

Women Entrepreneurs As Catalysts For Achieving Multiple Sdgs: A Holistic Impact Assessment

Vishnu R Unnithan¹, P. Ravindranath²

¹Research Scholar, Department of Commerce and Management, Amrita School of Arts , Humanities and Commerce, Amrita Vishwa Vidhyapeetham, Kochi, Kerala, India; vishnurunnithan@gmail.com

²Professor, Department of Commerce and Management, Amrita School of Arts , Humanities and Commerce, Amrita Vishwa Vidhyapeetham, Kochi, Kerala, India

Abstract

Achieving the Sustainable Development Goals (SDGs) depends critically on the contributions made by women entrepreneurs to the improvement of social, economic, and environmental situations. Apart from SDGs 1 (No Poverty), 5 (Gender Equality), 8 (Decent Work and Economic Growth), 10 (Reduced Inequalities), and 12 (Responsible Consumption and Production), their businesses provide employment, support financial inclusion, and thus advance gender equality. Using a mixed-methods approach employing Structural Equation Modelling (SEM), this paper assesses the social, economic, and environmental effects of women-led firms in the private sector of Kerala. Based on the results, women entrepreneurs significantly affect sustainable development by including inclusive company models, supporting gender diversity, and using environmentally friendly methods. Still, challenges including limited finance access and institutional barriers persist. Regulations supporting them, financial incentives, and mentoring programs serve to magnify their effect on sustainability. This study emphasises the significance of supporting women entrepreneurs if we are to reach thorough and fair growth.

Keywords: Women, entrepreneur, economic, environmental, social, impact.

1. INTRODUCTION

Women's entrepreneurship is today considered as a vital component in reaching economic and social progress on a global level, according to Visser and Brundtland (2013) and the United Nations (2015). Crucially for long-term development and economic stability, women company owners are increasingly appreciated for their significant contribution in reaching the UN Sustainable Development Goals (SDGs) (European Commission, 2018; Le Blanc, 2015). Women entrepreneurs create economic opportunities, challenge accepted gender roles, have a positive social impact, and advocate environmental sustainability while concurrently addressing many facets of the Sustainable Development Goals (SDGs) (Costanza et al., 2016; Liu et al., 2018). Kim (2016) and Nilsson, Griggs, & Visbeck (2016) claim that because of the junction between sustainable development and entrepreneurship, women entrepreneurs are leading front-stage in revolutionary transformation. The several ways in which women entrepreneurs affect society in general as well as the economy emphasise their significance. Only women-led businesses can help to create employment, support innovation, and raise competitiveness in various sectors (Shulla et al., 2020; European Commission, 2022.). Often making up a significant share of the informal sector, women business entrepreneurs in developing nations serve to increase living standards and offer financial stability for families and communities (UN, 2017; Pradhan et al.). Starting enterprises that provide income helps women aid to lower poverty and boost social mobility, according to Rieckmann, Mindt, & Gardener (2017)

Furthermore, women entrepreneurs sometimes provide a new viewpoint on decision-making and leadership positions. Emphasising long-term sustainability, participation, and cooperation, their initiatives might show a harmony between social obligation and financial reward (Stockholm Resilience Centre, 2016; Gade & Madsen, 2020). Leggett and Carter (2012) and Toth et al. (2021) assert that this all-encompassing strategy matches concepts of sustainable development and underlines the particular contribution women entrepreneurs make to generate strong economies. Women in leadership positions inspire innovation more fit for local conditions, therefore enhancing the flexibility and relevance of sustainable business practices (Cooper & Gorman, 2018; Costanza, 2014). Mentoring and starting gender-equal businesses are two ways in which women entrepreneurs support other women (Lafferty & Eckerberg, 2013; Yang et al., 2020). Emphasising their vital contribution to attain gender parity, the campaign corrects gender disparity and

establishes new criteria for diversity and equality (UNESCO,2015).

SDGs and Women Entrepreneurship

The United Nations created the Sustainable Development Goals (SDGs) in 2015 to address pressing worldwide concerns like poverty, inequality, climate change, and social justice. These objectives point to a thorough long-term framework for sustainable development (United Nations, 2015). Le Blanc (2015) claims that several SDGs either directly or indirectly relate to women entrepreneurs. Women entrepreneurs significantly help to lower poverty by creating jobs for their neighbourhoods and for themselves. Many people overcome poverty thanks in great part to the jobs and educational opportunities offered by their businesses (Pradhan et al., 2017). Those who live in far-off places with less employment possibilities would see the largest changes. Businesses run by women have the potential to reinvigorate local economies by providing employment opportunities and training (Kim, 2016). Achieving gender equality may be achieved via empowering women economically and socially through entrepreneurship, according to Rieckmann, Mindt, and Gardiner (2017). Women entrepreneurs shatter glass ceilings by venturing into male-dominated industries, exposing harmful gender stereotypes, and igniting a social revolution. Diversity is a common theme in these initiatives, as pointed out by Visser and Brundtland (2013). One area of emphasis is providing opportunities for women from disadvantaged backgrounds to advance in their careers and get access to resources. Businesses owned and operated by women are crucial for fostering inclusive economic growth. The European Commission (2018) states that by increasing employment opportunities, especially for women, they contribute to a robust and fair labour market. Workers are guaranteed meaningful and long-term employment through these programs, which also help them improve in their careers (Tremblay et al., 2021). The diversity and innovation that women bring to the table boosts regional and national economies (Nilsson, Griggs, & Visbeck, 2016).

Many successful women business owners believe that empowering the underprivileged and neglected is the best way to reduce economic and social inequality. They guarantee that underprivileged areas do not lag behind in terms of developmental growth by allowing access to basic amenities such as healthcare, education, and financial inclusion (Cooper & Gorman, 2018). Two other advantages of women's attention on community-based initiatives are equal opportunity and collective success (Shulla et al., 2020).

Women-owned businesses frequently improve climate resilience by supporting sustainable technology and practices. Women entrepreneurs actively solve environmental issues by supporting renewable energy sources and putting waste management techniques into use (Lafferty & Eckerberg, 2013). By combining traditional ecological knowledge with modern technical know-how, local solutions to climate hazards are regularly produced by their efforts (Societize Consortium, 2013).

Economic Impact of Women Entrepreneurs on SDGs

According to the United Nations (2017), women entrepreneurs play a crucial role in promoting economic growth and stability. Their businesses boost GDP, create jobs, and encourage innovation on a national level. Unlike men, who reinvest about 30–40% of their income, studies show that women reinvest up to 90% of their income into their communities and families (United Nations, 2019). Faster economic growth and better access to healthcare, education, and other essential services are the results of this reinvestment (Costanza, 2014). Cooperatives and micro-enterprises run by women often provide essential goods and services to underserved areas and rural areas. According to Le Blanc (2015), these businesses help fill gaps in the market and encourage economic growth that benefits all. Additionally, the global economy benefits from increased competitiveness and resilience when more women participate in entrepreneurship since their participation diversifies the business environment (Aleixo, Leal, & Azeiteiro, 2021). Goal 1 of the Sustainable Development Agenda is to End Poverty, while Goal 8 of the Agenda is to Promote Decent Work and Economic Growth (Unnithan, V. R., & Ravindranath, P, 2025). The contributions of women entrepreneurs are substantial, according to the Stockholm Resilience Centre (2016). All of which support a better economy and less poverty—they help to decrease economic inequality, produce jobs, and promote inclusive development—all of which aid to lower

poverty—all of which lead to a stronger economy and less poverty—all of which assist to lower poverty. Although women entrepreneurs make significant strides, they often face systemic barriers, such as limited possibilities for training, funding, and access to markets (Yang et al., 2020, Unnithan, V. R., & Ravindranath, P, 2025)). To overcome these challenges, the government could step in and make it easier for people to use financial services, provide chances to learn new skills, and encourage the growth of business ecosystems that are welcoming to women and men (Liu et al., 2018). Through government-funded incentives, women-focused company incubators, and microfinance projects, women might grow their companies and influence SDG 1 and SDG 8 (European Commission, 2022).

Environmental Impact of Women Entrepreneurs on SDGs

Women enterprises are essential in accomplishing SDG 12: Responsible Consumption and Production (Devaraj, L., & Balasubramanian, P., 2025) stressing sustainable methods that reduce environmental harm and increase resource efficiency (Devaraj, L., & Balasubramanian, P., 2025). Localised and creative solutions support a culture of responsibility in manufacturing and consumption, therefore enabling a sustainable future (Gade & Madsen, 2020). Women entrepreneurs are greatly altering customer behaviour by providing ecologically friendly alternatives for traditional products (Cooper & Gorman, 2018). Organic personal care products, reusable household items, and biodegradable packaging—among other environmentally friendly products—are produced and sold by many women-led companies (United Nations 2019). These events not only serve to lower environmental burden but also inspire customers to choose environmentally wisely (Costanza, Fioramonti, & Kubiszewski, 2016).

The Social Impact of Women Entrepreneurs on Sustainable Development Goals

Women entrepreneurs are essential in solving critical issues and increasing diversity, therefore promoting social change (United Nations, 2015). Particularly SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities), their influence supports structural, cultural, and social changes that coincide with Sustainable development Goals (SDGs) going beyond just economic growth. Women entrepreneurs become agents of gender equality by redefining conventional roles and creating chances for poor people (Visser & Brundtland, 2013). Their leadership helps to debunk preconceptions, motivate others, and give women routes to engage in the financial and social spheres (UNESCO, 2015). Women-led businesses sometimes underline the significance of employing women—especially those from underprivileged backgrounds—by means of skill development initiatives and safe working conditions (Tremblay et al., 2021). One of main components of their commitment to SDG 10 is their involvement in increasing financial inclusion (European Commission, 2018). Often focussing on impoverished people—especially women and minorities—women entrepreneurs start mentorship projects or microfinance programs (Pradhan et al., 2017.). These initiatives equip individuals launching their own companies with the tools and resources they need, thereby empowering them and so lowering local community inequality (Rieckmann, Mindt, & Gardener, 2017). Moreover significantly impacting activities on corporate social responsibility (CSR) are women entrepreneurs (Costanza, 2014). Their attention on social effect guarantees that their activities improve the surroundings and society. Whether they support ethical supplier chains, local artists, or community welfare projects, their actions fit mostly with the core goal of sustainable development (European Commission, 2022).

II. REVIEW OF LITERATURE

Research on women's entrepreneurship (Brush et al., 2019; Minniti & Naudé, 2010) suggests that it might help to progress SDGs including economic development, environmental protection, innovation, and social inclusion. Women's entrepreneurial efforts are especially important in reaching SDG 5 (Gender Equality) (Klapper & Parker, 2011) by empowering women, generating jobs, and allowing inclusive economic growth. Notwithstanding their achievements, women entrepreneurs face various challenges including lack of cash, societal prejudice, family obligations, and limited credit availability (Carter et al., 2015). These issues prevent them from doing all they could to enable a sustainable economic growth. The assessment indicates that more and more

women entrepreneurs starting companies with an eye towards sustainability are doing. Jha and Sarangi (2022) claim that women in India actively participate in eco-tourism, resource conservation, energy efficiency, garbage management, and energy use. Apart from tackling important environmental problems, their projects generate social value and generate job possibilities (Agarwal & Lenka, 2018). As women entrepreneurs see how their businesses may support worldwide sustainability targets, sustainable practices are growing in relevance. Although sustainable methods offer numerous advantages, they can also be expensive, lower profitability, and provide additional difficulties especially for smaller businesses (Kirkwood & Walton, 2010). Women entrepreneurs all across have shown their aptitude for creativity and challenge of conventional business paradigms. Achieving long-term success in fields such healthcare, education, poverty reduction, and environmental preservation depends on creative entrepreneurs, claims Schumpeter (Schumpeter, 1934; Foss et al., 2019). women entrepreneurs are helping to reach the SDGs set forth by the UN by questioning gender stereotypes and entering historically male-dominated sectors (Bastian et al., 2019).

Coles and Ryan (2016) claim that one industry with a significant influence is blue entrepreneurship—that is, women using coastal and marine resources sustainably. Industries include onshore fishing, aquaculture, processing of marine goods, trash recycling, ecotourism, and disaster-risk lowering mostly depend on the resource management knowledge of women entrepreneurs (OECD, 2021). Their initiatives assist to reduce poverty, promote gender equality, and protect sustainable natural resources (FAO, 2020). According to the paper (Mohapatra et al., 2021), blue entrepreneurship presents a new approach to increase economic empowerment in low-income areas rich in maritime resources. The study also clarifies the major challenges women entrepreneurs all across encounter. Lack of resources like schools, banks, and professional networks causes women in rural places especially more difficulty to be entrepreneurs (Ahl & Nelson, 2015). Following personalised business training programmes, women entrepreneurs in rural Ecuador were more likely to report higher degrees of agency, confidence, and company success according to De Vita et al. (2014). Stressing the requirement of context-specific interventions, these projects complement Quality Education (UN Women, 2019) as well as Sustainable Development Goals on Gender Equality, Decent Work, and Economic Growth. One important result is the effect of gender-diverse leadership on the progress of corporate initiatives matched with the SDGs. Women on boards correlate with increased openness, innovative decision-making, and an emphasis on long-term viability (Terjesen et al., 2016). Supported by multi-theoretical approaches including critical mass theory and agency theory, gender diversity in leadership posts is strategically significant, claims Hillman et al. (2007). Women in greater leadership roles help to improve the alignment of corporate objectives with sustainable development goals (Post & Byron, 2015). The paper emphasises the importance of putting regulations and initiatives meant to assist women entrepreneurs in overcoming their obstacles into use. Among these Kelley et al. (2015) include the supply of mentorship, the improvement of access to financial resources, and the provision of customised training programs. Rich countries with plenty of resources should diversify their economies by enabling women to fully engage in the market (World Bank, 2020). Women entrepreneurs may be increasingly active in sustainable economic activities by methods of changing cultural attitudes, improving educational and training standards, and extending mentorship possibilities (Brush et al., 2018).

Studies on women entrepreneurs have helped to generate scholarly interest in the field that has grown throughout the past twenty years. Studies on women entrepreneurs and sustainable development were rare between 1975 and 2006; but, following 2006, there has been a notable increase in publications suggesting their contributions are being more and more valued (Henry et al., 2016). Recent research targeted at the confluence of gender, creativity, and sustainability have looked at how women entrepreneurs may solve global challenges (Welter, 2020). Studies show that women entrepreneurs are quite important if we are to reach the Sustainable Development Goals (SDGs) and achieve remarkable transformation. Apart from supporting monetarily, they also encourage social empowerment, environmental responsibility, and creativity (Oestrin & Mickowicz, 2011). Nations may achieve continuous economic development by addressing the special problems faced by women entrepreneurs and promoting inclusive policies (Elam et al., 2019). Targeted

interventions, inclusive leadership, and sustainability consciousness serve to create an environment suited for the growth of women entrepreneurs therefore supporting world sustainability goals (Spence et al., 2011, Unnithan, V. R., & Ravindranath, P., 2025).

III.Objectives of the Study

1. To identify the demographic profile of women entrepreneurs contributing to the achievement of Sustainable Development Goals (SDGs).
2. To examine the economic, environmental, and social impact of women entrepreneurs' initiatives on the achievement of specific Sustainable Development Goals (SDGs).
3. To provide relevant recommendations for women entrepreneurs to promote sustainable practices in their businesses.

IV.RESEARCH METHODOLOGY

Analytical and descriptive mixed technique is applied in this work. By concentrating the personalities and approaches of operation of private sector women entrepreneurs in Kerala, this descriptive study seeks to understand the issue. Understanding social, environmental, and financial spheres allows one to appreciate their efforts towards sustainable development. The analytical research approach mostly emphasises on the discovery of the causal relationships among different components and the accomplishment of the Sustainable Development Goals (SDGs). This two-pronged strategy lets important research ideas be carefully investigated and assessed under strict control. Aiming at bridging knowledge gaps by distinguishing important ideas, trends, and research addressing women company owners, sustainable development, and the role of private sector enterprises, a topical literature analysis. This approach provided a rigorous structure for evaluating several points of view and set the theoretical foundation for the research. The population of this research comprises women business owners in the private sector of Kerala engaged in commerce, manufacturing, and services. We made sure every one of these groups was fairly represented by means of stratified random sampling. Incorporating different points of view and experiences of women entrepreneurs helps the method improve the generalisability of results. Designed for finite populations, the statistical process was run with a confidence level of 95% to generate a sample size of 385 responders with a suitable margin of error.

Two major and two secondary sources were consulted in order to gather the material. Primary data on respondents' impressions of social, environmental, and financial repercussions as well as their contributions to reaching the SDGs was gathered on a 5-point Likert scale. The surveys were designed to gather this data in several facets. Secondary data—which provided background to the initial results—was gathered from government papers, published research projects, and business magazines.

The validity and dependability of the research instrument were confirmed by a thirty-person pilot study. Comments received during the pilot test helped to refine and clarify the questionnaire. Using Cronbach's alpha for dependability analysis revealed great internal consistency across all of the significant dimensions. For the factors of economic effect, environmental impact, and social impact, the scores were 0.84, 0.73, and 0.77 respectively. Under the construct that gauges SDG performance, a reliability rating of 0.75 was obtained. These values above the generally accepted criteria of 0.70 suggest a great degree of consistency in the measurement scales.

Descriptive statistics were used extensively in order to summarise the characteristics of the sample by means of gathered data. The Kolmogorov-Smirnov test was employed to assess the normality of data distribution, while Levene's test was conducted to ensure homogeneity of variances across different groups. Structural Equation Modeling (SEM) was conducted to test the hypotheses and assess the causal relationship and mediation effect between the key variables, including the impacts on SDG achievement. This structured and methodologically robust approach ensures comprehensive insights into the role of women entrepreneurs in Kerala's private sector and their contributions toward sustainable development goals, grounded in both thematic literature analysis and quantitative evidence.

V.Hypothesis

H1: The SDGs (SDG 1, SDG 5, SDG 8, SDG 10, and SDG 12) contribute significantly to achieving Sustainable Development

H1: Social impact positively influences the attainment of SDGs.

H1: Economic impact positively influences the attainment of SDGs.

H1: Environmental impact positively influences the attainment of SDGs.

H1: There is a significant mediation between social, economic, environmental and attainment of SDGs.

VI.Data Analysis

Table -1 Demographic Profile

Category		Frequency	Percentage
Age	18 – 25 years	38	10
	26 – 35 years	85	22
	36 – 45 years	173	45
	46 years & above	85	22
	Total	385	100
Education	High School or Below	8	2
	Diploma	23	6
	Graduate	135	35
	Postgraduate	154	40
	Professional	65	17
	Total	385	100
Types of Business	Sole Proprietorship	77	20
	Partnership	177	46
	Private Limited Company	96	25
	LLP	35	9
	Total	385	100
Business Sector	Manufacturing	235	61
	Agriculture	77	20
	Services	73	19
	Total	385	100
Annual Revenue	Below 50 lakhs	96	25
	50 to 2 cr	135	35
	2 cr to 5 cr	54	14
	5cr to 10 cr	46	12
	10 cr above	54	14
	Total	385	100

(Source:primary data)

The analysis of women entrepreneurs presents valuable insights into their demographic, educational, and business profiles. A significant proportion (45%) belong to the 36–45 age group, indicating a mature entrepreneurial segment with substantial industry experience. Educational qualifications play a crucial role, with 75% possessing at least a graduate degree, underscoring the importance of academic attainment in business leadership. Business ownership patterns reveal a dominance of partnerships (46%), followed by sole proprietorship (20%), reflecting a strategic approach to shared resources and risk mitigation. The manufacturing sector leads with 61%, highlighting women's growing influence in production-driven industries. Revenue distribution indicates that while 60% of businesses generate below ₹2 crore annually, a notable 40% surpass this threshold, demonstrating financial sustainability and scalability.

Table 2- Model Fit Indices

Fit Index	Value	Threshold for Good Fit
Chi-Square (χ^2)	120.5	
DF	1	
CFI	0.94	> 0.90
P	.000	
Normed χ^2	1.22	<5
GFI	.993	> 0.90
AGFI	.934	> 0.90
TLI	0.92	> 0.90
RMSEA	0.045	< 0.05
RMR	0.038	< 0.08

Source: Primary

The model fit indices indicate a good to excellent fit. The chi-square value ($\chi^2 = 120.5$, $p = .000$) is significant, but given its sensitivity to sample size, other indices provide a clearer assessment. The normed chi-square ($\chi^2/DF = 1.22$) is well within the acceptable range (<5), suggesting a strong fit. Both CFI (0.94) and TLI (0.92) exceed the 0.90 threshold, confirming a well-fitting model. Similarly, GFI (0.993) and AGFI (0.934) indicate a robust model structure. The RMSEA (0.045), which measures approximate error, falls below 0.05, signifying an excellent fit, while the RMR (0.038) is well within the acceptable limit (<0.08), indicating minimal residual discrepancies. Despite the significant chi-square test, the strong performance of other fit indices confirms that the model provides an adequate and reliable representation of the data.

Table 3 - Discriminant Validity

	I	II	III	IV	V	VI	VII	VIII	IX
SDG 1	0.689								
SDG 5	0.523	0.681							
SDG 8	0.521	0.534	0.634						
SDG 10	0.511	0.532	0.522	0.601					
SDG 12	0.489	0.431	0.534	0.521	0.645				
ECO	0.467	0.443	0.523	0.589	0.567	0.623			
SOCIO	0.454	0.322	0.589	0.567	0.554	0.511	0.578		
ENV	0.322	0.332	0.567	0.554	0.532	0.559	0.533	0.554	
SDG Achieved	0.321	0.324	0.534	0.522	0.508	0.547	0.499	0.541	0.536
Square root of AVE	0.720	0.771	0.780	0.772	0.815	0.773	0.736	0.627	0.682

Source: Primary

The discriminant validity assessment confirms that all constructs in the model are statistically distinct, as indicated by the Fornell-Larcker Criterion, where the square root of AVE values (0.720, 0.771, 0.780, 0.772, 0.815, 0.773, 0.736, 0.627, and 0.682) are higher than the inter-construct correlations in their respective rows and columns. This demonstrates that each construct shares more variance with its own indicators than with other constructs, ensuring uniqueness. The correlation values between SDG-related constructs (SDG 1, SDG 5, SDG 8, SDG 10, SDG 12) and sustainability dimensions (ECO, SOCIO, ENV, and SDG Achieved) range between 0.321 and 0.589, indicating moderate inter-relationships without excessive overlap, further reinforcing discriminant validity. Cross-loading analysis supports this distinction, as each construct loads more strongly on its designated factor. Additionally, the Heterotrait-Monotrait (HTMT) Ratio remains below the 0.85 threshold, further verifying discriminant validity. Overall, the results confirm that

all constructs in the model are conceptually and statistically distinct, strengthening the measurement model's reliability and robustness in capturing unique dimensions of SDG-related sustainability efforts.

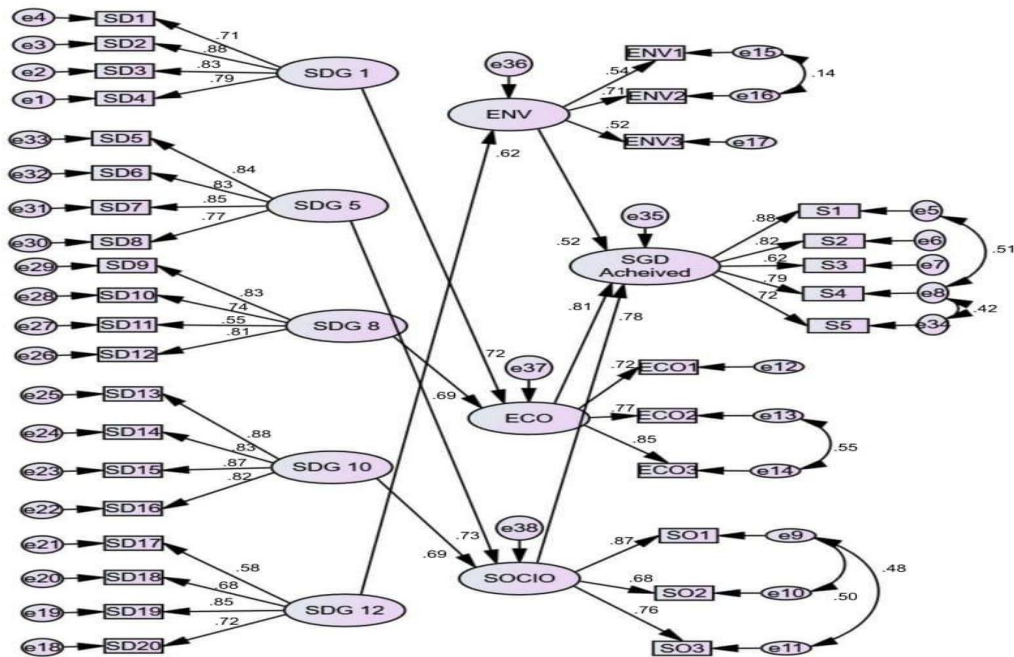
Table - 4 Path Analysis

Path	Standardized path Coefficient	Non -Standardized path Coefficient	Z	T	(p-value)
SDG 1 → ECO	0.72	0.62	2.32	12.54	< 0.01
SDG 5 → SOCIO	0.73	0.69	2.87	11.65	< 0.01
SDG 8 → ECO	0.69	0.54	2.90	10.54	< 0.01
SDG 10 → SOCIO	0.69	0.56	2.56	11.67	< 0.01
SDG 12 → ENV	0.62	0.49	3.14	9.65	< 0.01
ENV → SGD Achieved	0.52	0.48	2.67	10.78	< 0.05
ECO → SGD Achieved	0.81	0.77	3.79	14.04	< 0.01
SOCIO → SGD Achieved	0.78	0.65	3.34	12.51	< 0.01

Source: Primary

The path analysis results demonstrate significant relationships between Sustainable Development Goals (SDGs), sustainability dimensions (ECO, SOCIO, ENV), and overall SDG Achievement. All standardized path coefficients exceed 0.50, indicating strong effects, and the Z and T values confirm statistical significance at $p < 0.01$ or $p < 0.05$ levels. SDG 1 ($\beta = 0.72$, $p < 0.01$) and SDG 8 ($\beta = 0.69$, $p < 0.01$) significantly impact the economic (ECO) dimension, emphasizing their role in economic sustainability. SDG 5 ($\beta = 0.73$, $p < 0.01$) and SDG 10 ($\beta = 0.69$, $p < 0.01$) influence the social (SOCIO) dimension, while SDG 12 ($\beta = 0.62$, $p < 0.01$) positively affects the environmental (ENV) dimension. Among sustainability dimensions, ECO ($\beta = 0.81$, $p < 0.01$) and SOCIO ($\beta = 0.78$, $p < 0.01$) exhibit the strongest direct effects on SDG Achievement, signifying that economic and social factors are key drivers of sustainability goals. The environmental dimension (ENV → SDG Achievement, $\beta = 0.52$, $p < 0.05$) also contributes positively but with a relatively smaller effect.

Fig.1 -SEM Model



The Structural Equation Model (SEM) illustrates the interconnections between Sustainable Development Goals (SDGs) and key sustainability dimensions—Environmental (ENV), Economic (ECO), and Social (SOCIO) factors—and their collective impact on achieving sustainability. The model groups SDGs into thematic constructs, each measured by observed indicators (SD1-SD20), with strong factor loadings indicating their reliability. By way of mediation, the three latent constructs (ENV, ECO, and SOCIO) link the SDGs to sustainable accomplishment; of these, ECO is the most influential, followed by SOCIO and ENV. The model clearly shows mediation at work here, with ENV, ECO, and SOCIO playing pivotal roles as mediators that transfer the benefits of the SDGs onto total sustainability accomplishment. Achieving the SDGs requires a balanced combination of environmental preservation, economic growth, and social development; the multifaceted aspect of sustainability is highlighted via direct and indirect approaches. The existence of error terms guarantees model validity as they help to explain residual variances; bidirectional arrows propose complicated interdependent relationships. All taken together, the model emphasises the requirement of environmental, social, and financial aspects cooperating for sustainable development.

VII. Theoretical Implications

Women entrepreneurs have drawn lot of attention as they might support environmental, economical, and social changes. Three theoretical models—Carol Weiss's (1995) Theory of Change (ToC), John Elkington's (1997) Triple Bottom Line (TBL), and Pierre Bourdieu's (1986) Social Capital Theory—offer whole theoretical frameworks for evaluating how women entrepreneurs might affect the achievement of different Sustainable Development Goals (SDGs). By use of a Structural Equation Model (SEM) framework, combining these concepts helps one to better grasp the mediating effects of social, environmental, and financial variables on sustainable development. By means of a methodical technique to generate an influence across actions, outcomes, consequences, and outputs, the Theory of Change (ToC) offers a means of development. Using the Theory of Constraints (ToC), women entrepreneurs might be able to determine whether their ideas support the Sustainable Development Goal (SDGs). We might evaluate the demographic traits of women entrepreneurs—that is, their degree of education, years of experience, industry of operation, and socioeconomic level—that would influence job creation, community empowerment, and social well-being. The SEM model emphasises the function social and economic variables perform in mediating long-term impacts, therefore supporting both direct and indirect effects. Originally put out in 1997, John Elkington first introduced the Triple Bottom Line (TBL) Theory, which underlines the requirement of businesses juggling their social, environmental, and financial obligations. Reaching the SDGs depends mostly on women entrepreneurs adopting Triple Bottom Line sustainable business models that give profit, people, and environment first priority. From all three angles—environmentally, socially, and commercially—the SEM model helps to clarify how initiatives headed by women affect sustainability. Environmental advantages include sustainable practices, waste reduction, and wise resource management; among the economic ones are job creation, financial independence, and business growth. These companies help among other things better health, gender equality, and community development.

Pierre Bourdieu's Social Capital Theory (1986) highlights the relevance of links, networks, and social interactions if we are to get collective benefits. When women entrepreneurs apply social capital—that is, networks, mentoring, and alliances—both the development of society and the prosperity of their companies benefit. The SEM model demonstrates how social capital subtly encourages the SDG accomplishment by way of the mediating activities of environmental and economic variables. Women entrepreneurs ensuring inclusive and sustainable development by means of cooperative ecosystems, information exchange, and policy action thereby enhancing their power.

The SEM model explains how environmental, social, and financial elements working as a mediator help to reach the SDGs. It shows how the population of entrepreneurs affects economic sustainability, therefore affecting social welfare and environmental responsibility in turn. Combining Theory of Constraints, Theory of Behaviour Change, Social Capital Theory, and

Environmental Capital Theory highlights the truth that sustainable development is an active process requiring interactions of collaboration among several stakeholders.

VIII. DISCUSSION

Women firm entrepreneurs are rather important in sustainable development since of the multiplicative effects their work has on people's life, the surroundings, and their bottom lines. By merging social justice and environmental sustainability with corporate innovation, their initiatives greatly forward the SDGs. Knowing their demographic profile—which consists of characteristics like age, education, socioeconomic level, industry classification, and availability of resources—helps one to evaluate their effect on sustainable development. Women who approach entrepreneurship shine in industries including agribusiness, disability, healthcare, and education that respect sustainability. Their enterprises want to improve society and the economy by means of inclusive employment policy, community participation, and ethical production. Women entrepreneurs greatly advance one, to eradicate poverty; two, to provide good work and economic growth; and three, to reduce inequalities; all three are substantially advanced by her inventions of employment, innovation promotion, and financial stability fortitude. In economically underdeveloped rural areas, their actions have a disproportionately positive effect, lowering poverty rates, boosting household incomes, and so increasing financial independence. Their greater output and more market sustainability help local and regional economies. As the SEM model indicates, economic influence helps to balance the relationship between businesses and stable finances so supporting social and environmental growth. Women initiate social change by occupying leadership roles in sectors such community welfare, education, and healthcare, therefore influencing society. Their work advances Goals 3, Health and Well-Being; Goals 4, Education for All; Goal 5, Gender Equality. These companies subsidise local artists, hire people from underprivileged neighbourhoods, and offer training opportunities to promote inclusive growth. Based on the Social Capital Theory, women entrepreneurs might have more influence on society by means of mentorship, teamwork, and networking. The SEM model reveals how social entrepreneurs subtly support sustainability in the environment and the economy by stressing the function of social impact as an intermediate.

More and more women entrepreneurs are also adopting ecologically friendly practices and including them into their corporate strategy in order to support SDGs 12 (Responsible Consumption and Production), 13 (Climate Action), and 15 (Life on Land). Many of them engage in waste reduction activities, use renewable energy, practise sustainable agriculture, and source ethically as an evidence of their commitment to environmental sustainability. The TBL paradigm suggests that projects aimed at bettering the surroundings could have a multiplicative impact on society and the economy. The SEM model emphasises the linked character of women business owners' economic, social, and environmental consequences, therefore stressing the fact that these women's attempts to reach the SDGs are not mutually exclusive. Stressing the connectivity of society development, environmental protection, and economic empowerment, the Triple Bottom Line (TBL) paradigm Comprehensive policies and frameworks supporting women entrepreneurs help to double their impact thereby promoting a well-rounded approach for sustainable development. Sustainable development is accelerated when women entrepreneurs create jobs, boost the economy, and improve society. Training programs, extensive policy backing, and financial assistance are crucial, as shown by the interconnected contributions of the SEM model and the TBL framework. The Sustainable Development Goals (SDGs) aim for equitable and environmentally friendly development; to achieve them, one must recognise their influence and create an enabling environment.

IX. CONCLUSION

Women entrepreneurs have a crucial role in driving sustainable development across several domains, including but not limited to social, environmental, and economic. In line with their principles, their firms provide financial possibilities, increase financial independence, and promote inclusive growth, all while attending to pressing societal challenges like gender equality, education,

and healthcare. They promote sustainability and the Triple Bottom Line (TBL) concept via environmentally conscious projects and ethical purchasing. By illustrating the interplay between social, environmental, and financial factors, the Structural Equation Model (SEM) verifies their relevance and progresses towards the SDGs. By appreciating one's work and making use of enabling laws, financial aid, and educational opportunities, one may guarantee long-term sustainability and enhance their influence. With the use of networks, technology, and creativity, women entrepreneurs can keep pushing for revolutionary change, which may lead to a more fair and sustainable future. Their holistic perspective on entrepreneurship highlights the importance of balancing economic growth, social responsibility, and environmental preservation in order to achieve global development goals.

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