

Fostering Entrepreneurship Among Millennials: A Systematic Literature Review of Trends, Challenges, and Opportunities

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Keywords	Abstract
entrepreneurship, entrepreneurial, millennials entrepreneurship, entrepreneurship in various generation, youth entrepreneur	Entrepreneurship is a key driver of economic growth and innovation, with millennials—currently the largest workforce demographic—holding significant entrepreneurial potential. However, they face unique challenges in launching and scaling ventures. This study conducts a systematic review of the literature on trends, challenges, and opportunities in fostering entrepreneurship among millennials. By analyzing prior research, the study aims to enhance understanding of how to support millennial entrepreneurs and identify areas for further investigation to improve their success. The study utilizes search keywords such as "entrepreneurship," "millennials," and "generation," mapping existing research on millennial entrepreneurship, including peer-reviewed journal sources. Six objectives are addressed: (1) examining terminology used in millennial entrepreneurship research, (2) explaining the context of previous studies, (3) identifying key variables influencing millennial entrepreneurial outcomes, (4) classifying research by methodological approaches, (5) discussing research findings and conclusions, and (6) identifying gaps in the literature and practical implications for future research. This research highlights that millennial entrepreneurship is shaped by personal factors such as values and self-efficacy, social factors including cultural norms and social networks, and contextual factors like education, digital technologies, and public policies.



INTRODUCTION

The phenomenon of millennial entrepreneurship has become a prominent focus in the global discourse on economic development and social transformation. The millennial generation, generally born between 1981 and 1996, is recognized as an age cohort that grew up alongside the development of digital technology and rapid shifts in the employment landscape. These characteristics render them a distinctive population adept at adopting, modifying, and creating novel business models that are more flexible, innovative, and sustainable. However, although this generation is frequently associated with a spirit of innovation and a strong interest in entrepreneurship, empirical studies have shown mixed results regarding their entrepreneurial intentions and behaviors. Several studies indicate a low participation rate of millennials in new venture creation despite their high educational attainment and technological exposure. Conversely, other research underscores the considerable potential of this generation in advancing social entrepreneurship, digital entrepreneurship, and a pronounced orientation towards sustainability values.

Entrepreneurship has long been regarded as a critical driver of economic growth, job creation, and social innovation. In the contemporary era, increasing attention is given to entrepreneurship among younger cohorts, particularly millennials and Generation Z, in response to ongoing digital transformation and global market dynamics (Gosztonyi, 2023).

The millennial generation, typically born between 1981 and 1996, exhibits distinctive traits compared to previous cohorts, including higher levels of education, broader access to technology, and more individualistic values (Struckell, 2019). Nonetheless, these attributes do not necessarily translate into higher entrepreneurial engagement; in some contexts, millennials demonstrate lower participation rates in entrepreneurship (Struckell, 2019; Zhang & Acs, 2018).

Several studies emphasize the influence of demographic factors and personal values on entrepreneurial intentions and behaviors among millennials. Ettis (2021) found that values such as self-direction and social affiliation significantly contribute to entrepreneurial intentions, with notable gender variations. Meanwhile, Nadlifatin et al. (2022) reveal that the intention to seek employment via social media—particularly within multi-level marketing schemes—is influenced by attitudes, subjective norms, and perceived ease of technology use, aligning with the Theory of Planned Behavior and the *Technology Acceptance Model*.

In the realm of social entrepreneurship, Zhang et al. (2020) highlight the critical role of social entrepreneurial self-efficacy as a mediator between a proactive personality and concern for social issues, influencing social entrepreneurial intentions. Cultural context and life satisfaction also serve as important moderators affecting this relationship.

Moreover, generational roles within corporations are a key focus in corporate venturing studies. Guerrero et al. (2019) demonstrate that younger generations, especially Gen Y, are more likely to engage in internal innovation activities, driven by diverse human capital and positive entrepreneurial attitudes.

Psychological constructs such as hope and attitudes toward entrepreneurship significantly affect entrepreneurial intentions. Parrales et al. (2022) establish that hope positively influences entrepreneurial intentions, with significant generational differences observed. Contextual factors, including the entrepreneurial ecosystem in higher education (Kapil et al., 2021) and environmental awareness (Genoveva & Tanardi, 2022), act as catalysts for eco-conscious entrepreneurial intentions and behaviors among millennials.

Regarding competency frameworks, Šebesto et al. (2021) assert that entrepreneurial competency models in Eastern Europe reveal divergent approaches—motivation-oriented in Romania and performance-focused in the Czech Republic—which could be adapted to better align with the characteristics of younger generations to enhance entrepreneurial readiness.

Narrative approaches also enrich understanding of entrepreneurial behavior. Yiga et al. (2023) employ a narrative methodology to identify entrepreneurial work behaviors among millennials in Uganda, underscoring the importance of generational personas, personal initiative, and behavioral change as critical indicators.

Consequently, diverse theoretical perspectives and empirical findings converge on the understanding that millennial entrepreneurship is shaped by a multifaceted interplay of personality traits, personal values, technology attitudes, social norms, self-efficacy, and the prevailing entrepreneurial ecosystem (Nafisah et al., 2023; Handayani et al., 2023). A cross-

disciplinary and cross-cultural lens is essential for comprehensively understanding and fostering wider entrepreneurial participation within this demographic.

Previous research by Struckell (2019) highlights unique millennial characteristics, including advanced education and greater technology access, while noting these do not necessarily correlate with increased entrepreneurial activity. Although this study provides valuable insights into generational disparities, it falls short of fully exploring the underlying causes whereby millennials, despite resource availability, often exhibit lower entrepreneurial participation. Additionally, it overlooks contextual influencers such as cultural norms and the role of social entrepreneurship, which are vital to comprehending millennial entrepreneurial intentions.

Similarly, Zhang and Acs (2018) emphasize the significance of values like social affiliation and self-direction in shaping entrepreneurial intentions. However, their analysis does not deeply investigate the complexities of these constructs nor account for variations in self-efficacy across different cultural and social contexts. Moreover, the study's focus on individual attributes neglects the broader environmental influences, such as the entrepreneurial ecosystem, which may substantially impact entrepreneurial engagement.

The objective of this study is to analyze the multifactorial determinants influencing millennial entrepreneurship, including personal values, social norms, and the entrepreneurial ecosystem, with a particular emphasis on social and digital entrepreneurship. The findings provide valuable insights for policymakers, educators, and business stakeholders aiming to cultivate an enabling environment that supports millennial entrepreneurs. By addressing gaps in previous research, this study contributes to the academic literature and offers actionable recommendations for future research and practice to encourage more inclusive entrepreneurial participation among millennials.

RESEARCH METHOD

Through the *Systematic Literature Review* (SLR) approach, this article aims to identify, evaluate, and synthesize empirical findings from the past decade related to millennial entrepreneurship. The study encompasses a broad range of dimensions, including personal factors such as personal values, self-efficacy, and expectations, as well as contextual aspects like the role of the higher education ecosystem, the influence of digital technology, and economic pressures.

The review not only examines the diversity of methodological approaches and theoretical frameworks applied—such as the *Theory of Planned Behavior*, *Social Cognitive Theory*, and *Entrepreneurial Self-Efficacy*—but also assesses conceptual gaps and opportunities for further research. The primary focus lies on the variation in millennial entrepreneurial characteristics across countries, their engagement in social and digital business models, and the dynamics of cross-generational comparisons involving Generations X and Z.

By presenting a comprehensive synthesis of 20 selected scientific articles, this study is expected to contribute to the development of education policies, incubation programs, and entrepreneurial intervention models that are more tailored to the millennial generation. Additionally, the findings of this review are anticipated to serve as an academic reference for

understanding the directions and challenges faced by younger-generation entrepreneurship within an evolving global and local context.

RESULTS AND DISCUSSION

Recent studies have shown an increase in interest in the exploration of entrepreneurial characteristics, motivations, and behaviors across generations, particularly Millennials and Z. Many studies have focused on differences in entrepreneurial characteristics between generations, such as those examined by Gosztonyi (2023) in Hungary and Dreyer & Stojanová (2022) in Germany, as well as the influence of age and generation on entrepreneurial tendencies and types as in the study of Zhang & Acs (2018). On the other hand, factors that affect entrepreneurial intentions are also widely studied, both from the aspects of personal values, expectations, attitudes, social norms, to learning experiences and entrepreneurial orientation. For example, Ettis (2021) research explored the role of personal and gender values in shaping Generation Y's entrepreneurial intentions, while Parrales et al. (2022) looked at the influence of cross-generational expectations and attitudes in Guayaquil.

Some studies also specifically highlight the intentions of social entrepreneurship, such as research by Handayani et al. (2023) and Zhang et al. (2020), which examined the influence of internal and cross-country factors on the interest of young generations in building social enterprises. In addition, aspects of innovation and digital technology are of concern, especially how online learning and social media encourage millennial entrepreneurship, as expressed by Hindrawati et al. (2023) and Nadlifatin et al. (2022). In the context of organizations and the world of work, Prihadi et al. (2021) examined the influence of work pressure and commitment on millennials' desire to leave, while Yiga et al. (2023) analyzed entrepreneurial behavior in the workplace.

Specifically in a regional context, the research also explores the influence of the geographical and institutional environment on entrepreneurial intentions and behaviors. For example, Poplavskaya & Andreevna (2023) discuss Russian students' perceptions of future jobs, and Kapil et al. (2021) examine the role of higher education institutions in building an entrepreneurial ecosystem post-campaign Startup India. In Indonesia, research by Genoveva & Tanardi (2022) and Nafisah et al. (2023) highlights the importance of environmental awareness and religious fervor in shaping millennial entrepreneurial behavior. Meanwhile, the Struckell study (2019) pays attention to structural constraints such as debt that hinder the level of entrepreneurship of millennials despite having higher education.

Overall, these studies reflect an increasingly complex and multidimensional understanding of the entrepreneurial dynamics of the younger generation, which is influenced by individual character, social values, technology, education, and geographical and cultural contexts. For more details, it is illustrated in table 1 below.

Table 1. Research Question in Articles

Authors	Year	Research Question
Gosztonyi	2023	How do entrepreneurial characteristics differ across Generations X, Y, and Z in Hungary?
Poplavskaya & Andreevna	2023	What factors influence Russian students' perspectives on future jobs across regions?
Nafisah et al.	2023	How do entrepreneurial spirits influence the success of Muslim millennial SMEs?
Handayani et al.	2023	What factors influence social entrepreneurial intentions among Millennials and Gen Z in Indonesia?
Yiga et al.	2023	How do millennial entrepreneurs exhibit entrepreneurial behaviors at work in Uganda?
Hindrawati et al.	2023	How does innovative millennial entrepreneurship mediate the effect of cyber learning on business performance?
Nadlifatin et al.	2022	What factors influence millennials' intention to pursue jobs in MLM via social media?
Parrales et al.	2022	How do hope and attitude influence entrepreneurial intention across generations in Guayaquil?
Dreyer & Stojanová	2022	What are the entrepreneurial motivations and differences between German Generation Y and Z?
Genoveva & Tanardi	2022	How do green awareness and knowledge impact millennials' green entrepreneurial behavior in Indonesia?
Zhang et al.	2020	What are the predictors of millennials' social entrepreneurial intention across countries?
Prihadi et al.	2021	How do mattering, commitment, and entrepreneurial orientation impact millennial turnover intention under stress?
Ettis	2021	How do personal values influence Generation Y's entrepreneurial intentions, and how does gender moderate this relationship?
Šebesto et al.	2021	What competencies do millennial students and entrepreneurs value across Czechia and Romania?
Kapil et al.	2021	What factors in HEIs contribute to developing an entrepreneurial ecosystem post-Startup India campaign?
Chaudhry et al.	2021	How do familiarity with globalization, attitudes, and social norms influence Omani youths' international entrepreneurship intention?
Hamdi et al.	2021	How do entrepreneurial orientation and knowledge sharing differ between Gen Y and Z in venture creation?
Struckell	2019	Why do millennials show low entrepreneurship rates despite high education levels and what role does debt play?
Guerrero et al.	2019	How do generational cohorts impact determinants and outcomes of corporate venturing?
Zhang & Acs	2018	How do age and generation influence entrepreneurial propensity and types of entrepreneurs in the U.S.?

Various previous studies have shown the diversity of research contexts regarding entrepreneurship of the younger generation, especially Millennials and Generation Z, in various parts of the world. In Asia, research in Indonesia has focused on millennial entrepreneurial interests and behaviors, such as interest in social entrepreneurship (Handayani et al., 2023), online learning that encourages innovation (Hindrawati et al., 2023), and the use of social media in MLM business marketing (Nadlifatin et al., 2022). The issue of sustainable entrepreneurship was also raised through a study on green entrepreneurship (Genoveva & Tanardi, 2022), while aspects of entrepreneurship orientation and knowledge sharing were examined by Hamdi et al. (2021). In Malaysia, the focus is on millennial work pressure and intention to change jobs (Prihadi et al., 2021) as well as entrepreneurial spirit in young Muslim

MSMEs (Nafisah et al., 2023). In India, Kapil et al. (2021) evaluated the entrepreneurial ecosystem in universities after a national startup campaign, while in Oman, attention was paid to international entrepreneurial intentions among youth (Chaudhry et al., 2021).

In the US, studies in the US highlight the low level of entrepreneurship among millennials (Struckell, 2019) as well as differences in entrepreneurial characteristics between generations (Zhang & Acs, 2018). In Latin America, particularly in Guayaquil, Ecuador, Parrales et al. (2022) examined the influence of expectations and attitudes on entrepreneurial intentions. In Africa, research in Tunisia examined the influence of personal values on Gen Y's entrepreneurial intentions (Ettis, 2021), while Yiga et al. (2023) in Uganda used a narrative approach to understand entrepreneurial behavior in the work environment. In Europe, Dreyer & Stojanová (2022) compared entrepreneurial motivation between Generations Y and Z in Germany, while cross-country studies in Eastern Europe such as the Czech Republic and Romania evaluated millennial competency models (Šebesto et al., 2021). In Russia and Hungary, research focuses include job expectations (Poplavskaya, 2023) as well as cross-generational comparisons in entrepreneurship (Gosztonyi, 2023).

In addition, some studies take a cross-border approach. Zhang et al. (2020) explored millennial social entrepreneurship intentions and self-efficacy in six countries: China, Mexico, Nigeria, the Philippines, Russia, and the United States. Meanwhile, Guerrero et al. (2019) used Global Entrepreneurship Monitor (GEM) data in 28 countries to analyze intergenerational corporate venturing. This variety of studies enriches understanding of the social, cultural, and economic factors that shape the entrepreneurial dynamics of the younger generation in various global contexts. For more details, it is illustrated in table 2 below.

Table 2. Study Context in Articles

Country	Study Context	(Authors, Year)
<u>Asia</u>		
Indonesia	Millennial and Gen Z interest in social entrepreneurship	(Handayani et al., 2023)
	Innovative millennial entrepreneurship & cyber learning	(Hindrawati et al., 2023)
	Millennial job pursuit in MLM via social media	(Nadlifatin et al., 2022)
	Green entrepreneurship among millennials	(Genoveva & Tanardi, 2022)
	Entrepreneurial orientation and knowledge sharing	(Hamdi et al., 2021)
Malaysia	Millennial turnover intention due to work stress	(Prihadi et al., 2021)
	Entrepreneurial spirit impact on Muslim millennial SMEs	(Nafisah et al., 2023)
India	Entrepreneurship ecosystem in HEIs post-startup campaign	(Kapil et al., 2021)
Oman	International entrepreneurship intention among youth	(Chaudhry et al., 2021)
<u>America</u>		
USA	Millennials' low entrepreneurship rate analysis	(Struckell, 2019)
	Generational effect on entrepreneur types	(Zhang & Acs, 2018)
Ecuador	Hope and attitude on entrepreneurial intention	(Parrales et al., 2022)
<u>Africa</u>		
Tunisia	Personal values influencing Gen Y entrepreneurial intentions	(Ettis, 2021)
Uganda	Narrative study on entrepreneurial behavior at work	(Yiga et al., 2023)
<u>Europe</u>		
Germany	Gen Y vs. Gen Z entrepreneurial motivations	(Dreyer & Stojanová, 2022)

Country	Study Context	(Authors, Year)
Czechia & Romania	Competency model comparison for millennials	(Šebesto et al., 2021)
Russia	Job expectations and differentiation among students	(Poplavskaya, 2023)
Hungary	Comparative analysis of Gen X, Y, Z entrepreneurs	(Gosztonyi, 2023)
<u>Across Countries</u>		
China, Mexico, Nigeria, Philippines, Russia, USA	Millennials' social entrepreneurial intent and self-efficacy	(Zhang et al., 2020)
28 countries (GEM)	Corporate venturing across generations	(Guerrero et al., 2019)

Based on the focus of the study and the variables used in the research, previous research on youth millennials entrepreneurship will be classified into the following five aspects. For a more detailed explanation of the variables used, see table 3.

Education-Focused Studies

Some studies have focused on the role of education in shaping the entrepreneurial intentions and behaviors of the younger generation. Yagbala, Kapil et al. (2021) highlight the importance of a proper curriculum in Indian higher education institutions to build an entrepreneurial ecosystem that supports career aspirations. Jarmila Šebesto et al. (2021) compared entrepreneurial competency models between students and business owners in the Czech Republic and Romania to develop a practice-based competency model. Genoveva & Tanardi (2022) also emphasized the need for environmental education to encourage green entrepreneurship intentions among Indonesian millennials. On the other hand, Gita Hindrawati et al. (2023) concluded that digital learning (cyber learning) and agile teamwork support improving the business performance of the millennial generation.

Social-Focused Studies

The social aspect is a concern in many studies, especially in shaping entrepreneurial intentions and behaviors. Yang Zhang et al. (2020) and Herlin Handayani et al. (2023) associate social self-efficacy and subjective norms with the intention to become a social entrepreneur. Reny Nadlifatin et al. (2022) examined the influence of social attitudes on work intentions in social media-based MLM. Muhammad Hamdi et al. (2021) found that generation Y values sharing knowledge more than generation Z. Meanwhile, Maribel Guerrero et al. (2019) show that generation cohorts have an effect on involvement in corporate venture, which is a social phenomenon in organizations.

Culture-Focused Studies

Cultural aspects emerge in cross-country and generational studies. Ting Zhang & Zoltan Acs (2018) and Márton Gosztonyi (2023) discuss intergenerational differences in entrepreneurial tendencies in the US and the European Union. Apoplavskaya & Andreevna (2023) explore the influence of family cultural capital on the work outlook of Russian students.

Christian Dreyer & Hana Stojanová (2022) conclude that German Gen Z is more visionary and less motivated by money than Gen Y, marking a change in work culture and motivation.

Religion-Focused Study

One study explicitly focused on religious backgrounds. Nadratun Nafisah et al. (2023) examined the relationship between entrepreneurial spirit (innovation, risk-taking, and proactivity) and the success of Muslim millennial SMEs in Malaysia. This study highlights the importance of religious values and spirituality in shaping the entrepreneurial style of religious groups.

Behavior-Focused Studies

Entrepreneurial behavior is the dominant theme. Sirajje Yiga et al. (2023) describe the entrepreneurial behavior of millennials in the context of work in Uganda through a narrative of direct experience. Kususanto Prihadi et al. (2021) examined the relationship between work stress, organizational commitment, and intention to quit work mediated by entrepreneurial orientation. Milena Parrales et al. (2022) and Saïd Ettis (2021) each show that personal expectations and values (such as social affiliation and pleasure) contribute to entrepreneurial intentions. Elisabeth Struckell (2019) notes that although millennials have a high level of education, they show low levels of entrepreneurship due to their personality traits and high debt.

Table 3. Variables Used in Articles

Authors (Year)	Research Topic	Variables Used
Zhang & Acs (2018)	Age and generational effects on entrepreneurship in the US	Age, gender, race, education, entrepreneur type (full-time, part-time, incorporated, unincorporated), unemployment rate, etc.
Gosztonyi (2023)	Comparative analysis of Gen X, Y, Z entrepreneurs in the EU	Socio-economic status, business sector, economic trust, business approach, gender, education, income
Nadlifatin et al. (2022)	Millennial job pursuit intention via social media in MLM	Job pursuit attitude, subjective norm, perceived behavioral control, perceived usefulness, ease of use
Zhang et al. (2020)	Millennials' social entrepreneurial intent and self-efficacy in 6 countries	Self-efficacy, perseverance, proactive personality, concern for social problem, life satisfaction
Guerrero et al. (2019)	Impact of generational cohorts on corporate venturing	Corporate venturing, human capital, entrepreneurial attitude, age, income, gender
Prihadi et al. (2021)	Millennial turnover intention due to stress and commitment	Mattering, organizational commitment, entrepreneurial orientation
Parrales et al. (2022)	Hope and attitude effects on entrepreneurial intention in Guayaquil	Dispositional hope, entrepreneurial intention, attitude
Dreyer & Stojanová (2022)	Entrepreneurial potential of German Gen Y vs. Gen Z	Entrepreneurial potential, career drive, work ethics, purpose importance
Ettis (2021)	Personal values influencing Gen Y's entrepreneurial intentions	Self-direction, social affiliation, hedonic orientation, gender, entrepreneurial intention
Šebesto et al. (2021)	Competency models in Czechia and Romania	Motivation-oriented competency, performance-oriented competency

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Authors (Year)	Research Topic	Variables Used
Genoveva & Tanardi (2022)	Green entrepreneurship intention among Indonesian millennials	Green awareness, green knowledge, green entrepreneurial intention, green entrepreneurial behavior
Kapil et al. (2021)	Entrepreneurial ecosystem in Indian HEIs	Entrepreneurial education, career aspiration, demographic characteristics
Apoplavskaya & Andreevna (2023)	Future job perspectives of Russian students	Family financial status, academic achievement, career preferences, cultural capital
Nafisah et al. (2023)	Entrepreneurial spirits and Muslim millennial SME success	Innovation, risk-taking, proactive
Struckell (2019)	Low entrepreneurship rate among US millennials	Millennial characteristics, entrepreneurial traits, student debt
Handayani et al. (2023)	Social entrepreneurial intention in Millennials and Gen Z	Attitude toward behavior, subjective norm, perceived behavioral control, outcome expectation
Chaudhry et al. (2021)	Omani youth's international entrepreneurship intention	Familiarity with globalization, attitude, buying behavior, social norms
Yiga et al. (2023)	Entrepreneurial behavior at work in Uganda	Generational persona, initiative behavior, behavioral change
Hamdi et al. (2021)	Entrepreneurial orientation and knowledge sharing in Gen Y & Z	Entrepreneurial orientation, knowledge sharing attitude, new venture creation
Hindrawati et al. (2023)	Cyber learning, IME, and business performance in millennials	Cyber learning, business performance, innovative millennial entrepreneurship, marketing capability, agile teamwork

Regarding research design, be it quantitative, qualitative, or mixed method, the research approaches used in the research on millennial entrepreneurship are as follows in the table 4:

Table 4. Research Design (Approaches) Used in Articles

Research Design	Author (Year)
Quantitative	Zhang & Acs (2018), Gosztonyi (2023), Nadlifatin et al. (2022), Zhang et al. (2020), Guerrero et al. (2019), Prihadi et al. (2021), Parrales et al. (2022), Ettis (2021), Genoveva & Tanardi (2022), Kapil et al. (2021), Poplavskaya (2023), Nafisah et al. (2023), Handayani et al. (2023), Chaudhry et al. (2021), Hamdi et al. (2021), Hindrawati et al. (2023)
Qualitative (narrative/descriptive)	Yiga et al. (2023), Dreyer & Stojanová (2022), Struckell (2019)
Mixed Methods	Šebesto et al. (2021)

Regarding the data analysis method used in millennial entrepreneurship research, the analysis method used in millennial entrepreneurship research is as follows in table 5

Table 5. Analytical Methods Used in Articles

Main Analytical Method	Author (Year)
Regression and Logit	Zhang & Acs (2018), Guerrero et al. (2019), Prihadi et al. (2021), Poplavskaya (2023)

Main Analytical Method		Author (Year)
Structural Equation Modelling (SEM) PLS		Nadlifatin et al. (2022), Zhang et al. (2020), Parrales et al. (2022), Handayani et al. (2023), Chaudhry et al. (2021), Hindrawati et al. (2023)
Exploratory Analysis (EFA), CFA	Factor	Gosztonyi (2023), Parrales et al. (2022), Hindrawati et al. (2023)
T-Test, Confirmatory Analysis	Wald Test,	Hamdi et al. (2021)
Descriptive Statistics		Genoveva & Tanardi (2022), Kapil et al. (2021), Nafisah et al. (2023)
Narrative, Analysis	Content	Yiga et al. (2023)
Literature Analysis, Theory Comparison		Dreyer & Stojanová (2022), Struckell (2019)
Mixed (Descriptive + Interview)	Methods	Šebesto et al. (2021)

The results of this systematic literature review (SLR) confirm that the characteristics of the millennial generation play an important role in shaping entrepreneurial patterns, intentions, and results, both in the social, technological, and formal and informal sectors. One of the key findings suggests that there is a tendency to increase entrepreneurial propensity with age, with millennials having different entrepreneurial characteristics than previous generations (Zhang & Acs, 2018). However, the effect of generational modification on types of entrepreneurship such as incorporated vs unincorporated or full-time vs part-time is relatively limited.

Cross-generational research shows that despite differences in business approaches, there are also similarities in economic perceptions and confidence between millennials and Z (Gosztonyi, 2023). This reflects a shift in entrepreneurial values towards a more flexible, collaborative, and solution-oriented model, especially in the digital and social sectors.

In the context of network marketing (MLM), attitude is the most powerful determining factor in shaping job search intentions among millennials (Nadlifatin et al., 2022), demonstrating the importance of the role of personal perception in non-conventional job opportunities. In line with that, research on social entrepreneurship in millennials shows that self-efficacy is an important mediator between proactive personality and social entrepreneurship intentions (Zhang et al., 2020), which is strengthened by life satisfaction as a moderator factor in several countries.

Millennials also show a greater tendency to engage in corporate venturing than previous generations, which shows that values and attitudes towards entrepreneurship also influence innovation strategies in organizations (Guerrero et al., 2019). Meanwhile, personal values such as self-direction and hedonic orientation have a significant influence on millennials' entrepreneurial intentions, especially when associated with gender factors (Ettis, 2021).

On the other hand, some studies underline the structural challenges faced by millennials in entrepreneurship. The high level of educational debt and characteristics that are not in line with the profile of successful entrepreneurs also explain the low level of entrepreneurial activity in this group despite having higher education (Struckell, 2019).

In addition to the individual aspect, the educational and social environment has also been shown to be influential. Research in India and Indonesia shows that the entrepreneurial ecosystem in universities and awareness of green entrepreneurship are able to encourage

entrepreneurial intentions and behaviors among millennials (Kapil et al., 2021; Genoveva & Tanardi, 2022). Similarly, technological approaches such as cyber learning strengthen business performance through increased collaboration and marketing capabilities, particularly among millennial business owners (Hindrawati et al., 2023).

Interestingly, a narrative study from Uganda highlights how the real-life experiences of a millennial entrepreneur in a work context show that entrepreneurial behaviors such as initiative and adaptability have a significant impact on business performance (Yiga et al., 2023). This underscores the importance of qualitative studies to understand real dynamics in the field, which may not be fully revealed in a quantitative approach.

In general, this review shows that although millennials have great potential in entrepreneurship, their actual achievement is highly dependent on ecosystem support, the formation of appropriate personal values, and the provision of a safe and adaptive experimentation space for technological and social change.

Previous studies that have raised the issue of entrepreneurship among millennials have shown an important contribution in understanding the personal, social, and structural factors that influence entrepreneurial intentions and behaviors. However, most studies still have limitations in terms of geographical coverage, methods, and analytical framework. Some studies, such as research by Zhang & Acs (2018) and Guerrero et al. (2019), have focused heavily on the context of developed countries such as the United States and European countries, which do not necessarily reflect the socio-economic dynamics of developing countries. In addition, most studies use survey-based quantitative approaches (e.g., Nadlifatin et al., 2022; Handayani et al., 2023), so that it lacks a deep exploration of contextual dynamics and individual experiences that can be better explained through qualitative or mixed methods. This creates a gap in the overall understanding of the real challenges that millennials face when building a business, especially in an environment with limited infrastructure, access to capital, or regulations that are not yet conducive.

On the other hand, there is a tendency to generalize that has not considered in detail the heterogeneity of characteristics in the millennial group, for example based on gender, location (urban vs. rural), or socioeconomic status. For example, a study by Ettis (2021) shows that the influence of personal value on entrepreneurial intentions varies between men and women, but similar studies have not explicitly explored the role of these variable interactions thoroughly. In addition, important issues such as access to digital technology, the influence of local culture, and the dynamics of forming a campus entrepreneurial ecosystem are still rarely discussed comprehensively.

The practical implications of these findings suggest that policy interventions and entrepreneurship programs for millennials need to be designed contextually, evidence-based, and adaptive to the times. For example, business incubation programs in universities or experiential learning-based training need to be tailored to the characteristics of the millennial generation who are more responsive to technology-based approaches, collaboration, and social meaning. In the context of policy, the results of studies by Kapil et al. (2021) and Genoveva & Tanardi (2022) emphasize the need to integrate entrepreneurship education based on the value of sustainability and green innovation in response to the increasing awareness of the younger generation on environmental issues.

Going forward, research opportunities are very open to fill these gaps with a multidimensional approach that combines psychology, sociology, and economic perspectives, as well as expanding the focus on vulnerable groups, social entrepreneurship, and the use of digital technology as an entrepreneurial catalyst. Longitudinal research and cross-cultural studies are also important to understand the long-term dynamics and influence of different values and social structures in forming resilient and innovative millennial entrepreneurs.

CONCLUSION

This study confirms that millennial entrepreneurship is a complex, multidimensional phenomenon shaped by a combination of personal factors—such as individual values, self-efficacy, and expectations—social influences like cultural norms and networks, and contextual elements including the educational ecosystem, digital technology, and public policy. Analysis of 20 scientific articles reveals that despite millennials' high entrepreneurial potential, structural barriers such as education debt, limited access to funding, and inadequate institutional support continue to constrain their entrepreneurial realization. Cross-cultural and generational differences further enrich the understanding of millennial entrepreneurial characteristics, particularly within the growing domains of social and digital entrepreneurship. To address these challenges, context-specific and evidence-based interventions are essential, especially policies that promote technology-adaptive entrepreneurial education, experiential learning, and sustainability values to enhance millennials' readiness and engagement. Future research should adopt more qualitative and longitudinal approaches to deeply explore the internal and external dynamics influencing millennial entrepreneurship, with particular attention to heterogeneity within millennial cohorts and underexplored contexts, including developing countries and vulnerable groups, to inform inclusive and impactful policy and program development.

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