

The WEMPOWERMENT Scorecard: A contextual tool for assessing women's entrepreneurial empowerment in developing economies

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Keywords

Empowerment, Entrepreneurship, Gender Equity, Scorecard, Women Entrepreneurs, Women's Empowerment.

Abstract

This paper introduces the WEMPOWERMENT Scorecard, a contextualized assessment tool designed to measure women's entrepreneurial empowerment in developing economies. The purpose of the research is to conceptualize, develop, and validate a multidimensional tool that can guide inclusive ecosystem reform in developing economies. Grounded in Entrepreneurship Theory, Social Justice Theory, and Empowerment Theory, the scorecard is based on a multidimensional model developed from 72 phenomenological qualitative interviews with women entrepreneurs in Egypt, capturing empowerment as a dynamic and transformative process.

A three-phase pilot involving 90 women entrepreneurs was conducted to test the tool's clarity, cultural resonance, and empirical robustness. Reliability and validity were established through construct alignment with the model's core dimensions, expert evaluations from scholars in gender and entrepreneurship, participant feedback on usability and relevance, and internal consistency analysis using Cronbach's Alpha.

Findings reveal that empowerment is best understood across four interrelated dimensions: within, to, with, and over, each achieved through perceptual, cognitive, relational, and material transformations. These processes unfold across individual, organizational, and community levels, highlighting the systemic nature of women's entrepreneurial empowerment.

The research presents a comprehensive and operational framework for assessing women's empowerment in entrepreneurship in developing economies. The WEMPOWERMENT Scorecard emerges as a theoretically grounded and practically applicable diagnostic and strategic tool. It enables stakeholders across policy, finance, development, education, and support sectors to design evidence-based interventions that address structural barriers and advance gender-inclusive and equitable ecosystem reform. Its adaptable design and methodological rigor make it a significant contribution to gendered entrepreneurship research, with strong potential for application across other developing country contexts.

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Introduction

Empowering Women Entrepreneurs in Developing Economies

Women's entrepreneurship holds transformative potential for sustainable economic growth, job creation, and social advancement. Globally, empowering women entrepreneurs could contribute up to USD 7 trillion to the economy and create over 400 million jobs (CITI, 2022; UN Women, 2024). Yet, in many developing economies, including Egypt, women remain significantly underrepresented due to entrenched social, economic, and institutional barriers (Ogundana, 2020). Egypt ranks among the lowest globally in women's participation in entrepreneurship (Business Insider Africa, 2023), with just 12.6% of businesses co-founded by women and a startup rate of 3.6%, far below the global average of 10.6% (GEM, 2023). These ventures are typically necessity-driven and concentrated in informal sectors, constrained by limited access to finance, mentorship, and networks, as well as gendered societal expectations and regulatory hurdles (El-Fiky, 2021; Khayal, 2021).

While global attention to women's empowerment has grown, most existing empowerment assessment tools remain broad in focus, targeting health, education, and political participation, and rarely address the complex realities of women entrepreneurs (Khan et al., 2010). This has left a significant gap in tools that are context-specific, entrepreneurship-focused, and responsive to structural and cultural barriers faced by women in developing ecosystems, hindering the design of targeted, effective support interventions.

To address this gap, the WEMPOWERMENT Index and Scorecard was developed as a context-specific tool grounded in Entrepreneurship Theory, Social Justice Theory, and Empowerment Theory. It captures both personal and structural dimensions of empowerment, ranging from individual self-efficacy and agency, to access to markets and institutional equity. This integrated framework assesses empowerment across four dimensions (Within, To, With, and Over) and at three levels: individual, organizational, and community. It reflects a nuanced understanding of empowerment as both a personal transformation and a system-wide shift in opportunity structures.

This research introduces the WEMPOWERMENT Index and Scorecard as a validated, practical tool for assessing the empowerment of women entrepreneurs in developing economies. Its objectives are to (1) validate the tool's internal consistency and conceptual coherence, (2) explore its utility as a strategic diagnostic tool ecosystem stakeholders, and (3) inform inclusive interventions that support women in entrepreneurship. In doing so, it bridges theory and practice, offering a scalable model grounded in lived entrepreneurial experiences in Egypt and potentially adaptable to similar contexts.

Literature Review and Critique

The WEMPOWERMENT Model and Scorecard are grounded in three interrelated theoretical pillars: Entrepreneurship Theory, Social Justice Theory, and Empowerment Theory. Together, these offer a multi-dimensional lens on the barriers and enablers shaping women's entrepreneurial empowerment in developing contexts.

Entrepreneurship Theory

Entrepreneurship theories traditionally examine how individuals identify opportunities and launch ventures. However, most remain gender-neutral and fail to address the specific challenges that disproportionately affect women, especially in developing economies. Psychological theories emphasize personal traits like self-efficacy, innovativeness and resourcefulness (Shane, 2012), but often overlook contextual constraints. Sociological and anthropological theories explore how norms, networks, and culture influence behavior (Weber, 1930; Hoselitz, 1952; Cochran, 1965; Kunkel, 1965), yet rarely confront institutional gender biases. Economic theories stress rational choice and market behavior (Mises, 1949; Kirzner, 1973), while disregarding barriers like discriminatory lending and regulatory exclusion.

Integrated approaches (Bygrave, 1989) aim for comprehensiveness but typically fail to incorporate gendered experiences.

These limitations are especially pronounced in developing economies like Egypt, where women's ventures are frequently necessity-driven, informal, and confined to low-growth sectors (GEM, 2023). Women entrepreneurs often rely on personal savings or informal networks, and face legal, financial, and social obstacles, including exclusion from business networks, limited property rights, and a lack of visible role models (Hassan & Zaharia, 2021). The WEMPOWERMENT Index addresses these gaps by offering a more comprehensive perspective, integrating personal agency with ecosystem-level constraints often overlooked in traditional entrepreneurship theory.

Social Justice Theory

Social Justice Theory frames empowerment as a response to systemic inequities. Its three core dimensions: distributive, procedural, and interactional, are directly applicable to women entrepreneurs (Rawls, 1971; Bies & Moag, 1986). Distributive justice relates to inequities in access to finance, training, and market opportunities (Huffman & King, 2017). Procedural justice highlights exclusionary regulatory systems that may require male authorization or fail to accommodate women (Thibaut & Walker, 1975; Williams et al., 2017). Interactional justice reflects persistent stereotyping and marginalization in business interactions (Marlow & McAdam, 2015). In Egypt, these injustices and entrenched gender roles manifest through restricted mobility, limited visibility, and the under-recognition of women's competencies. This underscores the importance of redesigning entrepreneurial ecosystems to promote fairness, access, and voice, principles that are embedded in the design of the WEMPOWERMENT Index through the lens of social justice theory.

Empowerment Theory

Empowerment Theory explains how individuals gain agency, autonomy, and control over resources. For women entrepreneurs, this includes navigating social constraints, building confidence, and accessing capital, knowledge, information, and networks (Kabeer, 1999; Zimmerman, 1995). Empowerment has become a strategic global objective, reflected in development agendas such as the Sustainable Development Goals (SDG 5 on gender equality), the Beijing Platform for Action, and UN Women's global initiatives. These frameworks underscore that empowerment is both a personal transformation and a structural imperative for inclusive economic development (Neha & Ansari, 2020). Yet, in Egypt, women-led ventures remain small-scale, informal, and under-resourced (GEM, 2023), revealing persistent structural and social barriers. The WEMPOWERMENT Index aligns with empowerment theory's multidimensional view, capturing both internal enablers (such as agency, confidence) and external conditions (including support systems, ecosystem equity) essential for entrepreneurial success.

Existing Empowerment Assessment Frameworks

Several established indices and scorecards assess women's empowerment across social, economic, and political dimensions (Table 1). These frameworks offer valuable insights into economic participation, health, education, and social norms, and are widely used to benchmark gender equality at national and global levels (Khan et al., 2010).

However, despite their utility, these frameworks often fall short in capturing the complex realities of women entrepreneurs, particularly in developing economies. Among the most prominent frameworks is the Gender Empowerment Measure (GEM), which focuses on political and economic participation, including leadership roles, income, and representation in high-status positions (UNDP, 1995), but lacks specificity in entrepreneurial contexts. The Gender Development Index (GDI) measures disparities in health, education, and income (UNDP, 2010), yet does not account for factors such as market access or capital acquisition that directly affect entrepreneurial activity. Oxfam's Women's Economic Empower-

ment Framework (WEE) offers a broader, systemic view of empowerment (Oxfam International, 2017), but still overlooks critical ecosystem-level enablers necessary for supporting women entrepreneurs. Most of these tools remain disconnected from entrepreneurship and tend to generalize or exclude critical dimensions such as access to finance, markets, targeted support, and regulatory fairness, leaving a gap in assessing empowerment for women navigating structural and cultural constraints in business.

Table 1: Women's Empowerment Indices

Index/Scorecard	Focus	Methodology	Source
Gender Empowerment Measure (GEM)	Measures gender inequality in political and economic participation and power over economic resources.	Aggregation of indicators like political participation, economic opportunities, & income equality.	UNDP, 1995
Gender Development Index (GDI)	Measures gender disparities in human development (health, education, income).	Compares Human Development Index (HDI) values for genders.	UNDP, 2010
Oxfam's Women's Economic Empowerment (WEE) Framework	Promotes women's economic empowerment by addressing barriers at individual, household, community, and institutional levels.	Systemic approach addressing economic and social barriers through participatory methods, legal reforms, & norm changes.	Oxfam International, 2017
Gender Inequality Index (GII)	Measures gender disparities in reproductive health, empowerment, and labor force participation.	Composite index combining dimensions of health, empowerment, & labor market participation.	UNDP, 2020
Global Gender Gap Index (GGGI)	Tracks gender gaps in economic participation, education, health, and political empowerment.	Multidimensional measure using weighted indicators for economic, educational, health, & political gaps.	World Economic Forum, 2020
Social Institutions and Gender Index (SIGI)	Assesses gender discrimination in social institutions, laws, and practices across family, resources, and civil liberties.	Categorical scoring based on discrimination levels in social institutions and practices.	OECD, 2019
African Gender Development Index (AGDI)	Measures gender equality across social, economic, and political dimensions in Africa.	Composite score based on performance in social, economic, and political dimensions.	UNECA, 2004
Economic Participation and Opportunity Index	Assesses women's participation in labor, income, financial access, and control over resources.	Weighted aggregation of data on labor, income, and resource control.	World Bank, 2021
UN Women's Empowerment Principles Gender Gap Analysis Tool	Measures corporate adherence to gender equality principles in leadership, workplace equity, and community engagement.	Assessment tool with seven principles related to workplace and community gender equality.	UN Women & UN Global Compact, 2010
Women's Empowerment Principles (WEPs)	Evaluates gender-related policies in businesses across leadership, workplace, and community levels.	Corporate-focused index evaluating adherence to Women's Empowerment Principles (WEPs).	UN Women & UN Global Compact, 2021
Women's Empowerment in Agriculture Index (WEAI)	Measures women's empowerment in agriculture across domains like decision-making, access to resources, income control, leadership, and time.	Threshold-based multidimensional measure aggregated into a composite score.	Alkire et al., 2013
Oxfam's Household Care Survey and Gender Analysis Scorecards	Measures unpaid care work distribution and its impact on women's empowerment and economic participation.	Survey-based analysis of unpaid care work and its effects on empowerment.	Oxfam International, 2020
World Bank's Gender Data Portal Scorecards	Assesses gender disparities in education, health, labor force participation, and financial access.	Aggregated data on gender disparities across key development indicators.	World Bank, 2020

Source: Barsoum (2024)

To bridge this gap, the WEMPOWERMENT Index introduces a tailored framework rooted in theory and validated through fieldwork. It captures the multidimensional nature of empowerment across the

entrepreneurial journey, integrating personal agency, relational networks, and ecosystem-level factors in contexts where gender disparities are most pronounced.

The WEMPOWERMENT Model

The WEMPOWERMENT Model (Barsoum, 2024), illustrated in Figure 1, presents a practical, multi-level framework to advance women’s entrepreneurial empowerment in developing economies. Grounded in the intersection of gender, entrepreneurship, and local context, the model provides a structured approach to understanding and fostering empowerment within Egypt’s entrepreneurial landscape and other similar contexts.

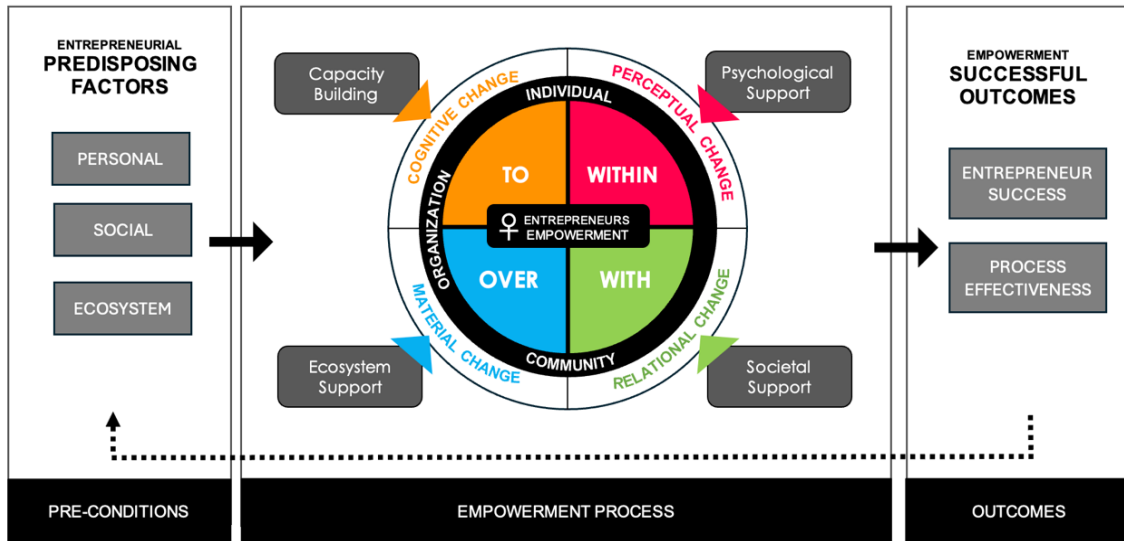


Figure 1: The ‘WEMPOWERMENT’ Model
Source: Barsoum (2024)

The model presents empowerment as a cyclical, three-phase journey: Preconditions (individual, social, and ecosystem-level factors that shape women’s entry into entrepreneurship); Empowerment Process (transformational changes across individual, organizational, and community levels); and Outcomes (indicators of entrepreneurial success and impact, feeding back to influence future conditions).

Empowerment is conceptualized across three levels: Individual (Psychological and capability-related dimensions including self-efficacy, confidence, and agency); Organizational (Structural enablers within the business including strategic capacity, resources, and operational strength); and Community (Ecosystem-level influences such as norms, policy, infrastructure, and access to networks).

Central to the model is the Empowerment Process, driven by four interrelated transformations that collectively shape a woman’s entrepreneurial journey. Perceptual transformation enhances self-worth, confidence, and resilience, allowing a fundamental shift in mindset and self-perception, leading to ‘Empowerment Within’. Cognitive transformation equips women with the knowledge, skills, and capabilities necessary to act entrepreneurially, resulting in ‘Empowerment To’. Relational transformation strengthens social capital through access to networks, mentorship, and inclusive support systems, contributing to ‘Empowerment With’. Finally, material transformation expands access to financial resources, markets, and decision-making power, enabling ‘Empowerment Over’.

These transformations unfold across individual, organizational, and community levels, forming the multidimensional foundation of the WEMPOWERMENT model. This model underpins the WEMPOWERMENT Index and Scorecard, tools designed to translate empowerment into measurable, actionable components. By offering a systems-level perspective, the model supports stakeholders in policy, finance, development, and education to design targeted interventions that address layered barriers and promote sustainable inclusion and gender equity in entrepreneurship.

Research Methodology

The WEMPOWERMENT Index and Scorecard were developed and validated using a structured, multi-phase methodology to ensure reliability, validity, and practical relevance. The process involved five key stages: (1) conceptual framework development, (2) tool design, (3) pilot study and sample description, (4) data collection, and (5) reliability and validity testing.

Conceptual Framework Development

The Index is grounded in the WEMPOWERMENT Model, which was developed through qualitative research using a phenomenological approach. This methodology enabled in-depth exploration of the lived experiences of women entrepreneurs, capturing how they define empowerment within Egypt's sociocultural and economic context (Creswell, 2013). The model was shaped through 72 interviews with women entrepreneurs, ecosystem experts, and support organizations, ensuring it reflects empowerment across personal, organizational, and community levels. Scorecard indicators were derived from core themes identified in the qualitative analysis. Items were phrased for clarity, cultural relevance, and resonance with women's lived realities. The tool was translated into Arabic and piloted with six participants to ensure linguistic accuracy and ease of understanding.

Structured as a 5-point Likert-scale questionnaire (1 = Strongly Disagree to 5 = Strongly Agree), the scorecard enables quantification of empowerment perceptions while maintaining analytical integrity (DeVellis, 2017). Empowerment was assessed along two axes: 1) Empowerment Level: Individual, organizational, and community levels; and 2) Empowerment Dimension: Within, To, With, and Over. This dual-axis structure facilitates an integrated understanding of empowerment's depth and distribution, generating actionable insights into both internal capabilities and ecosystem-level enablers.

Pilot Study and Sample Description

A three-phase pilot study was conducted with purposive samples of 30 women entrepreneurs per round, in line with pilot study norms for tool refinement (Johanson & Brooks, 2010). Participants represented diverse ages, sectors, and stages, from nascent startups to growth-phase and established businesses, ensuring contextual relevance.

Participants were drawn from various governorates to ensure geographic inclusion. They operated across sectors such as education, arts, agriculture, manufacturing, health, food and beverage, fashion, technology, and services. Approximately 45% had formally registered businesses, while 55% operated informally. The sample reflected a diverse group of women navigating different stages of entrepreneurship in Egypt.

Data Collection Process

Data were collected electronically via Google Forms, with the WEMPOWERMENT Scorecard disseminated to women entrepreneurs in both Arabic and English to ensure accessibility and cultural relevance. Participants completed the tool independently and provided structured feedback on clarity, flow, and content through embedded questions. Each participant received clear instructions and provided informed consent, with voluntary participation and the option to withdraw at any stage. The pilot study was conducted over four months through three iterative rounds. Findings from each round guided refinements to content and structure, enhancing the tool's coherence, usability, and contextual fit.

Reliability and Validity Testing

Multiple methods were employed to assess the reliability and validity of the scorecard. Construct validity (Cronbach & Meehl, 1955) was established by aligning the items with the defined dimensions and levels of the WEMPOWERMENT Model, ensuring theoretical coherence. Content validity (Haynes, Richard & Kubany, 1995) was supported through expert reviews by specialists in entrepreneurship, empowerment, and gender studies, who confirmed the tool's comprehensive coverage of relevant constructs. Face validity (Holden, 2010) was confirmed through pilot participant feedback, which affirmed the scorecard's clarity, practicality, and relevance to the lived experiences of women entrepreneurs. Internal consistency was evaluated using Cronbach's Alpha (Tavakol & Dennick, 2011). The results confirmed high reliability across all empowerment dimensions.

Research Findings and Analysis

To establish the reliability and validity of the WEMPOWERMENT Scorecard, the study employed a combination of statistical and qualitative methods, including conceptual mapping and expert review.

Construct Validity - Conceptual Structuring of the Scorecard

The scorecard was designed using a theory-informed structure grounded in the WEMPOWERMENT Model. Each item was systematically mapped to one of six analytical groupings, based on its alignment with one of four empowerment dimensions (Within, To, Over, With), and their corresponding levels of influence (individual, organizational, and community), as illustrated in Table 2. This structure ensured strong conceptual alignment and reinforced the tool's multi-level, multi-dimensional logic. Construct validity (Cronbach & Meehl, 1955) was established through this rigorous mapping process, reflecting intentional, theory-informed design and ensuring alignment with constructs derived from entrepreneurship, social justice, and empowerment literature.

Table 2: Wempowerment Scorecard Structural Logic

Dimension	Level	Indicators
Power Within	Individual	Confidence, Self-Esteem, Need for Achievement, Growth Mindset, Self Leadership
Power To		Self-Efficacy, Innovativeness, Resilience, Risk Taking, GRIT, Proactivity, Resourcefulness, Agency, Entrepreneurial Skills, Conscientiousness, Openness, Neuroticism, Agreeableness, Extraversion, Adaptability, Transformational Leadership, Continuous Learning
Power Over	Organizational	Skill & Internal Capacity, Vision & Goal Achievement, Innovation/R&D Capacity
	Community	Access to Resources, Infrastructure & Information, Access to Markets & Opps, St Partnerships & Alliances, Regulatory Environment, Ecosystem Equity, Technology Utilization, Competitive Position, Customer/Market, Feedback Cultural & Social Capital, Crisis Management & Risk Mitigation
Power With		Regulations & Legislations, Ecosystem Equity, Societal Bias/Gender Roles & Norms, Entrepreneurial Attitude, Structural Support, Infrastructure & Information Availability, Perception of Competence & Ability, Business Network Inclusion, Business Advocacy, Understanding Challenges, Representation in Business, Associations/Voice
		Community Support, Market Access, Role Models, Family Support, Tailored Support Availability, Synergy, Collaboration & Partnerships

Content Validity – Expert Review

Content validity (Haynes, Richard & Kubany, 1995) was assessed through a structured review by domain experts in entrepreneurship, gender, and empowerment. Their evaluation affirmed that the scorecard adequately captured the breadth of relevant empowerment constructs and was well-suited to the lived realities of women entrepreneurs. Based on their feedback, minor linguistic and contextual adjustments were made to enhance clarity and ensure stronger alignment with both theoretical foundations and practical application.

Face Validity – Participant Feedback

Face validity (Holden, 2010) was assessed during the pilot phase through structured feedback from 30 respondents who completed the scorecard. A dedicated section of the tool included eight Likert-scale items (1 = Strongly Disagree to 5 = Strongly Agree) evaluating clarity, relevance, ease of use, and structure. The results are summarized in Table 3.

Question	Mode	Mean	SD
The length of the questionnaire was appropriate	3	2.33	0.99
The questions in the questionnaire were easy to understand	5	4.11	1.01
The wording of the questions was clear and straightforward	5	4.17	0.88
The questionnaire had a smooth and logical flow	4	4.11	0.92
The questions in the questionnaire were relevant to my experience	4	3.86	0.93
The time required to complete the questionnaire was reasonable	5	4.60	0.55
I found it easy to complete the questionnaire	5	4.80	0.45
I am satisfied with the overall structure & design of the questionnaire	4	4.00	1.00

Key findings include:

- The average score across all items was 4.00, reflecting overall positive reception.
- Highest ratings included: Ease of completion (Mean = 4.80); Reasonable time to complete (Mean = 4.60); and Clarity of wording (Mean = 4.17)
- The lowest rated item was questionnaire length (Mean = 2.33), suggesting some concern regarding its length despite strong usability ratings.

Overall, participant feedback supported the scorecard's clarity, relevance, and practical applicability, reinforcing its face validity.

Internal Consistency – Cronbach's Alpha

Internal consistency was evaluated using Cronbach's Alpha, a statistical measure of the internal reliability of grouped questionnaire items (Tavakol & Dennick, 2011). The scorecard underwent three iterative rounds of testing, with progressive refinements enhancing its robustness. Table 4 presents Cronbach's Alpha values across all variables in each round.

- Round One – Initial Assessment: The first version consisted of 169 items covering 53 variables. Ten variables (18.9%) recorded alpha values below the conventional 0.70 threshold, indicating areas requiring revision for clarity and cohesion.
- Round Two – Tool Refinement: Following targeted revisions, the revised version was reduced to 161 items. Reliability improved markedly, with only 4 variables (7.5%) falling below the threshold, raising the tool's internal consistency to 92.5%.
- Round Three – Final Validation: The final iteration retained the 161-item structure. All variables exceeded the 0.70 threshold, achieving full internal consistency (100%) and confirming the tool's reliability.

This multi-phase validation process confirmed the methodological rigor of the WEMPOWERMENT Scorecard. The final version demonstrates high reliability and coherence, positioning it as a robust instrument for assessing women's entrepreneurial empowerment and producing actionable insights for both academic inquiry and applied use in developing economy contexts.

Table 4: Wempowerment Scorecard Internal Consistency

Empowerment Variable Tested	Scorecard V1		Scorecard V2		Scorecard V3	
	Questions	Ch Alpha	Questions	Ch Alpha	Questions	Ch Alpha
Confidence	Q1-4	0.858	Q1-3	0.818	Q1-3	0.818
Self Esteem	Q5-8	0.782	Q4-6	0.876	Q4-6	0.876
Need for Achievement	Q9-11	0.785	Q7-9	0.827	Q7-9	0.827
Self-Leadership	Q12-14	0.661	Q10-12	0.847	Q10-12	0.847
Growth Mindset	Q15-17	0.527	Q13-15	0.746	Q13-15	0.746
Self-Efficacy	Q18-21	0.698	Q16-18	0.865	Q16-18	0.865
Innovativeness	Q21-23	0.967	Q19-21	0.917	Q19-21	0.917
Resourcefulness	Q24-26	0.719	Q22-24	0.883	Q22-24	0.883
Resilience	Q27-29	0.648	Q25-27	0.864	Q25-27	0.864
Proactivity	Q30-32	0.714	Q28-30	0.696	Q28-30	0.696
Risk Taking	Q33-35	0.858	Q31-33	0.866	Q31-33	0.866
Openness	Q36-38	0.69	Q34-36	0.885	Q34-36	0.885
Conscientiousness	Q39-41	0.92	Q37-39	0.849	Q37-39	0.849
Neuroticism	Q42-44	0.698	Q40-42	0.943	Q40-42	0.943
Extraversion	Q45-47	0.8	Q43-45	0.807	Q43-45	0.807
Agreeableness	Q48-50	0.745	Q46-48	0.908	Q46-48	0.908
GRIT	Q51-53	0.743	Q49-51	0.908	Q49-51	0.908
Adaptability	Q54-56	0.667	Q52-54	0.89	Q52-54	0.89
Agency	Q57-59	0.862	Q55-57	0.901	Q55-57	0.901
Entrepreneurial Skills	Q60-62	0.353	Q58-60	0.849	Q58-60	0.849
Continuous Learning	Q63-65	0.943	Q61-63	0.893	Q61-63	0.893
Transformational Leadership Skills	Q66-70	0.876	Q64-66	0.906	Q64-66	0.906
Skill Building and Internal Capacity	Q71-73	0.798	Q67-69	0.726	Q67-69	0.726
Vision and Goal Achievement	Q74-76	0.881	Q70-72	0.911	Q70-72	0.911
Innovation and R&D Capability	Q77-79	0.642	Q73-75	0.913	Q73-75	0.913
Access to Resources	Q80-86	0.881	Q76-80	0.796	Q76-80	0.796
Infrastructure and Information	Q87-90	0.836	Q81-83	0.837	Q81-83	0.837
Access to Markets and Opportunities	Q91-93	0.864	Q84-86	0.919	Q84-86	0.919
Strategic Partnerships and Alliances	Q94-96	0.842	Q87-89	0.956	Q87-89	0.956
Regulatory Environment	Q97-99	0.716	Q90-92	0.853	Q90-92	0.853
Ecosystem Equity	Q100-102	0.791	Q93-95	0.897	Q93-95	0.897
Cultural and Social Capital	Q103-105	0.747	Q96-98	0.757	Q96-98	0.757
Customer and Market Feedback	Q106-108	0.922	Q99-101	0.938	Q99-101	0.938
Competitive Position	Q109-111	0.546	Q102-104	0.972	Q102-104	0.972
Technology Utilization	Q112-114	0.732	Q105-107	0.963	Q105-107	0.963
Crisis Mngmt & Risk Mitigation	Q115-117	0.862	Q108-110	0.932	Q108-110	0.932
Support from Community	Q118-120	0.851	Q111-113	0.908	Q111-113	0.908
Access to Networks	Q121-123	0.808	Q114-116	0.831	Q114-116	0.831
Role Models	Q124-126	0.969	Q117-119	0.933	Q117-119	0.933
Availability of Support	Q127-129	0.835	Q120-122	0.686	Q120-122	0.835
Family Support	Q130-132	0.911	Q123-125	0.949	Q123-125	0.949
Regulations & Legislations	Q133-135	0.838	Q126-128	0.673	Q126-128	0.838
Ecosystem Equity	Q136-138	0.898	Q129-131	0.817	Q129-131	0.898
Infrastructure & Info Availability	Q139-142	0.908	Q132-134	0.828	Q132-134	0.828
Synergy, Collab & Partnerships	Q143-145	0.92	Q135-137	0.897	Q135-137	0.92
Societal Bias/Gender Roles & Norms	Q146-148	0.823	Q138-140	0.787	Q138-140	0.787
Attitude Toward Entrepreneurship	Q149-151	0.802	Q141-143	0.877	Q141-143	0.877
Structural Support to Help Women	Q152-154	0.989	Q144-146	0.951	Q144-146	0.989
Perception of Competence & Ability	Q155-157	0.821	Q147-149	0.84	Q147-149	0.84
Inclusion in Business Networks	Q158-160	0.791	Q150-152	0.691	Q150-152	0.791
Advocacy for Women in Business	Q161-163	0.926	Q153-155	0.767	Q153-155	0.926
Understanding Challenges	Q164-166	0.881	Q156-158	0.857	Q156-158	0.857
Representation & Voice	Q167-169	0.888	Q159-161	0.801	Q159-161	0.888

Discussion and Synthesis

The WEMPOWERMENT Scorecard is a contextually grounded, theory-informed, and empirically validated tool that captures the complexity of women's entrepreneurial empowerment in developing economies. Bridging Entrepreneurship Theory, Social Justice Theory, and Empowerment Theory, it offers a multidimensional lens that integrates individual agency with structural conditions.

Aligned with Empowerment Theory, the scorecard conceptualizes empowerment as a dynamic, nonlinear process of transformation. It operationalizes this through four interconnected dimensions:

- ‘Within’ – building psychological enablers (autonomy, confidence, self-worth)
- ‘To’ – developing cognitive elements (competencies, decision-making, intent)
- ‘Over’ – expanding material access to resources, markets, support, and influence
- ‘With’ – enhancing relational factors (networks, mentorship, peer collaboration)

These dimensions, supported by evidence of reliability and validity, map onto the individual, organizational, and community levels of empowerment, reflecting how it unfolds across multiple domains. This framing aligns with Zimmerman’s (1995) conception of psychological empowerment and Kabeer’s (1999) relational model of choice and agency, highlighting empowerment as an evolving and context-specific process shaped by both internal growth and external conditions.

Informed by Social Justice Theory (Frankena, 1962; Rawls, 1971; Bies & Moag, 1986), the scorecard embeds constructs of distributive justice (equitable access to finance and opportunities), procedural justice (fairness in registration, licensing, and procurement), and interactional justice (respect and recognition). This lens reveals gendered inequities within institutional and cultural systems, particularly in developing nation contexts like Egypt, and guides reforms toward more inclusive entrepreneurship ecosystems.

The WEMPOWERMENT Scorecard reframes entrepreneurship as a socially embedded and systemically influenced journey, moving beyond a narrow focus on individual traits. It provides a structured framework to understand and measure empowerment as both a personal transformation and an institutional challenge. By capturing how empowerment unfolds across individual, organizational, and community levels, the scorecard offers more equitable and context-aware definitions of entrepreneurial success.

Designed as a holistic and adaptable tool, the WEMPOWERMENT Scorecard supports three core applications: (1) diagnosing empowerment gaps across dimensions and levels, (2) informing targeted, context-sensitive interventions, and (3) evaluating the impact of support programs over time. Though developed in Egypt, its theoretical grounding and flexible design make it applicable in other developing contexts, enabling policymakers, ecosystem actors, and support organizations to localize strategies and scale inclusive entrepreneurship using reliable, evidence-based insights.

Implications and Applications

The WEMPOWERMENT Scorecard transforms empowerment theory into a practical, scalable diagnostic tool for supporting women entrepreneurs in developing economies. By capturing empowerment across personal, relational, and structural dimensions, it offers actionable insights that extend beyond individual assessment toward system-level change. To maximize its impact, three key pathways are proposed for operationalizing the scorecard in Egypt and in other developing nation contexts:

- Policymakers can integrate the scorecard into national entrepreneurship strategies and gender action plans to assess gaps in access, participation, and support. It can inform policy design, guide resource allocation, and support the development of inclusive monitoring frameworks aligned with SDG targets.
- Financial Institutions can apply the scorecard to better understand women’s empowerment profiles and access challenges, enabling the design of tailored financial products, inclusive credit assessments, and gender-sensitive risk frameworks.
- Educational Institutions, including universities, research centers, and innovation hubs, can utilize the scorecard to align curricula, training, and R&D initiatives with empowerment dimensions, supporting

women-led ventures and embedding gender equity into entrepreneurship education and innovation ecosystems.

- Entrepreneurship Support Organizations, such as incubators and accelerators can embed the tool within program cycles (as a baseline diagnostic, mid-program checkpoint, or exit evaluation) allowing tailored support that responds to individual empowerment profiles and ecosystem barriers. Aggregated insights can also shape more responsive service offerings and mentor matching.
- International Development Agencies can adopt the scorecard as a contextual evaluation tool across multi-country programs. It offers a framework for designing interventions that reflect local gendered realities while maintaining cross-country comparability. Agencies can also fund the localization, training, and digitization of the tool for broader uptake by local ecosystem actors.
- Community Support Organizations can leverage the scorecard to identify social and relational barriers faced by women, inform advocacy and storytelling strategies, and develop community-based initiatives that foster supportive environments for women's entrepreneurship.
- Women Entrepreneurs can use the tool for self-reflection and strategic planning, helping them track their empowerment progress, identify personal and structural gaps, and set actionable goals for business and personal development.

By bridging measurement, strategy, and implementation, the WEMPOWERMENT Scorecard enables stakeholders to design more inclusive, responsive, and empowering entrepreneurial ecosystems. Its potential lies not only in what it measures, but in how it mobilizes collective action to foster systemic change.

Limitations and Future Research

While the WEMPOWERMENT Scorecard represents an important advancement in assessing women's entrepreneurial empowerment, several limitations should be acknowledged. First, the reliance on self-reported data introduces potential biases, including social desirability effects and varied interpretation of constructs. Although face validity findings were strong, further cognitive testing would enhance clarity and interpretive consistency. Second, confirmatory factor analysis (CFA) was not conducted. Future research should apply CFA to larger and more diverse samples to strengthen structural validity and improve generalizability. Relatedly, examining the tool's performance across different developing-country contexts would provide evidence for cross-country applicability and support the development of a standardized yet adaptable measurement framework. Third, the cross-sectional design captures empowerment at a single point in time; longitudinal studies are needed to understand how empowerment evolves and to evaluate intervention impact. Fourth, while the scorecard offers diagnostic insights, it does not yet include composite scoring or threshold benchmarks. Establishing these metrics would enhance its utility for program design and monitoring. Finally, digitizing the scorecard could improve accessibility, scalability, and real-time use by ecosystem stakeholders and women entrepreneurs.

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veloped as part of doctoral research and refined through postdoctoral work to support women's entrepreneurial empowerment across developing contexts.

The WEMPOWERMENT Scorecard

A Contextual Tool for Assessing Women's Entrepreneurial Empowerment in Developing Economies

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