



YOUTH
ECO-ENTREPRENEURSHIP

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ECO-ENTREPRENEURIAL RESEARCH REPORT

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1. Introduction

The Youth Eco-Entrepreneurship Hub (YEE-HUB) is a visionary Erasmus+ initiative that aims to revolutionize how young people engage with environmental challenges. This collaborative project brings together six organizations from Turkey, Italy, Spain, Germany, and Poland to nurture a new eco-entrepreneur generation. YEE-HUB is more than a project—it is a movement designed to empower youth to create sustainable, innovative solutions for the planet while fostering a community of like-minded changemakers.

YEE-HUB is rooted in a mission to enable young individuals to transform their environmental concerns into actionable, impactful ventures. The project takes a comprehensive approach, intertwining education, mentorship, and collaboration to achieve its ambitious goals:

1. Training the Next Generation of Eco-Entrepreneurs

YEE-HUB will provide a state-of-the-art digital platform offering free, immersive training for aspiring eco-entrepreneurs. This platform will act as a gateway to knowledge, delivering tailored modules that equip participants with the practical skills to conceptualize and implement sustainable business solutions. From crafting environmentally friendly business models to understanding global ecological trends, the training will ensure that participants are prepared to take on real-world challenges.

2. Defining Success in Eco-Entrepreneurship

The project will delve deep into research to identify the key traits and characteristics that define a successful eco-entrepreneur. This data-driven approach ensures that training modules will address, not only technical skills, but also the personal and interpersonal attributes required for long-term success in the field.

3. Empowering Mentors and Professionals

YEE-HUB will go beyond youth by offering capacity-building programs for mentors, youth workers, and professionals. These programs will enhance their ability to guide, support, and inspire young eco-entrepreneurs, creating a ripple effect of empowerment that extends far beyond the individual.

4. Amplifying Stories of Success

The initiative will place a strong emphasis on storytelling, highlighting real-life examples of eco-entrepreneurs who have successfully made a difference. These stories will act as powerful tools for inspiration, showing participants that their dreams of creating a sustainable business can become a reality.

YEE-HUB specifically will target young individuals aged 18-30 who are passionate about making a difference in the fight against climate change. These participants are not just passive learners; they are active changemakers, ready to channel their creativity and energy into ventures that address pressing environmental issues. The initiative will also support those who have already begun their eco-entrepreneurial journey but require guidance to overcome obstacles. Additionally, it will extend its resources to youth workers, professionals, and mentors, ensuring a robust support system for emerging talent.

The Building Blocks of YEE-HUB

At the heart of the YEE-HUB initiative lies a multifaceted strategy that combines technology, education, and community-building:

1. The YEE-HUB digital platform will be an innovation in itself. Equipped with AI-driven tools, it will offer personalized learning pathways, interactive training modules, and a built-in social network. This platform will become a vibrant ecosystem where young entrepreneurs can learn, connect, and collaborate. Participants will be able to access resources ranging from sustainability frameworks to digital marketing strategies, all tailored to the unique needs of eco-entrepreneurs.
2. The training modules will be designed with a deep understanding of the complex demands of modern eco-entrepreneurship. Participants will gain insights into topics such as circular economy models, renewable energy innovations, and eco-friendly supply chains. Additionally, the training will emphasize digital skills and leadership, ensuring participants can navigate both the environmental and technological landscapes with confidence.
3. While the digital platform will be a cornerstone, YEE-HUB also places significant emphasis on face-to-face interactions. Workshops, networking events, and community meetups will create opportunities for participants to collaborate, share ideas, and build lasting relationships. This combination of digital and physical engagement will ensure that participants not only gain knowledge, but will also feel supported by a strong, like-minded community.

The Youth Eco-Entrepreneurship Hub is more than a training program—it is a call to action. By empowering young people with the skills, knowledge, and support needed to create eco-

friendly solutions, YEE-HUB will directly address some of the most critical challenges facing our world. Its emphasis on sustainability, innovation, and collaboration will position it as a leading force in the global transition toward a greener, more sustainable future.

Through its holistic approach, YEE-HUB will foster a culture of hope and determination among youth. It will empower them to take ownership of their environmental impact, transform their ideas into actionable plans, and connect them with a global community of changemakers. By investing in the potential of young eco-entrepreneurs, YEE-HUB will ensure that the fight for a sustainable future is in capable hands—those of the next generation.

2. Study of Ecological Practices Among Young Entrepreneurs

This report explores the findings of an extensive research initiative conducted under the YEE-HUB project, focusing on the ecological practices and attitudes of young entrepreneurs born between 1990 and 2004. The study investigates the role of ecological awareness in shaping the behaviors of young business owners, emphasizing their dual roles as professionals and active participants in broader societal and environmental contexts. By examining the interrelation between knowledge, attitudes, and actions, this research offers valuable insights into how young entrepreneurs incorporate sustainability into their businesses, personal lives, and community engagement.

The primary aim of the research is to understand the drivers and barriers influencing the adoption of ecological practices among young entrepreneurs. Specifically, the study addresses the following objectives:

1. To assess how ecological awareness shapes actions across various roles, including as entrepreneurs, consumers, and community members.
2. To evaluate the level of knowledge and perceptions regarding the impact of business on the environment.
3. To identify factors that enable or hinder the implementation of sustainable business practices.
4. To establish criteria for the "ideal eco-entrepreneur," contributing to the creation of supportive frameworks for sustainability.

The study was conducted in two phases, combining a comprehensive literature review with primary data collection through an online survey. The integration of these methodologies allowed for a holistic exploration of the subject.

The literature review analyzed eight key studies and reports on the pro-ecological behaviors of entrepreneurs published between 2004 and 2024. This review provided a foundation for understanding national and international trends in sustainability. Key focus areas included:

- Entrepreneurs' behaviors in ecological contexts.
- Positive and negative influences on pro-ecological actions.
- Knowledge and awareness about the environmental impact of business operations.
- Challenges in implementing sustainable practices.
- Market and legal conditions influencing ecological entrepreneurship.
- Successful case studies demonstrating financial and ecological benefits.

Phase Two: Online Survey

The second phase involved an online survey targeting young entrepreneurs across five partner countries: Poland, Turkey, Germany, Italy, and Spain. Designed to collect both qualitative and quantitative data, the survey featured 35 questions divided into five sections:

1. Respondent Profile
2. Business Data
3. Personal Shopping Preferences
4. Citizenship Behavior
5. Knowledge and Learning Preferences

This approach enabled researchers to gain insights into the consistency of pro-environmental behaviors across professional and personal contexts. Additionally, the survey examined the factors influencing sustainability, ranging from regulatory frameworks to consumer demand.

Significance of the Research

The study's significance lies in its ability to bridge gaps in understanding the ecological practices of young entrepreneurs, a demographic increasingly pivotal to driving sustainable economic growth. By examining both individual and systemic factors, the research offers actionable recommendations for:

- Policymakers: Enhancing regulatory and financial support for green entrepreneurship.
- Educational Institutions: Developing targeted training programs to cultivate ecological knowledge and skills.
- Business Leaders: Identifying strategies to integrate sustainability into core operations.

Outcomes and Future Implications

The results of this research are expected to:

1. Highlight trends in ecological practices among young entrepreneurs, providing a basis for comparative analysis across different countries.
2. Offer insights into the challenges faced by the younger generation in implementing sustainability within their businesses.
3. Support the development of policies and programs that encourage ecological responsibility.
4. Contribute to the broader discourse on the role of entrepreneurship in achieving global sustainability goals.

In conclusion, this study underscores the importance of fostering a generation of eco-conscious entrepreneurs who balance profitability with ecological stewardship. Through collaborative efforts involving governments, educational institutions, and the private sector, it is possible to create an environment where sustainable practices thrive, ultimately benefiting both society and the planet.

2.1 The Ecological Awareness and Practices of Young German Entrepreneurs

In Germany, young entrepreneurs born between 1990 and 2004 are reshaping the business landscape by integrating sustainability into their practices. This growing movement reflects not only a shift in business priorities but also a generational commitment to ecological responsibility. As part of the YEE-HUB project, this study delves into their attitudes, behaviors, and motivations concerning ecological practices. The report combines insights from a literature review and survey data to examine the challenges and opportunities these entrepreneurs face in adopting sustainable approaches, as well as pathways to fostering eco-conscious entrepreneurship. By examining these insights, this essay highlights the pivotal role of young German entrepreneurs in advancing sustainability and contributing to global ecological goals.

The literature review provides a detailed perspective on Germany's pro-ecological entrepreneurial environment, offering insights into trends, barriers, and opportunities that frame the journey of sustainable entrepreneurship.

Growing Emphasis on Sustainability:

- The Global Entrepreneurship Monitor (2023) underscores that 66.5% of German entrepreneurs consistently consider environmental factors in their decision-making processes, with 59% having implemented eco-friendly measures within their businesses. This statistic illustrates a significant cultural shift toward sustainability, driven by the recognition of its long-term value.
- Green startups are emerging as pivotal players in this transformation. Their growth reflects not just innovation but also an alignment with societal demands for accountability and environmental stewardship.

Generational Shifts in Values:

- Millennials prioritize work-life balance, flexibility, and meaningful work, often aligning with sustainable business models that integrate social and environmental responsibility.
- Generation Z entrepreneurs demonstrate even greater adaptability and motivation for sustainability. Their technological proficiency and acute environmental awareness position them as leaders in integrating advanced, eco-friendly practices into their business strategies.
- These generational values create a unique synergy between profit and purpose, setting a foundation for a broader cultural shift toward sustainability.

Economic Benefits of Sustainability:

- Many entrepreneurs report financial benefits from eco-friendly practices, such as cost savings achieved through energy efficiency and the use of environmentally friendly materials. These practices also reduce operational risks and improve market positioning.
- Examples like ForTomorrow, Hortiya, and Pydro highlight how green startups are leveraging sustainability to drive profitability while addressing urgent ecological challenges.

Barriers to Adoption:

- Small and medium-sized enterprises (SMEs) face substantial challenges, including limited financial resources, complex regulations, and difficulties in measuring their environmental impact. These barriers create a gap between intent and implementation.

- The lack of access to venture capital further exacerbates these challenges, with only 16% of green startups successfully securing funding, according to the Green Startup Monitor (2023).

Market and Legal Dynamics:

- Germany's regulatory framework has made strides in supporting sustainability, yet its complexity often deters smaller businesses from fully engaging in eco-friendly initiatives. This paradox underscores the need for streamlined and supportive policies.
- Collaboration between policymakers and businesses is necessary to create a more cohesive and enabling environment for sustainable entrepreneurship.

An online survey conducted in September and October 2024 gathered responses from 52 young German entrepreneurs, offering valuable insights into their ecological attitudes and actions.

Pro-Social and Pro-Environmental Actions:

- Respondents actively engage in a range of sustainability initiatives, including:
 - Implementing comprehensive recycling programs within their operations.
 - Organizing community-based tree-planting events to promote reforestation.
 - Leading educational campaigns aimed at raising awareness about environmental sustainability.
 - Advocating for sustainable transportation solutions, such as biking or public transit, as part of urban mobility strategies.
- These initiatives demonstrate a commitment to sustainability that transcends professional obligations, reflecting a holistic approach to environmental stewardship.

Knowledge of Environmental Regulations:

- Entrepreneurs display a high level of awareness regarding environmental regulations, including waste management policies and emissions control standards. This awareness highlights their proactive engagement with compliance requirements.
- However, the survey also revealed gaps, with some respondents indicating that no formal regulations impacted their businesses. This suggests discrepancies in the communication and implementation of policies across sectors.

Consumer and Citizen Behaviors:

- Respondents prioritize eco-conscious consumer choices, including supporting local farmers, reducing single-use plastics, and conserving energy through efficient practices.
- As citizens, their environmental responsibility extends to activities like participating in community clean-ups and promoting sustainable habits among peers. This dual role of eco-conscious citizen and entrepreneur underscores their broader commitment to fostering a culture of sustainability.

Policy Recommendations:

- Young entrepreneurs proposed several initiatives to enhance Germany's environmental policies, including:
 - Expanding educational programs focused on sustainability for students and professionals to instill eco-consciousness early on.
 - Increasing subsidies and incentives for adopting renewable energy technologies, thereby reducing financial barriers.
 - Enhancing infrastructure for recycling and waste management to support circular economy principles.
 - Introducing stricter regulations on industrial emissions and single-use plastics to curb environmental degradation.

Challenges and Opportunities:

The findings from the literature review and survey reveal a nuanced understanding of the challenges and opportunities facing young German entrepreneurs in their pursuit of sustainability.

Challenges:

1. Financial Barriers:

- Limited access to capital remains one of the most significant challenges for young entrepreneurs. High initial costs for adopting advanced eco-technologies, coupled with uncertain returns on investment, discourage many businesses from leaping to sustainability.
- Green startups often struggle to secure funding from traditional sources, with only a small fraction obtaining venture capital or government grants.

2. Regulatory Complexity:

- The complexity and inconsistencies within Germany's regulatory frameworks pose significant hurdles for SMEs and startups. Entrepreneurs frequently express frustration with the lack of clear, standardized guidelines.
- For highly regulated industries like energy and food, navigating compliance requirements can be particularly daunting, often delaying or derailing sustainable initiatives.

3. Generational Tensions:

- While Millennials and Gen Z entrepreneurs share a commitment to sustainability, differences in priorities can create friction. For instance, Millennials' emphasis on personal freedom and work-life balance may conflict with the collective effort required for large-scale environmental change.
- Gen Z's impatience and materialistic tendencies, though often overstated, can also pose challenges to the long-term focus needed for sustainable business practices.

4. Knowledge Gaps:

- Many entrepreneurs recognize the importance of sustainability but lack the necessary expertise to implement effective practices.
- Educational programs and mentorship opportunities are essential for equipping entrepreneurs with the tools to bridge these gaps and take meaningful action.

Opportunities:

1. Economic and Environmental Synergies:

- Examples like Enpal and 1KOMMA5, which have achieved unicorn status by integrating sustainability into their business models, illustrate that profitability and ecological responsibility can coexist harmoniously.
- Green startups leveraging crowdfunding platforms or benefiting from government support highlight the potential for innovative financing mechanisms to fuel sustainable initiatives.

2. Collaborative Networks:

- Establishing Sustainability Innovation Hubs could foster partnerships between green startups, established companies, and investors, accelerating the adoption of eco-friendly practices.

- Networking opportunities enable entrepreneurs to share resources, expertise, and best practices, creating a collaborative ecosystem for sustainable innovation.
- 3. Policy Innovations:
 - Dedicated funding lines for green startups and streamlined regulatory frameworks could significantly enhance their ability to scale sustainable solutions.
 - Policymakers can support this by aligning sustainability goals with economic incentives, encouraging more businesses to adopt environmentally friendly practices.
- 4. Cultural Shifts:
 - Promoting sustainability as a core business value and a competitive advantage can inspire more entrepreneurs to prioritize eco-friendly practices.
 - Highlighting success stories from within Germany and abroad can build confidence among entrepreneurs and demonstrate the viability of sustainable business models.

Pathways to Sustainable Entrepreneurship

To cultivate a robust culture of sustainability among young German entrepreneurs, several strategies are recommended:

1. Education and Training:
 - Develop and implement comprehensive educational programs focused on sustainability, emphasizing practical strategies such as energy efficiency, waste reduction, and circular economy principles.
 - Partner with universities, vocational institutions, and industry leaders to offer workshops, certifications, and mentorship opportunities.
2. Financial Support:
 - Expand access to grants, subsidies, and green loans tailored to the needs of SMEs and startups, reducing the financial barriers to adopting sustainable practices.
 - Promote innovative financing solutions, such as crowdfunding or public-private partnerships, to support eco-friendly initiatives.
3. Regulatory Reforms:

- Simplify and harmonize Germany's environmental regulations, making compliance more accessible and less time-intensive for entrepreneurs.
 - Establish advisory bodies or support centers to guide businesses through regulatory processes and help them align their operations with sustainability goals.
4. Collaborative Ecosystems:
- Foster partnerships between academia, industry, and government to create innovation hubs that drive sustainable entrepreneurship.
 - Encourage community-driven initiatives, such as urban reforestation projects or renewable energy collaborations, to enhance collective impact.
5. Cultural Shifts:
- Inspire a mindset change among entrepreneurs, positioning sustainability as an essential element of business success rather than an optional add-on.
 - Launch public awareness campaigns that celebrate eco-friendly business achievements, building momentum for a broader cultural embrace of sustainability.

Young German entrepreneurs are playing a pivotal role in advancing sustainability, integrating ecological practices into their businesses while actively participating in community initiatives.

Their dual commitment to environmental responsibility and economic growth positions them as key contributors to Germany's sustainability movement. Despite challenges such as financial barriers, regulatory complexities, and knowledge gaps, their determination and innovative spirit remain strong.

By prioritizing targeted education, financial incentives, and collaborative networks, Germany can empower its young entrepreneurs to lead the transition toward a green economy. These efforts will not only bolster environmental resilience but also position Germany as a global leader in sustainable innovation. Through determination, collaboration, and a shared commitment to ecological responsibility, young German entrepreneurs can set a powerful example for future generations, balancing profitability with sustainability to build a better future for all.

2.2 The Ecological Awareness and Practices of Young Italian Entrepreneurs

The integration of sustainability into business practices has become a defining challenge of the 21st century. In Italy, young entrepreneurs born between 1990 and 2004 are navigating this complex landscape, balancing profitability with growing ecological concerns. This essay examines the findings of a comprehensive study conducted as part of the YEE-HUB project, which explores the ecological attitudes, behaviors, and motivations of young Italian entrepreneurs. Drawing from literature reviews and survey data, the analysis highlights the factors influencing ecological awareness and identifies strategies for fostering sustainable entrepreneurship in Italy.

The literature review conducted for the YEE-HUB project reveals an evolving commitment to sustainability among Italian entrepreneurs. Businesses are increasingly adopting pro-environmental practices in response to consumer demand, economic benefits, and societal pressures. Key areas of focus include green technology, circular economy principles, and eco-innovation. Collaborative initiatives, such as Contamination Labs, provide a platform for interdisciplinary efforts, fostering innovations in smart technology, bio-economy, and cultural industries.

Despite these advancements, significant challenges persist. The high initial costs of green technologies and limited financial resources pose substantial barriers for small and medium-sized enterprises (SMEs). Regulatory complexity further complicates the adoption of sustainable practices, as entrepreneurs often face inconsistent policies and bureaucratic hurdles. Moreover, the lack of green infrastructure and insufficient financial incentives undermines broader ecological efforts.

Italian consumers, particularly Gen Z and millennials, are driving the shift toward sustainability. These generations are willing to pay a premium for eco-friendly products and demand greater transparency from companies regarding their environmental practices. Initiatives like "Eco-Generation" exemplify the role of youth engagement in promoting pro-ecological values, incorporating activities such as beach cleanups and sustainability workshops.

An online survey conducted among 51 young Italian entrepreneurs provides a detailed perspective on their ecological practices and motivations. The findings offer valuable insights into the current state of eco-entrepreneurship in Italy.

Around 60% of respondents reported implementing eco-strategies within their businesses. Common practices include recycling, energy reduction, and waste minimization.

Specific measures, such as reducing plastic use, utilizing recycled materials, and partnering with sustainable suppliers, demonstrate a commitment to environmental responsibility. However, the perceived impact of these actions varies. While approximately half of the respondents believe that eco-friendly practices positively influence profitability, others find the effects difficult to measure.

Entrepreneurs are motivated by long-term value creation and corporate responsibility, with consumer demand serving as an additional driver. Financial constraints remain a significant barrier, as many SMEs lack the resources to invest in sustainable technologies. Market pressures exacerbate these challenges, leading 41% of respondents to seek grants or subsidies to facilitate their ecological transformations.

Investment Priorities: While many young entrepreneurs plan to invest in innovative solutions and eco-friendly technologies, their emphasis often lies on introducing new products and services rather than directly targeting environmental projects. This highlights a pragmatic approach, where sustainability is integrated into broader business objectives rather than pursued as a standalone goal.

Young Italian entrepreneurs face several obstacles in their journey toward sustainable practices:

1. Economic Constraints:

- Limited financial resources restrict access to green technologies and infrastructure.
- Rising energy costs and the scarcity of renewable energy sources hinder efforts to reduce emissions.

2. Regulatory Complexity:

- Entrepreneurs grapple with inconsistent and ambiguous regulations, which create barriers to eco-friendly transitions.
- Fluctuating policies discourage long-term investments in sustainability.

3. Knowledge Gaps:

- While awareness of global sustainability goals is high, practical knowledge for implementing effective eco-practices remains limited.
- Many entrepreneurs rely on external education and training to bridge these gaps.

Opportunities for Growth: Despite these challenges, there are clear pathways for fostering sustainable entrepreneurship. Successful examples, such as Enel Green Power and Caviro Extra SpA, demonstrate how eco-innovation can align with profitability. These companies employ

circular economy principles, green technologies, and strategic alliances to enhance both environmental impact and market competitiveness.

Collaborative ecosystems, involving partnerships between public, private, and educational sectors, offer additional opportunities. These ecosystems provide the resources, expertise, and support necessary for entrepreneurs to adopt and scale sustainable practices.

To cultivate a culture of sustainability among young Italian entrepreneurs, several strategies are essential:

1. Education and Training:

- Targeted programs should focus on practical sustainability practices and their financial benefits.
- Partnerships with universities and training organizations can provide the skills and knowledge needed for effective eco-strategies.

2. Financial Support:

- Expanding access to grants, subsidies, and tax breaks can lower barriers to eco-investments.
- Innovative financing models, such as green loans, can encourage SMEs to adopt sustainable technologies.

3. Regulatory Reforms:

- Simplifying and standardizing environmental regulations would reduce confusion and compliance burdens.
- Clear guidelines and advisory services can help SMEs navigate regulatory complexities.

4. Collaborative Ecosystems:

- Encouraging partnerships between government, private sector, and educational institutions can foster innovation and provide resources for eco-entrepreneurship.

5. Cultural Shifts:

- Promoting sustainability as a core business value, rather than a regulatory obligation, can drive intrinsic motivation among entrepreneurs.
- Public campaigns emphasizing the benefits of sustainability can enhance consumer demand and entrepreneurial engagement.

Young Italian entrepreneurs are at the forefront of integrating sustainability into business practices, driven by consumer demand and corporate responsibility. While significant challenges persist, including financial constraints, regulatory complexities, and knowledge gaps, the opportunities for fostering eco-entrepreneurship are vast.

To align with Italy's sustainability goals and the broader European Green Deal, systemic changes are necessary. By addressing economic barriers, providing education and financial incentives, and fostering collaborative ecosystems, young Italian entrepreneurs can become proactive leaders in eco-innovation. Through these efforts, Italy can cultivate a new generation of entrepreneurs who prioritize environmental responsibility alongside business growth, paving the way for a greener and more sustainable future.

2.3 The Ecological Awareness and Practices of Young Polish Entrepreneurs

Young entrepreneurs in Poland, born between 1990 and 2004, are navigating the complexities of modern business in an era where sustainability has become an imperative. However, this demographic often prioritizes profitability and financial independence, relegating ecological considerations to a secondary role. This essay delves into the findings of a comprehensive study that combined literature reviews and survey data, analyzing the ecological attitudes, behaviors, and motivations of young entrepreneurs in Poland. The analysis also explores the challenges and opportunities for fostering sustainable entrepreneurship in the country, aiming to bridge the gap between awareness and actionable environmental responsibility.

The YEE-HUB project's literature review paints a nuanced picture of ecological entrepreneurship. Large corporations, driven by regulatory compliance and public expectations, are increasingly integrating environmental considerations into their operations. Strategies such as carbon footprint reduction and adherence to ESG (Environmental, Social, Governance) criteria are becoming standard. These efforts often yield both reputational and financial benefits. In contrast, small and medium-sized enterprises (SMEs) face unique challenges. For SMEs, financial independence and operational autonomy often take precedence over sustainability initiatives.

The challenges for SMEs are multifaceted:

1. **Financial Constraints:** Implementing sustainable practices often requires significant investment in technology, infrastructure, or training—resources that many SMEs lack.
2. **Regulatory Ambiguities:** Complex and sometimes inconsistent regulations hinder SMEs' ability to adopt and benefit from sustainable practices.
3. **Communication Gaps:** Public communication about environmental efforts is limited, with only 3% of corporate social media content addressing sustainability. This lack of transparency erodes trust and diminishes the potential for positive consumer engagement.

Moreover, greenwashing—misleading claims about eco-friendliness—has further complicated the landscape, creating skepticism among consumers and business partners alike. This underscores the need for authentic, well-communicated sustainability initiatives.

A survey conducted among 50 young Polish entrepreneurs offers valuable insights into their ecological attitudes and practices. The majority of respondents operate service-based businesses, emphasizing personal relationships with clients and unique service offerings. This business model prioritizes client engagement and innovation over environmental considerations.

Pro-Ecological Actions:

- The most common environmental practices include energy-efficient lighting and waste segregation.
- Advanced measures, such as the use of eco-friendly materials or partnerships with sustainable suppliers, are notably rare (6% and 2%, respectively).

Motivators and Barriers:

- Financial incentives, such as subsidies, are critical motivators, with 40% of respondents identifying them as key drivers of ecological initiatives.
- Customer expectations play a smaller role, while intrinsic ecological values are almost absent.
- Knowledge gaps persist: 68% of respondents lack a formal environmental strategy, and many are unfamiliar with applicable regulations. The internet (72%) and informal conversations (26%) are their primary sources of information.

Investment priorities reveal a strong preference for short-term profitability. Advertising (46%) and innovation (36%) dominate the list, while investments in water-saving (10%) and energy-saving (14%) solutions rank much lower. Consumer behavior among these entrepreneurs mirrors this pragmatism. Price (72%) and quality (70%) are the primary factors influencing purchasing decisions, while eco-friendly considerations, such as sustainable packaging, are rarely prioritized.

For many entrepreneurs, pro-environmental actions are reactive, driven by immediate cost savings or regulatory compliance rather than a proactive commitment to sustainability. This approach underscores the need for systemic changes to encourage value-based ecological responsibility.

Young Polish entrepreneurs face significant obstacles in adopting sustainable practices:

1. Economic Pressures:

- Limited financial resources make it challenging for SMEs to invest in eco-friendly technologies or infrastructure.
- High upfront costs and uncertain returns on investment deter many businesses from pursuing sustainability initiatives.

2. Regulatory Complexity:

- Inconsistent and ambiguous regulations create confusion and hinder compliance.
- The rapid evolution of environmental standards adds to the burden, especially for smaller businesses with limited administrative capacity.

3. Cultural and Historical Context:

- A historical resistance to external mandates, rooted in Poland's experiences with foreign rule and centralized control, contributes to skepticism toward regulatory-driven sustainability efforts.

4. Knowledge and Communication Gaps:

- Internal communication within companies often fails to cascade ecological values and strategies to all levels of staff.
- Public communication of environmental efforts is minimal, limiting consumer awareness and engagement.

Despite these challenges, examples of successful ecological initiatives provide a roadmap for progress. Large corporations leveraging ESG-aligned financing, such as green

bonds and loans tied to sustainability ratings, demonstrate how environmental responsibility can align with profitability. For instance, companies like PKN Orlen and Philips have successfully issued green bonds or secured loans contingent on sustainability performance.

These practices offer valuable lessons for SMEs:

- **Scalable Solutions:** Simple measures like energy-efficient lighting, waste reduction, and electronic document workflows are cost-effective and relatively easy to implement.
- **Collaborative Efforts:** Partnerships with larger corporations or industry organizations can provide SMEs with resources and expertise to adopt sustainable practices.

To foster a culture of sustainability among young Polish entrepreneurs, several strategies are essential:

1. Education and Awareness:

- Targeted training programs should emphasize the financial and operational benefits of sustainability.
- Workshops, webinars, and e-learning platforms can bridge knowledge gaps and provide practical guidance.

2. Financial Incentives:

- Expanding access to grants, subsidies, and tax breaks can lower the barriers to eco-friendly investments.
- Innovative financing models, such as green loans tailored to SMEs, could encourage wider adoption of sustainable practices.

3. Regulatory Reforms:

- Simplifying and harmonizing environmental regulations would reduce compliance burdens for smaller businesses.
- Clear guidelines and support mechanisms, such as advisory services, can help SMEs navigate regulatory complexities.

4. Cultural Shifts:

- Promoting sustainability as a core value, rather than a regulatory requirement, can foster genuine commitment.
- Leveraging Poland's strong sense of community could encourage collective efforts, such as neighborhood recycling programs or local eco-initiatives.

5. Enhanced Communication:

- Transparent and authentic communication about environmental efforts can build trust and engage consumers.
- Social media campaigns and public reports highlighting successful eco-practices can inspire other businesses to follow suit.

In conclusion, young Polish entrepreneurs demonstrate high awareness of environmental issues but remain primarily driven by profitability and efficiency. Pro-environmental actions are often reactive, motivated by financial incentives or regulatory compliance rather than intrinsic ecological values. This pragmatic approach underscores the need for systemic changes to encourage proactive and value-based sustainability practices.

To align with broader European sustainability goals, Poland must cultivate a new generation of eco-entrepreneurs. By addressing knowledge gaps, providing financial incentives, and promoting cultural shifts, young entrepreneurs can be empowered to integrate sustainability into their core business strategies. Through education, collaboration, and clear communication, the ideal eco-entrepreneur can move from theory to reality, driving both economic growth and environmental stewardship in Poland.

2.4 The Ecological Awareness and Practices of Young Spanish Entrepreneurs

In recent years, the call for sustainability in business practices has grown louder, driven by the urgent need to combat environmental degradation and align with global sustainability goals. In Spain, young entrepreneurs born between 1990 and 2004 are actively navigating this evolving landscape, balancing economic aspirations with ecological responsibilities. As part of the YEE-HUB project, a study was conducted to explore their ecological attitudes, behaviors, and motivations. By integrating literature reviews and survey data, this research offers a comprehensive analysis of the challenges and opportunities young Spanish entrepreneurs face in adopting sustainable practices, while proposing actionable pathways for fostering eco-conscious entrepreneurship.

The literature review provides critical insights into Spain's pro-ecological entrepreneurial environment, highlighting both progress and persistent challenges.

Rising Awareness of Sustainability:

- There is a clear upward trend in awareness regarding sustainability among businesses and consumers alike. Regulatory pressure, consumer demand, and extensive media coverage have all played a role in shaping this awareness.

- Entrepreneurs increasingly view sustainability as a competitive advantage, aligning their strategies with consumer expectations and global goals such as the United Nations' 2030 Agenda.

Challenges for SMEs:

- Small and medium-sized enterprises (SMEs) in Spain encounter significant barriers when trying to implement sustainable practices. Limited financial resources, lack of technical expertise, and high costs associated with eco-friendly technologies often stymie their progress.
- Measuring environmental impact and demonstrating tangible returns on investment are ongoing challenges, leading to hesitancy in fully embracing sustainability.

The Role of Green Marketing:

- Green marketing is a powerful tool for engaging eco-conscious consumers. However, concerns about greenwashing—misleading sustainability claims—underscore the importance of transparency and authenticity.
- Businesses that successfully communicate their environmental commitments build stronger trust and loyalty among consumers.

Market and Legal Conditions:

- Government regulations and shifting market trends act as key drivers of sustainability. However, the complexity of regulatory frameworks and competitive pressures create both opportunities and challenges for entrepreneurs.
- Spain's alignment with European policies, such as the EU Green Deal, has been instrumental in advancing sustainability goals, though localized support and clearer guidelines are needed to enhance their effectiveness.

Examples of Success:

- Companies such as Lush, Mahou San Miguel, and Danone serve as benchmarks for integrating sustainable practices with financial success. Their adoption of circular economy principles and eco-innovation demonstrates the potential for profitability and environmental responsibility to coexist.

Survey Insights: Young Entrepreneurs in Spain

An online survey conducted in September and October 2024 gathered responses from 50 young Spanish entrepreneurs. The data provides a nuanced understanding of their ecological practices, motivations, and challenges.

Pro-Social and Pro-Environmental Actions:

- Respondents reported engaging in diverse sustainability initiatives, such as:
 - Organizing community gardening projects to provide fresh produce.
 - Leading beach clean-ups and tree-planting events.
 - Implementing recycling programs within businesses and adopting sustainable personal habits, such as reducing single-use plastics and using public transportation.

These actions reflect a strong commitment to environmental stewardship, extending beyond professional responsibilities to include personal and community involvement.

Knowledge of Environmental Regulations:

- The respondents exhibited a proactive approach to compliance with environmental regulations. They highlighted adherence to waste management laws, emission limits, and environmental impact assessments as integral to their operations.
- This awareness not only demonstrates their commitment to legal compliance but also underscores their broader dedication to fostering a sustainable environment.

Citizen Behavior:

- Personal actions taken by these entrepreneurs include energy conservation, supporting local farmers, and participating in community clean-up events.
- Their proactive engagement as eco-conscious citizens indicates a holistic approach to sustainability that integrates personal, professional, and community-level commitments.

Policy Recommendations:

- Respondents proposed several initiatives to enhance Spain's environmental policies, including:
 - Introducing mandatory environmental education in schools to cultivate ecological awareness from a young age.
 - Expanding financial incentives for renewable energy adoption.
 - Implementing stricter regulations on single-use plastics.

- Promoting urban reforestation and creating additional green spaces.

Challenges and Opportunities

The survey and literature review highlight several key challenges and opportunities for young Spanish entrepreneurs striving for sustainability:

1. Economic Barriers:

- Limited access to financial resources restricts SMEs' ability to invest in sustainable technologies and practices.
- High initial costs and the uncertainty of return on investment act as significant deterrents for businesses considering eco-friendly solutions.

2. Regulatory Complexity:

- Entrepreneurs face challenges navigating the often complex and inconsistent regulatory frameworks.
- A lack of standardized guidelines further complicates compliance, particularly for smaller businesses with limited administrative capacity.

3. Greenwashing and Consumer Trust:

- The prevalence of greenwashing undermines consumer trust in sustainability claims.
- Transparency and authenticity in marketing are crucial for building credibility and fostering consumer engagement.

Opportunities for Growth:

- Collaborative initiatives between public institutions, private enterprises, and educational organizations can provide entrepreneurs with the resources and expertise needed to advance sustainability efforts.
- Success stories, such as Danone's integration of circular economy practices, serve as inspiration and models for SMEs aiming to align environmental responsibility with profitability.
- Policy reforms, including tax incentives and grants for eco-friendly initiatives, have the potential to significantly lower economic barriers for SMEs.

Pathways to Sustainable Entrepreneurship

To cultivate a robust culture of sustainability among young Spanish entrepreneurs, the following strategies are recommended:

1. Education and Training:

- Develop targeted educational programs that focus on the practical implementation of sustainability practices, emphasizing their financial and ecological benefits.
- Collaborate with universities and training organizations to offer workshops, courses, and resources tailored to the needs of SMEs.

2. Financial Incentives:

- Expand access to financial mechanisms such as green loans, subsidies, and tax breaks to reduce the cost burden of sustainable transitions.
- Encourage public-private partnerships to create innovative financing models that support eco-entrepreneurship.

3. Regulatory Reforms:

- Simplify and standardize environmental regulations to make compliance more accessible and achievable for SMEs.
- Establish advisory bodies to guide businesses in navigating regulatory complexities and aligning their operations with sustainability standards.

4. Collaborative Ecosystems:

- Foster partnerships between public, private, and academic sectors to build ecosystems that support innovation and sustainability.
- Encourage community-driven initiatives, such as urban gardening and reforestation, to promote collective ecological responsibility.

5. Cultural Shifts:

- Position sustainability as a core business value and a source of competitive advantage.
- Launch awareness campaigns that highlight the benefits of sustainability, inspiring both entrepreneurs and consumers to adopt eco-friendly practices.

Young Spanish entrepreneurs are at the forefront of the country's sustainability movement, demonstrating commendable commitment to ecological practices through innovative initiatives and community engagement. Their dual roles as business leaders and eco-conscious citizens reflect a holistic approach to sustainability that encompasses professional

and personal domains. However, significant challenges remain, including economic barriers, regulatory complexities, and the pervasive issue of greenwashing.

By addressing these obstacles through targeted education, financial support, regulatory reforms, and collaborative efforts, Spain can empower its young entrepreneurs to become leaders in sustainable development. These efforts will not only enhance the country's environmental resilience but also contribute to the broader global agenda for a greener and more equitable future. Through continued innovation and dedication, young Spanish entrepreneurs can pave the way for a sustainable economy that balances profitability with environmental responsibility, setting an inspiring example for future generations.

2.5 The Ecological Awareness and Practices of Young Turkish Entrepreneurs

In Turkey, young entrepreneurs born between 1990 and 2004 are contributing to a growing movement towards ecological responsibility in business. As part of the YEE-HUB project, this research aims to explore their attitudes, behaviors, and motivations concerning sustainability. By integrating a detailed literature review and survey findings, this study provides a comprehensive view of the ecological practices of young Turkish entrepreneurs. It highlights both the challenges they face and the opportunities to foster a culture of sustainable entrepreneurship. The results not only reflect local trends but also align with broader European and global sustainability goals.

The literature review offers critical insights into the pro-ecological entrepreneurial landscape in Turkey. It examines various dimensions, including the factors influencing ecological practices, barriers to adoption, and successful case studies.

Increasing Focus on Sustainability:

- A growing number of Turkish entrepreneurs are adopting sustainability as a core value, reflecting a shift in consumer demands and global ecological trends.
- Fields such as renewable energy, sustainable agriculture, and waste management have gained significant traction, opening new opportunities for eco-conscious businesses.

Factors Influencing Pro-Ecological Behaviors:

- Positive factors include financial incentives, increasing consumer demand for eco-friendly products, and advancements in technology such as smart energy systems and recycling innovations.

- Negative factors include high initial costs, limited access to funding, and a lack of infrastructure to support sustainable practices.

Pro-Ecological Behaviors as Consumers and Citizens:

- Entrepreneurs are integrating eco-friendly habits into both their business operations and personal lives. These behaviors include recycling, reducing energy consumption, and promoting sustainability within their communities.

Barriers to Adoption:

- Challenges such as regulatory complexity, lack of awareness about environmental policies, and insufficient technical expertise are prevalent.
- Many entrepreneurs report difficulties in accessing government incentives and navigating the regulatory landscape.

Market and Legal Conditions:

- The Turkish market is witnessing a gradual increase in eco-conscious consumerism. However, regulatory frameworks need to evolve to provide clearer guidelines and better support for green initiatives.

Successful Pro-Ecological Activities:

- Case studies highlight the profitability of integrating sustainability into business models. Initiatives such as community responsibility projects and collaborations with NGOs have shown positive financial and societal impacts.

An online survey conducted in September 2024 gathered responses from 50 young Turkish entrepreneurs. This survey provided valuable data on their ecological attitudes and practices, covering diverse aspects of their professional and personal lives.

Pro-Social and Pro-Environmental Actions:

- Participants reported engaging in a wide range of eco-friendly initiatives, including:
 - Establishing community gardens to provide fresh produce for local families.
 - Organizing workshops on upcycling and sustainable practices.
 - Hosting awareness campaigns in schools to educate children about reducing plastic waste.
 - Partnering with charities to donate a portion of profits to environmental causes.

- These actions reflect a strong commitment to sustainability and a willingness to contribute to societal well-being.

Knowledge of Environmental Regulations:

- Respondents demonstrated awareness of key regulations, such as waste management policies and energy efficiency standards. However, many noted that more accessible resources and clearer guidelines would enhance compliance.
- Some businesses are proactively exceeding regulatory requirements, implementing initiatives like zero-waste operations and the use of biodegradable packaging materials.

Consumer and Citizen Behaviors:

- As consumers, respondents reported prioritizing local and organic products, reducing single-use plastics, and adopting energy-efficient technologies.
- As citizens, they actively participate in community clean-ups, volunteer for environmental NGOs, and use social media platforms to raise awareness about sustainability.
- These behaviors indicate a holistic approach to ecological responsibility, integrating personal and professional commitments to sustainability.

Policy Recommendations:

- Entrepreneurs suggested several initiatives to improve environmental policies in Turkey, including:
 - Introducing standardized recycling programs nationwide.
 - Expanding financial incentives for renewable energy projects.
 - Implementing stricter regulations on industrial emissions and single-use plastics.
 - Promoting urban reforestation and green space development.

Challenges and Opportunities

The study identified several challenges and opportunities for young Turkish entrepreneurs in their journey towards sustainable business practices:

Challenges:

1. Economic Barriers:

- Limited financial resources and high upfront costs deter many entrepreneurs from investing in eco-friendly technologies.
- Access to funding remains a significant challenge, with many respondents citing a need for government support and private sector investment.

2. Regulatory Complexity:

- Entrepreneurs face difficulties navigating Turkey's regulatory framework due to inconsistencies and a lack of clear guidelines.
- The absence of a centralized system for monitoring and enforcing environmental policies further complicates compliance efforts.

3. Knowledge and Awareness Gaps:

- While many respondents exhibit strong ecological awareness, they acknowledge gaps in their understanding of advanced sustainability practices and technologies.
- Educational programs and mentorship opportunities are needed to bridge these gaps.

4. Infrastructure Deficits:

- Insufficient infrastructure, such as recycling facilities and renewable energy grids, hinders widespread adoption of sustainable practices.

Opportunities:

1. Advancements in Green Technology:

- Innovations in renewable energy, waste management, and sustainable agriculture provide significant opportunities for eco-conscious entrepreneurs.
- Investments in smart technologies can enhance operational efficiency and reduce environmental impact.

2. Growing Eco-Consumer Market:

- The increasing demand for eco-friendly products creates new avenues for businesses to innovate and cater to environmentally conscious consumers.
- Sectors such as organic food, natural cosmetics, and eco-friendly packaging are experiencing rapid growth.

3. Collaborative Ecosystems:

- Partnerships with NGOs, educational institutions, and international networks can provide resources, expertise, and support for sustainable initiatives.

- Collaborative efforts can accelerate the adoption of best practices and foster a culture of shared responsibility.

4. Policy Reforms:

- Policymakers have the opportunity to create more supportive frameworks by simplifying regulations, expanding incentives, and investing in green infrastructure.
- Aligning national policies with international standards can enhance Turkey's competitiveness in the global green economy.

Pathways to Sustainable Entrepreneurship

To foster a robust culture of sustainability among young Turkish entrepreneurs, the following strategies are recommended:

1. Education and Training:

- Develop targeted educational programs focusing on practical sustainability practices, including circular economy principles and renewable energy integration.
- Partner with universities and NGOs to offer workshops, certifications, and mentorship opportunities tailored to the needs of young entrepreneurs.

2. Financial Support:

- Expand access to grants, subsidies, and low-interest loans for eco-friendly initiatives.
- Encourage public-private partnerships to create innovative financing models that support sustainable business ventures.

3. Regulatory Reforms:

- Simplify and harmonize environmental regulations to make compliance more accessible and transparent.
- Establish centralized systems for monitoring and enforcing compliance, ensuring accountability across industries.

4. Infrastructure Development:

- Invest in expanding recycling facilities, renewable energy grids, and green transportation networks.

- Promote urban development projects that integrate sustainable design principles, such as energy-efficient buildings and community gardens.

5. Cultural and Community Engagement:

- Launch public awareness campaigns to inspire collective action and highlight the benefits of sustainability.
- Foster a culture of community-driven initiatives, encouraging local collaborations to address environmental challenges.

Young Turkish entrepreneurs are emerging as key players in advancing sustainability, integrating ecological practices into their businesses and personal lives. Their efforts reflect a strong commitment to addressing environmental challenges while contributing to societal well-being. Despite facing significant barriers, including economic constraints, regulatory complexities, and infrastructure deficits, their innovative spirit and dedication remain unwavering.

By addressing these challenges through targeted education, financial incentives, policy reforms, and collaborative efforts, Turkey can empower its young entrepreneurs to lead the transition towards a green economy. These initiatives will not only enhance the country's environmental resilience but also position Turkey as a leader in the global sustainability movement. Through determination, creativity, and collective action, young Turkish entrepreneurs have the potential to build a future that balances economic growth with ecological responsibility.

3. Comparative cross-country analysis

This report provides a comparative analysis of ecological awareness and practices among young entrepreneurs in Germany, Italy, Poland, Spain, and Turkey. By examining the unique challenges, motivations, and opportunities faced by these entrepreneurs, the report sheds light on the integration of sustainability into entrepreneurial ventures across varying cultural, economic, and regulatory contexts.

Across all five countries, young entrepreneurs exhibit a growing awareness of sustainability. However, the degree of awareness and its conversion into actionable practices reflect notable disparities:

- **Germany:** Generational values strongly influence ecological awareness among young entrepreneurs. Millennials and Gen Z view sustainability not only as a moral imperative but as a core element of their business models. This is evidenced by widespread compliance with environmental regulations and proactive measures to integrate sustainability into decision-making.
- **Italy:** Ecological awareness is largely driven by consumer demand and societal pressures. Young entrepreneurs perceive sustainability as essential for long-term value creation and corporate responsibility. This perspective aligns with Italy's cultural emphasis on environmental preservation and high-value craftsmanship.
- **Poland:** While ecological awareness is increasing, it remains largely reactive. Entrepreneurs often prioritize financial stability and profitability over sustainability, relegating ecological values to a secondary role. This highlights a gap between awareness and practice.
- **Spain:** Rising awareness of sustainability is catalyzed by regulatory and market pressures. Entrepreneurs increasingly recognize ecological practices as competitive advantages, leading to innovative responses to consumer demands and environmental challenges.
- **Turkey:** Awareness is steadily growing, particularly in emerging sectors like renewable energy and waste management. Financial incentives and evolving consumer preferences serve as critical drivers for ecological behavior among young entrepreneurs.

This is presented in Table 1 below:

Aspect	Germany	Italy	Poland	Spain	Turkey
Awareness	High awareness of environmental issues and compliance with regulations.	Driven by consumer demand and societal pressures.	High awareness but primarily reactive actions driven by cost-saving or compliance.	Rising awareness due to regulatory and market pressures.	Growing awareness with focus on sustainability in renewable energy and waste management.
Motivations	Generational values (millennials)	Long-term value creation and	Profit-driven, ecological	Competitiveness and alignment	Consumer demands and

	and Gen Z) align with sustainability.	corporate responsibility.	values secondary.	with global goals.	financial incentives drive behavior.
Barriers	Financial resources and regulatory complexity.	High initial costs and regulatory hurdles.	Financial constraints and limited knowledge.	Financial and technical barriers for SMEs.	Regulatory inconsistencies and infrastructure deficits.

Table 1: Ecological awareness across countries

The extent to which young entrepreneurs implement sustainability in their businesses highlights disparities in priorities, capabilities, and resources:

- **Germany:** Over 66% of entrepreneurs integrate environmental considerations into their decision-making processes. Common initiatives include recycling programs, renewable energy adoption, and participation in reforestation efforts.
- **Italy:** Around 60% of young entrepreneurs adopt eco-strategies such as reducing plastic use and promoting sustainable supply chains. Their motivations often link sustainability with long-term profitability and corporate resilience.
- **Poland:** Basic sustainable practices, such as energy-efficient lighting and waste segregation, dominate. However, more advanced measures like partnerships with sustainable suppliers remain limited due to financial and knowledge constraints.
- **Spain:** Entrepreneurs engage in both community-focused initiatives, such as urban gardening and beach clean-ups, and business-oriented sustainability measures, indicating a balanced approach to ecological practices.
- **Turkey:** A strong emphasis on community-driven initiatives characterizes Turkey's young entrepreneurs. Activities such as upcycling workshops and zero-waste operations are gaining traction, with biodegradable packaging and localized solutions emerging as key trends.

This data is presented in Table 2 below:

Aspect	Germany	Italy	Poland	Spain	Turkey
Pro-Social Actions	Recycling, reforestation events, and eco-campaigns.	Recycling, reduced plastic use, and sustainable supply chains.	Basic actions (e.g., waste segregation, energy efficiency).	Beach clean-ups, community gardening, recycling programs.	Community gardening, upcycling workshops, and school campaigns.
Eco-Friendly Business	66.5% incorporate sustainability into decision-making.	60% implement eco-strategies (e.g., recycled materials).	Limited adoption of advanced eco-practices (<6%).	Integrated eco-friendly practices into community efforts.	Eco-initiatives such as zero-waste operations and biodegradable packaging.

Table 2: Implementation of ecological practices

Despite their enthusiasm for sustainability, young entrepreneurs face significant barriers:

- **Financial Constraints:** High initial costs and limited access to green financing are pervasive challenges. German and Italian SMEs struggle with securing venture capital, while Turkish and Polish entrepreneurs cite insufficient subsidies and incentives.
- **Regulatory Complexity:** Inconsistent and complex environmental regulations hinder progress. German and Spanish entrepreneurs navigate intricate regulatory landscapes, while Turkish and Polish counterparts face evolving and often ambiguous standards.
- **Knowledge Gaps:** Entrepreneurs, particularly in Poland and Turkey, lack access to advanced sustainability practices and expertise. Educational initiatives and accessible resources are essential to address this gap.

This is presented in the Table 3 below:

Aspect	Germany	Italy	Poland	Spain	Turkey
Financial Barriers	SMEs struggle with high costs and limited venture capital.	Insufficient funds for green technologies.	High costs deter investment in advanced practices.	SMEs face economic constraints and high initial costs.	Limited funding and access to green financing options.

Regulatory Challenges	Complex regulatory frameworks create hurdles.	Inconsistent policies and bureaucratic delays.	Ambiguous regulations hinder SMEs.	Complexity in compliance, especially for small businesses.	Inconsistent policies and lack of centralized enforcement.
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Table 3: Economic and Regulatory Challenges

Cultural attitudes and consumer behavior significantly influence ecological practices:

- **Germany:** Deeply embedded cultural values of sustainability enable green startups to leverage consumer trust, driving ecological innovation.
- **Italy:** Eco-conscious consumers, especially among younger generations, are willing to pay premiums for sustainable products, creating pressure for businesses to adopt greener practices.
- **Poland:** While price and quality dominate consumer priorities, eco-friendliness remains secondary, limiting market-driven sustainability efforts.
- **Spain:** Concerns about greenwashing have increased demand for transparency, encouraging entrepreneurs to clearly communicate their ecological commitments.
- **Turkey:** A growing interest in local, organic, and sustainable products is shaping entrepreneurial strategies, with a focus on catering to eco-conscious markets.

This is presented in the Table 4 below:

Aspect	Germany	Italy	Poland	Spain	Turkey
Consumer Role	Consumers drive demand for green startups.	Consumers willing to pay premium for eco-friendly goods.	Price and quality outweigh eco-friendliness in decisions.	Consumers value transparency; greenwashing is a concern.	Consumers prioritize organic, local, and sustainable products.
Cultural Shifts	Strong integration of sustainability into values.	Cultural shift toward eco-responsibility.	Resistance to regulatory mandates limits shift.	Public campaigns and success stories promote change.	Community-driven initiatives fostering ecological awareness.

Table 4: Consumer behaviour and cultural shifts

Finally, the study shows knowledge gaps in sustainability practices persist across Germany, Italy, Poland, Spain, and Turkey, though the nature of these gaps and proposed educational solutions vary. German SMEs face limitations in advanced eco-practices, which are addressed through workshops, certifications, and networking events. In Italy, practical knowledge of eco-strategies remains restricted, prompting partnerships with universities and specialized training programs. Poland's reliance on informal sources for environmental knowledge underscores the need for structured webinars and e-learning platforms. Spain identifies technical expertise as a critical need, advocating for school-level environmental education to foster early awareness. Meanwhile, Turkish entrepreneurs grapple with understanding advanced sustainability technologies, leading to collaborations with NGOs and institutions to deliver targeted workshops. These tailored initiatives highlight the importance of education in bridging the knowledge divide and promoting effective sustainability practices.

This comparative analysis highlights the shared commitment to sustainability among young entrepreneurs in Germany, Italy, Poland, Spain, and Turkey while emphasizing the diverse approaches and challenges shaped by cultural, economic, and regulatory contexts. Germany's leadership in integrating sustainability into business models, Italy and Spain's consumer-driven eco-innovation, and Poland and Turkey's emerging community-driven initiatives underscore the varied paths toward ecological entrepreneurship.

4. Recommendations and Opportunities

To overcome the complex barriers and maximize the numerous opportunities associated with sustainability, implementing tailored strategies is essential. These strategies must encompass education, financial incentives, regulatory reforms, collaborative ecosystems, and cultural shifts, each uniquely adapted to specific contexts to ensure widespread and effective engagement.

Education and training are foundational to fostering a sustainable future. By developing targeted programs that focus on practical sustainability practices, such as circular economy principles and renewable energy solutions, stakeholders can build competence in addressing pressing environmental challenges. Collaborating with universities and NGOs offers a way to enhance these educational efforts through workshops, certifications, and mentorships. Tailoring these initiatives to the unique needs of individual countries ensures relevance and effectiveness, bridging knowledge gaps and equipping participants with actionable skills.

Financial incentives play a critical role in reducing the economic barriers to adopting sustainable practices. Expanding access to green loans, grants, and subsidies alleviates financial burdens, particularly for small and medium-sized enterprises (SMEs), which often lack the resources to invest in eco-friendly innovations. Public-private partnerships can further enhance these efforts by driving the development of innovative financing models that support eco-entrepreneurship. These collaborations not only unlock new funding avenues but also create a shared sense of responsibility among diverse stakeholders.

Regulatory reforms are equally crucial in fostering a conducive environment for sustainability. Simplifying and harmonizing environmental regulations can significantly ease compliance, especially for SMEs that may lack the administrative capacity to navigate complex legal frameworks. Establishing centralized advisory services provides businesses with the guidance needed to understand and meet regulatory requirements efficiently. Such measures reduce friction and encourage broader participation in sustainable initiatives.

The development of collaborative ecosystems offers another powerful mechanism for promoting sustainability. Partnerships between government, academia, and the private sector can create innovation hubs where new ideas and technologies flourish. Supporting community-driven initiatives, such as urban reforestation and waste reduction projects, ensures that sustainability efforts resonate at the grassroots level. These initiatives build social capital and empower communities to contribute meaningfully to ecological well-being.

Cultural shifts are indispensable for embedding sustainability into the fabric of society. Promoting sustainability as a core business value through awareness campaigns and success stories fosters a cultural environment where ecological responsibility is celebrated. Leveraging cultural attitudes to inspire collective action further strengthens these efforts, as individuals and organizations alike come to view sustainability not as an obligation but as an opportunity for growth and transformation.

Possible solutions for partner countries have been presented in Table 5 below. Please acknowledge the following:

Aspect	Germany	Italy	Poland	Spain	Turkey
Education	Expand mentorship and training for SMEs.	Tailored workshops and certifications.	Practical, financial-focused education needed.	Introduce environmental education in schools.	More mentorship and training collaborations with NGOs.

Financial Support	Streamlined access to green loans and subsidies.	Green loans, grants, and subsidies proposed.	Targeted grants and tax breaks essential.	Green loans and public-private partnerships.	Expand low-interest loans and subsidies.
Regulatory Reforms	Simplify and standardize policies for SMEs.	Reduce complexity and harmonize policies.	Clear guidelines and advisory support needed.	Standardize regulations for easier compliance.	Centralized regulatory monitoring recommended.
Collaboration	Innovation hubs for startups and established firms.	Public-private-educational partnerships proposed.	Encourage resource-sharing collaborations.	Build ecosystems for community-driven projects.	Encourage NGO-business partnerships.

Table 5: Recommendations for partner countries

In conclusion, overcoming barriers to sustainability and maximizing its opportunities require a multi-faceted approach tailored to specific needs and contexts. By investing in education and training, expanding financial incentives, reforming regulations, fostering collaboration, and driving cultural change, societies can create a robust framework for sustainable development. These strategies not only address immediate challenges but also lay the foundation for a resilient and thriving future. Addressing challenges through targeted education, financial support, regulatory reforms, and collaborative networks will empower these nations' young entrepreneurs to spearhead sustainable transitions. By fostering an environment conducive to ecological innovation, these efforts will enhance environmental resilience and position these countries as global leaders in sustainable entrepreneurship, bridging the gap between profitability and ecological responsibility.

5. Comparative Analysis of Eco-Entrepreneurial Characteristics Across Five Countries

Eco-entrepreneurship embodies principles that prioritize environmental sustainability, innovation, and ethical operations. This analysis examines the relative importance of eight key eco-entrepreneurial characteristics across Spain, Germany, Poland, Turkey, and Italy, based on

national surveys and reports. These characteristics include environmental and social awareness, innovation and openness to change, ability to collaborate and build relationships, strategic thinking, resilience to take risks, adaptability, transparency, and high ethics in operations. Each country's unique emphasis reflects its socio-economic and regulatory context.

Spain

In Spain, **environmental and social awareness** ranks as the most important characteristic of eco-entrepreneurs. This is demonstrated by community-driven initiatives such as beach clean-ups, tree planting, and waste reduction programs. Innovation also plays a significant role, with Spanish entrepreneurs exploring ways to align profitability with sustainability. Collaboration is evident in community-based projects that bring together diverse stakeholders.

Strategic thinking is gradually gaining prominence, but its uneven application highlights the need for further development. While Spanish entrepreneurs show some **resilience to take risks**, high costs often hinder their efforts. **Transparency** is identified as a critical issue due to concerns about “greenwashing,” emphasizing the need for authentic and clear communication. Adaptability to changing regulations and consumer demands is present but less pronounced. Lastly, **high ethics in operations** is reflected in community engagement, though it is not a dominant theme.

Germany

Germany prioritizes **strategic thinking**, with 66.5% of young entrepreneurs incorporating long-term ecological considerations into their planning. **Environmental and social awareness** is deeply integrated into decision-making, supported by widespread acknowledgment of the ecological impact of business activities. Innovation is also critical, with green startups and technologies leading the way, though financial barriers remain a challenge.

Transparency is highly valued, with an emphasis on clear environmental impact reporting. Collaboration is facilitated through sustainability innovation hubs, which foster partnerships between businesses and stakeholders. While entrepreneurs exhibit a proactive mindset, financial constraints limit their **resilience to take risks**. Adaptability is evident in the integration of new technologies, while **high ethics in operations** aligns with societal and regulatory pressures, though it ranks lower in importance compared to other characteristics.

Poland

In Poland, **environmental and social awareness** is often driven by compliance with regulations rather than intrinsic motivation. Strategic thinking is limited, as financial priorities

overshadow long-term ecological planning. Adaptability is primarily reactive, with businesses adjusting to new regulations rather than proactively innovating.

High ethics in operations is recognized but remains secondary to economic and regulatory concerns. Entrepreneurs demonstrate limited **resilience to take risks** due to financial insecurities. Transparency is notably low, with only 3% of social media content highlighting green activities. Collaboration exists but is not strongly emphasized, and **innovation and openness to change** is primarily driven by cost-saving incentives rather than ecological commitments.

Turkey

Turkey places significant emphasis on **environmental and social awareness**, as seen in widespread community projects and ecological initiatives. Innovation ranks highly, with entrepreneurs adopting zero-waste initiatives and biodegradable materials. Collaboration is evident through international networks that share best practices.

Adaptability is a key strength, with entrepreneurs demonstrating flexibility in adopting sustainable technologies. Despite market and regulatory challenges, Turkish entrepreneurs show **resilience to take risks**, further supported by efforts to promote transparency through environmental compliance. **High ethics in operations** is evident in sustainable sourcing and community-focused initiatives. Strategic thinking is present but not as strongly emphasized as in other countries.

Italy

Italy's eco-entrepreneurial landscape is characterized by **environmental and social awareness**, driven by consumer demand and global sustainability goals. Innovation is prominent, particularly in renewable energy and circular economy sectors. Collaboration across public, private, and educational sectors plays a crucial role in fostering sustainable practices.

Strategic thinking aligns with the EU Green Deal and national recovery plans, reflecting Italy's commitment to long-term ecological goals. Transparency is increasingly demanded by consumers, prompting businesses to adopt clearer environmental reporting practices. **High ethics in operations** is integral to circular economy practices and consumer trust. Entrepreneurs demonstrate adaptability through the adoption of green technologies, though **resilience to take risks** is limited by the high upfront costs associated with sustainable initiatives.

Comparative Summary

Across the five countries, **environmental and social awareness** and **innovation and openness to change** emerge as universally critical characteristics of eco-entrepreneurs. Spain and Turkey highlight community-driven initiatives, while Germany and Italy emphasize long-term strategic planning and alignment with global sustainability goals. Transparency is particularly valued in Germany and Italy, where clear communication of environmental practices is a priority. Poland, by contrast, exhibits lower transparency and a more compliance-driven approach to eco-entrepreneurship.

Adaptability and collaboration vary in importance, with Turkey and Italy demonstrating strong collaborative efforts, while Poland and Spain lag behind. Resilience to take risks is a common challenge across countries, often constrained by financial and regulatory barriers. Finally, **high ethics in operations** is reflected to varying degrees, with Italy and Turkey showing the strongest alignment between ethical practices and sustainable goals.

This comparative analysis underscores the need for tailored strategies to support eco-entrepreneurs, addressing country-specific challenges while leveraging shared strengths to promote a sustainable global economy.

The above has been summarized in Table below:

Characteristic	Spain	Germany	Poland	Turkey	Italy
Environmental and Social Awareness	Strong focus on community-driven initiatives such as clean-ups and tree planting.	Deeply integrated into decision-making and strategic development.	Compliance-driven rather than intrinsically motivated.	Notable emphasis on community projects and awareness campaigns.	Driven by consumer demand and global sustainability goals.
Innovation and Openness to Change	Emphasis on aligning sustainability with profitability, though challenges exist.	Prominence of green startups and technologies, but financial barriers limit adoption.	Adoption often stems from cost-saving incentives rather than ecological goals.	Focus on innovative practices such as zero-waste initiatives and biodegradable materials.	Prominent in sectors like renewables and circular economy initiatives.
Ability to Collaborate and Build Relationships	Community-oriented collaboration highlighted in projects.	Encouraged through sustainability innovation hubs and networks.	Collaboration is present but not strongly emphasized.	Significant engagement in international collaborations and networks.	Collaboration across public, private, and educational sectors is a priority.

Ability to Think Strategically	Growing focus, but implementation remains uneven.	A central characteristic, evident in long-term planning approaches.	Overshadowed by immediate financial concerns.	Moderate emphasis on strategic planning for sustainable practices.	Aligned with policies like the EU Green Deal and national recovery plans.
Resilience to Take Risks	Some willingness, but hindered by financial costs.	Limited by financial constraints despite awareness and intentions.	Avoidance due to economic insecurity.	Resilience demonstrated despite regulatory and market challenges.	Limited by high upfront costs for sustainable practices.
Ability to Adapt to Changing Conditions	Moderate adaptability to new regulations and demands.	Adaptability shown in integration of advanced technologies.	Reactive rather than proactive adaptation.	Flexibility in adopting sustainable technologies and approaches.	Adoption of green technologies demonstrates adaptability.
Transparency of Behavior	Concerns about greenwashing highlight the need for clear communication.	Clear environmental impact reporting is prioritized.	Low levels of transparency; limited green communication.	Promoted through compliance and clear environmental practices.	Increasingly demanded by consumers and promoted by businesses.
High Ethics in Operations	Demonstrated through community engagement.	Ethical alignment with societal and regulatory expectations.	Ethics are recognized but take a back seat to financial priorities.	Sustainable sourcing and community-focused ethics are visible.	Ethics are integral to circular economy practices and consumer trust.

Table 6: Grouped Eco-Entrepreneurial Characteristics by Country

6. Final conclusions

The final conclusions of the joint national research report encapsulate the multifaceted insights gathered through comprehensive exploration of ecological awareness and practices among young entrepreneurs across Germany, Italy, Poland, Spain, and Turkey. The overarching goal of this research was to delineate how these young individuals navigate the complex intersection of entrepreneurship and sustainability, identifying barriers, opportunities, and actionable strategies to foster sustainable development across diverse contexts.

This report underscores a shared commitment to sustainability among young entrepreneurs, reflected in their innovative efforts and community engagement. Despite varying degrees of

progress across the five nations, commonalities in the challenges and opportunities encountered highlight the universal significance of tailored strategies. Financial constraints, regulatory complexities, and knowledge gaps emerge as recurrent obstacles, underscoring the need for systemic reforms and targeted support mechanisms.

Germany exemplifies a nation where generational values and cultural integration of sustainability significantly shape entrepreneurial practices. Italian entrepreneurs demonstrate a strong consumer-driven approach, linking sustainability with long-term profitability. In contrast, Polish entrepreneurs often view ecological initiatives as reactive measures rather than proactive strategies, reflecting economic and cultural constraints. Spanish entrepreneurs display a balanced integration of business and community-focused sustainability efforts, driven by regulatory and market pressures. Meanwhile, Turkish entrepreneurs' innovative approaches and community-driven initiatives, despite significant barriers, highlight their commitment to advancing ecological practices.

This comparative analysis emphasizes that overcoming barriers to sustainability requires a multifaceted approach, integrating education, financial incentives, regulatory reforms, collaborative ecosystems, and cultural shifts. Education plays a pivotal role, bridging knowledge gaps through targeted training programs and mentorship tailored to specific national contexts. Financial incentives, such as green loans and subsidies, alleviate the economic burden of adopting sustainable practices, particularly for small and medium-sized enterprises. Simplifying regulatory frameworks and offering centralized advisory services facilitate compliance and encourage broader participation. Collaborative ecosystems foster innovation and community engagement, leveraging partnerships between government, academia, and the private sector. Lastly, promoting cultural shifts ensures that sustainability becomes embedded in societal values, inspiring collective action and long-term commitment.

The findings also highlight the critical role of consumer behavior and cultural attitudes in shaping entrepreneurial responses to sustainability. Germany's deeply ingrained cultural values enable green startups to thrive, while Italy and Spain leverage eco-conscious consumer demand to drive innovation. Poland and Turkey, though facing more significant challenges, exhibit potential for rapid progress through systemic reforms and targeted interventions.

In conclusion, this report advocates for a holistic and adaptive approach to sustainability, recognizing the unique socio-economic and cultural contexts of each country. By addressing barriers and leveraging opportunities through collaborative efforts, young entrepreneurs can spearhead the transition toward a sustainable future. The collective insights and

recommendations provided herein lay the groundwork for fostering ecological entrepreneurship, ensuring that economic growth and environmental responsibility coexist harmoniously. This endeavor, driven by innovation, education, and cultural transformation, positions the participating nations as global leaders in sustainable development and serves as an inspiring model for future generations.

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