD, 2018). Not only can digital solutions, in some cases, support environmental practice, but they also may, in other cases, be a source of high-energy use (OECD, 2021b). For example, among the smart solutions suitable for MSMEs are microgrids that incorporate renewable sources of energy into conventional electricity grids with the help of information and communication technologies (ICT) for management and control purposes and enable small-scale energy production and management (OECD, 2021a).

Figure 5. Measures adopted by member states to cope with the energy prices spikes

	AT	BE	BG	DE	DK	EE	ES	EL	FI	FR	HU	IE	IT	LT	LU	MT	PO	PT	RO	SE	SK	SL	
Direct support to MSMEs, i.e. direct subsidies, grants, guarantees, soft loans, vouchers, energy tax allowances, temporary reduction in the duty on fuels, compensations, fuel prices discounts, VAT reductions, liquidity support.																							
Support measures for MSMEs from devoted networks like employers' and business associations, i.e. advice, positive stimuli, information and consultation provision, incl. through devoted portals, coordination and expression of views.																							
Regulatory actions on energy prices that have effect over the MSMEs – e.g. fixed prices for fossil fuels, joint procurement, or reductions of price, taxes on electricity and gas, VAT or excise duties.																							
Measures to improve the design and functioning of energy markets – e.g., reforms, green transition accelerating measures, additional credit lines, increased energy wholesale security obligations, biogas promotion, preventive last resort energy supply.																							
Diversify energy sources/suppliers – additional energy sourcing mechanisms, promotion of storage projects.																							
Develop infrastructures, storage facilities and ports to increase imports of renewable hydrogen.																							
Accelerate investments in renewables – e.g., reduce time to roll out projects, increase renewable energy production capacity, public charging stations for electrical cars, boosting self-consumption, etc.																							
Accelerate investments in energy efficiency - reduce time to roll out projects, improve energy efficiency, foster the creation of green handcraft jobs, accelerate phase-out of fossil fuels, etc.																							
Simplification and streamlining permitting procedures as to speed up the deployment of renewable energy sources - reduce the length of procedure by removing high requirements for documents, limiting re-authorisation requirements, increasing transparency.																							
Skills for green transition – steering of investments in skills for the deployment of renewable energies, setting-up of partnerships in strategic industrial eco-systems and value chains, securing competence for climate-neutral future.																							
Other – e.g., minimum safety inventory for natural gas.																							

	AT	BE	BG	DE	DK	EE	ES	EL	FI	FR	HU	IE	IT	LT	LU	MT	PO	PT	RO	SE	SK	SL
Monitoring energy prices – e.g., observatories, statistical information collection, price surveillance, monitoring of energy exchanges.																						
Improving transparency of the energy bills.																						
Enhancing construction of micro grids, removing obstacles of investment process in renewables.																						
Insolvency measurement and prevention, consulting MSMEs in financial difficulties.																						
Capital liquidity for green investments – e.g., green supporting factors introduction, green credit offerings.																						

Source: Desk research

While activating drivers and enablers of the green transition can be expected to produce results over a longer time span – more likely in a medium, even in a long run, it is still important to focus on the *immediate response* options and, most urgently – to help MSMEs dealing with the energy price spikes. Such immediate measures will not only support MSMEs directly, but also will help getting control over the rising inflation, where energy prices skyrocketing is one of the most important inflation-inducing factors. Most European MS adopted measures, as to support the MSMEs to cope with the skyrocketing energy prices (Figure 5). Although such measures, certainly help many MSMEs to avoid being pushed into insolvency, a recently growing number of voices also raise concerns about the risk of distorting competition, because of the different ability of MS to fund them.

Proposal for a Holistic Strategic Approach to Measures for Supporting the Green Transition of MSMEs

Based on the analysis of the challenges, barriers and opportunities that MSMEs face while endeavouring towards green transition and while suggesting how the drivers and enablers of this transition can be unleashed, it is also interesting to take a more holistic and strategic perspective, looking at medium and long time span. Such a perspective aims at allowing MSMEs to be aware of what the future might bring to them and be better prepared to actively manage their future path, so that they do not run the risk of failure and even being pushed out of the market. Therefore, the current paper suggests *seven building blocks of a holistic strategic approach to measures for supporting the green transition of MSMEs*.

First, to help MSMEs to understand and embrace the modern business responsibility, that is built on economic, social and environmental grounds. A successful MSME shall incorporate all these dimensions in its business strategy and everyday operations. Responsibility stems from companies' own values and consciousness and is further shaped by external influences linked to the overall role of enterprises in the economy and society – such as: direct or indirect requirements of the regulatory framework, demands by market players (e.g., business partners, consumers, investors and financiers), as well as expectations by employees and citizens at large. There is thus a wide variety of aspects and topics to be considered today, let alone to be anticipated for the future, all of which require different

professional expertise. This is often very demanding, especially for smaller enterprises, and it is also demanding for policymakers to find the right ways to enhance business responsibility.

Second, acknowledging and highlighting the diversity and different needs of MSMEs, it is necessary ***specific attention to be paid to the smallest and most vulnerable ones***, so that no one is left behind. In what concerns the states' role to motivate and promote the green transition, it is recommended to maintain direct support to MSMEs regarding the fixed costs they endure on energy, fuel and raw materials increasing prices, through tax reduction or direct subsidies. In this context of policy making and devising support measures, the policymakers should work around a better definition for MSMEs (including diversification by typology) regarding different industrial strategies and eco-systems as shown by these new productive crises. Potential suggestions include a revised category with differentiated criteria for specific typologies, such as traditional/family-owned businesses and a differentiation based on productivity and services.

Third, wide-ranging and targeted information and awareness-raising measures, delivered in a coordinated and complementary manner by the state, regional and local authorities, together with business organisations, chambers, social partners and other relevant stakeholders, are vital to help MSMEs navigate successfully through current troubled waters. To that end, the states and public sector are recommended to stimulate the promotion of further associationism, networking and cooperative partnerships for MSMEs across various industry sectors. ***Associationism and networking*** are meant as participatory instruments for closing the gap between policymaking at the international and national levels and business realities. Cooperative partnerships (particularly in times of crisis) can act as gatekeepers for prices and value chain efficiency and availability, and also can help elaborating clear strategies to restore a sustainable post-crisis economy based on innovation, skills and competition, that are so badly needed.

Fourth, MSMEs need targeted recommendations, that can help them planning actions towards energy security and addressing all kinds of conflict-derived trade disruptions, especially on operational limitations in Russian markets (i.e., luxury goods, high-quality exports). Specific actions to be implemented include policy measures to control the current crisis, such as the employment of methods to control speculation and demand transparency on prices, namely on energy and raw materials.

Fifth, an essential component of MSMEs recovery and boosting also lies in delivering on the ambitions of the green and digital transitions through ***improving MSMEs' human resources training and skills***. For a necessary approach to workforces, it shall be suggested to the European institutions and MS to promote an increased revision of VET practices specifically designed to reinforce the twin transition. However, it is also requested not to forgo specialised training for employers (also including digitalisation) with a particular outlook on more traditional sectors. These should be aimed at promoting diversity and creativity in European entrepreneurship by tapping the potential of all prospects, and especially of women, third-country nationals or even social economy models (i.e., worker-owned cooperatives). Further assistance could be provided through the training of specialised mentors and intermediaries

of MSMEs innovation siding the businesses or even the promotion of business transfer-specific training dedicated to the pick-up of small and medium businesses in risk of closure.

Sixth, a set of recommendations can be focused *at interconnections across processes of (digital) innovation, sustainability and European cohesion for MSMEs*. From this point of view, MSMEs are in greater need of advanced technical and logistical support for awareness-raising, application and implementation of European regulation and funding. This holds multiple implications for the increased participation of MSMEs in EU-funded projects and for obtaining guidance on compliance with the new climate and environmental policies (i.e., EGD and Fit for 55 packages). On the other side, improvements to these processes are also strictly connected to further digitalisation. To face such a challenge, additional investments will be required both for closing national gaps among digital levels (i.e., physical infrastructure and digital services) and to enable the development of a specific EU fund for broad SME digitalisation capacity. Of special interest may be the use of “one-sheet” application procedures for EU funds and the employment of different criteria according to the level of desired upscale in digitalisation. To enhance the successful implementation of such a digital capacity-building plan, it may well be necessary to consider the creation of a new generation of Innovation hubs – embedded not only at the national, but also at a regional and local level. These would not only be dedicated to digital and start-up services, but rather connected to the practical implementation of technological innovation in traditional MSMEs settings and will require joint commitment by employers’ and business associations and relevant stakeholders.

Seventh, the current trying times, characterised by multiple crisis, underline once again the importance of human inspiration and leadership. This recalls the Schumpeterian concept of entrepreneurship, which is focused on the innovation as “the introduction of something new – a new idea, method or device”, that is invented, implemented and diffused by the entrepreneur, who is characterised by “...the will to conquer, the impulse to fight, to prove oneself superior to others, to succeed for the sake, not of the fruits of success, but of success itself... or simply of exercising one’s energy or ingenuity” (Schumpeter, 1969). Therefore, it is important that the overall business environment is made attractive and supportive for entrepreneurship, innovation, investment and trade (EESC, 2022a) and the role of entrepreneurs is recognised and respected in the society. And above all, in order to have a successful transition tomorrow, the MSMEs have to survive today.

Conclusion

The MSMEs form the overwhelming majority of the European business community. They are the genuine engine and determinant of the success of so badly needed radical transformation towards climate neutrality – being both parts of the problem causes and of its solution. Therefore, their commitment to net zero is vital for its success – embracing all aspects of modern responsibility and embedding the holistic concept of green and sustainable business in each and every aspect of their operations.

The motivation and stimuli that were identified and mapped to incentivise the MSMEs to embrace the green transition and to communicate their efforts and achievements can speed

up the process and serve as avenues for boosting the transition to the sustainability of the European MSMEs. To that end, it is vital to help them to grasp the opportunities offered by the green transition and overcome the barriers and challenges they have to cope with on the way to achieving climate neutrality. Provided that the relevant motivators and enablers are unleashed – and while respecting, acknowledging and highlighting the diversity and different needs of MSMEs, the transition towards climate neutrality can be accelerated. And it will also provide a timely answer to the additional challenges brought about by the invasion of Russia of Ukraine, that now seems to be serving as a catalyst of the green transition, by forcing businesses to search for alternative, not fossil based sources of energy and for alternatives of raw materials.

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