

FORM 2
THE PATENTS ACT, 1970
(39 of 1970)
&
THE PATENT RULES, 2003

Complete Specification
(See section 10 and rule 13)

1. Title of the Invention: **THE INFLUENCING HUMAN CAPITAL ON THE ENTREPRENEURIAL SUCCESS OF BUSINESS WOMEN IN INDIA**

2. Applicants:-

Name	Nationality	Address
Dr. Varshini S K	Indian	Assistant Professor, Department of Commerce and Management, Seshadripuram College, Nagappa Sheet, Kumarapark road, Seshadripuram, Bangalore, Karnataka-560020, India.
Dr. S. Archana	Indian	Associate Professor, Department of Corporate Secretaryship, Dr. N. G. P Arts and Science College, Kalapatti Road, Coimbatore, Tamil Nadu-641048, India.
Dr. Puja Sharma	Indian	Assistant Professor, Department of B.Com, Dayananda Sagar of Arts, Science and Commerce, Shavige Malleshwara hills, Kumarswamy Layout, Bengaluru, Karnataka-560078, India.
Dr. Shobana Lakshmanan	Indian	Assistant Professor, Department of Commerce, Hindusthan College of Science and Commerce, Ingur, Perundurai, Erode, Tamil Nadu-638052, India.
Dr. Shenbagaveni Gopalan	Indian	Assistant Professor, Department of Management, Hindusthan College of Science and Commerce, Chennaimalai Road, Ingur Post, Perundurai, Erode, Tamil Nadu-638052, India.
Jayanthi Atthappa Gounder	Indian	Associate Professor, Department of MBA, Hindusthan College of Engineering and Technology, Coimbatore, Tamil Nadu-642114, India.
Mr. Prasanth Arumugam	Indian	Assistant Professor, Department of MBA, Hindusthan College of Engineering and Technology, Coimbatore, Tamil Nadu-642114, India.
Dr. M. Devaki	Indian	Assistant Professor, Department of Commerce, Thanthai Hans Roever College (Autonomous), Perambalur, Tamil Nadu-621212, India.

3. Preamble to the description:

The following specification particularly describes the invention and the manner in which it is to be performed.

4. DESCRIPTION

FIELD OF THE INVENTION

This invention relates to the field of human resource development, particularly focusing on the strategic influence of human capital. It addresses gender-specific entrepreneurial outcomes within the socio-economic landscape of India. Specifically, it explores how knowledge, skills, education, and social support drive the success of women-led enterprises.

BACKGROUND OF THE INVENTION

Entrepreneurship is a pivotal driver of economic development, innovation, and employment. In India, women entrepreneurs are increasingly contributing to diverse sectors ranging from textiles and crafts to technology and manufacturing. However, the rate of success among businesswomen varies significantly across regions and industries, largely influenced by the availability and effective utilization of human capital. Human capital, which encompasses education, training, experience, and soft skills, plays a crucial role in entrepreneurial performance. For women, human capital is not only a matter of qualifications but also includes access to mentorship, social capital, and cultural acceptance. Despite numerous government schemes and financial initiatives aimed at promoting female entrepreneurship, structural challenges persist. Women face societal biases, limited mobility, restricted access to higher education, and limited professional networks. These barriers hinder the full development of their human capital and, by extension, their ability to scale and sustain businesses. In regions where women have access to targeted training, mentorship programs, and education, their entrepreneurial ventures exhibit higher success rates and innovation levels.

Traditional metrics for entrepreneurial success such as profitability and scalability fail to consider the unique pathways and struggles of women business owners. Therefore, the need for a nuanced approach to assessing the impact of human capital on entrepreneurial outcomes

is imperative. Furthermore, the existing body of literature often fails to contextualize this relationship within the Indian socio-cultural and economic framework, where norms, family dynamics, and systemic gender disparities play a significant role. This invention bridges that gap by providing an analytical framework to measure and map how components of human capital contribute to the growth, sustainability, and societal impact of women-led enterprises in India. Through qualitative and quantitative modeling, the invention enables policy-makers, incubators, and financial institutions to better assess needs, allocate resources, and measure outcomes. The framework also supports predictive analytics, identifying high-potential women entrepreneurs based on their human capital profile.

Additionally, this invention is not limited to academic or theoretical understanding it provides practical insights for designing skill-development programs, fostering mentorship networks, and optimizing policy interventions. As a scalable, data-driven solution, it adapts to regional disparities and sector-specific challenges. By spotlighting the role of education, emotional intelligence, leadership style, and social learning in entrepreneurial success, it provides a multidimensional tool for empowering women in business. The background of this invention stems from the intersection of gender studies, entrepreneurship development, and human capital theory. It fills a crucial void in innovation-driven, inclusive economic planning by focusing on the vital yet under-quantified impact of human capital on businesswomen in India.

SUMMARY OF THE INVENTION

This invention presents a dynamic, analytical framework to evaluate and enhance the influence of human capital on the entrepreneurial success of businesswomen in India. It identifies and quantifies the core components of human capital formal education, domain-specific training, cognitive skills, social competencies, and experience as primary variables affecting business growth and sustainability. Using a mixed-methods approach, the invention

incorporates data analytics, interviews, surveys, and longitudinal studies to capture real-time entrepreneurial challenges faced by women. It introduces a scoring matrix and decision-support system that maps individual human capital elements to business performance indicators such as profitability, longevity, and innovation. The invention also integrates socio-cultural filters that adjust for regional disparities, social barriers, and support structures. At the technological core, the invention uses AI and machine learning algorithms to analyze patterns, identify critical gaps in human capital, and forecast entrepreneurial potential. This allows for real-time feedback loops that support capacity-building efforts through personalized recommendations and interventions.

Furthermore, the invention serves as a benchmarking tool for government and non-government organizations to design more effective entrepreneurship development programs. It enables institutions to allocate funding and mentorship resources more accurately by evaluating the composite human capital index of applicants. This invention thereby shifts the focus from financial capital alone to a more holistic view that values intellectual, emotional, and social capabilities. It is scalable, adaptable, and policy-ready, ensuring its relevance across diverse sectors and demographics. Ultimately, it aims to elevate the role of Indian businesswomen in economic development through targeted human capital empowerment.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig.1: Depicts flow diagram for the proposed invention.

Fig.2: Depicts factors influencing women-led entrepreneurial success in India.

Fig.3: Depicts pros and cons for women entrepreneurship in India.

BRIEF DESCRIPTION OF THE INVENTION

CONCEPTUAL FOUNDATION AND PURPOSE OF THE INVENTION

The invention addresses a crucial socio-economic dynamic how human capital dimensions such as education, skills, experience, and personal attributes significantly contribute to the

entrepreneurial success of Indian businesswomen. In the context of a rapidly evolving economic landscape in India, where women are increasingly participating in entrepreneurial ventures, understanding and optimizing the human capital factors influencing their success becomes not only timely but essential for inclusive development. The invention provides an innovative and data-driven framework that captures, evaluates, and enhances the critical components of human capital that directly or indirectly foster the entrepreneurial performance of women in diverse business sectors.

This invention leverages a hybrid methodological approach, combining quantitative and qualitative assessments, psychometric evaluation, AI-driven profiling, and sociocultural impact analysis to assess human capital dimensions. Traditional metrics such as formal education and work experience are analyzed in parallel with soft competencies like risk tolerance, leadership acumen, emotional intelligence, creativity, and resilience. The invention proposes a predictive and prescriptive model that assesses the potential of women entrepreneurs and offers actionable insights for personal development, policy formulation, and institutional support mechanisms. A central tenet of the invention is the identification and classification of human capital attributes into core categories: Formal Capital (educational qualifications, vocational training), Experiential Capital (previous business or industry experience), Social Capital (networks, mentors, family support), and *Personal Capital* (innate traits, psychological strength). Through structured diagnostics, the invention captures the interplay among these elements and their composite impact on the growth trajectory of women-led enterprises across urban and rural India. This multi-dimensional profiling ensures that the assessment of entrepreneurial potential is not based solely on academic metrics but considers holistic personal and societal contexts.

The invention also proposes a dynamic Entrepreneurial Human Capital Index (EHCI), tailored specifically for Indian women entrepreneurs. This index quantifies the

entrepreneurial strength of individuals based on weighted indicators aligned with sector-specific and regional challenges. For instance, a woman entrepreneur in rural Gujarat running a dairy cooperative will be evaluated using different indicators than one leading a tech startup in Bengaluru. The EHCI provides a numerical and visual representation of readiness, potential, and areas requiring support, enabling governments, incubators, banks, and NGOs to tailor interventions more effectively.

In addressing systemic issues, the invention integrates a Barrier Mapping System (BMS) which identifies social, economic, legal, and psychological constraints that inhibit human capital optimization. These include gender bias in funding ecosystems, lack of mentorship, restrictive family structures, limited mobility, and low digital literacy. The BMS module not only detects these issues but also suggests micro and macro-level solutions. For example, it might recommend peer-learning groups, digital skills training, or flexible microcredit schemes for low-income women with high entrepreneurial potential.

Moreover, the invention incorporates a Capacity Building and Enhancement Toolkit (CBET). This component is a repository of tailored learning modules, business simulation environments, psychological resilience workshops, and role-model narratives designed to strengthen specific human capital dimensions. Each user receives a personalized development pathway, enabling skill acquisition and confidence-building aligned with their business goals. The CBET system is accessible via mobile platforms to ensure inclusivity for women in low-connectivity regions. From a data science standpoint, the invention is powered by AI-driven analytics, including Machine Learning-based Predictive Modelling and Natural Language Processing (NLP) techniques. These are used to evaluate case studies, track progress, and predict the likelihood of entrepreneurial success based on varying human capital parameters. As the invention collects data over time, it continues to refine its predictions and

recommendations, creating a self-learning ecosystem that adapts to evolving socio-economic conditions.

To foster peer learning and mentorship, the invention also proposes a Human Capital Mentorship Network (HCMN), a digital platform that connects emerging women entrepreneurs with seasoned professionals across industries. This network functions as a two-way knowledge exchange system, where successful women entrepreneurs can share insights, while learners can ask questions, get feedback, and find inspiration. The platform uses algorithmic matching to ensure compatibility between mentor and mentee in terms of goals, values, and industry experience. The purpose of this invention is not just academic or diagnostic—it is transformational. It seeks to create a ripple effect in India's entrepreneurial landscape by equipping women with the clarity, confidence, and capabilities to thrive as business leaders. Furthermore, it challenges the notion that lack of funding is the sole barrier to entrepreneurial growth; instead, it highlights that often, it is underdeveloped or underutilized human capital that limits business performance. This invention thus redefines the paradigm of women entrepreneurship support by focusing on people development over resource distribution.

IMPLEMENTATION ARCHITECTURE, APPLICATIONS, AND STRATEGIC IMPACT

The implementation of this invention involves a multi-layered architecture that seamlessly integrates user profiling, dynamic assessment, learning pathways, mentorship facilitation, and impact measurement. It begins with a Smart Intake and Assessment Interface, where users complete a comprehensive diagnostic questionnaire. This interface adapts based on language preference, literacy level, and business sector, making it suitable for use across socio-economic classes. The AI then processes the input data and generates a personalized Human Capital Profile with recommendations on learning, mentoring, and business development activities.

The invention can be deployed in a modular fashion through institutions such as Women Entrepreneurship Cells, Startup Incubators, Microfinance Institutions, Self-Help Groups (SHGs), Vocational Training Centers, and University Entrepreneurship Programs. In these ecosystems, it functions as both a screening tool for identifying high-potential entrepreneurs and a capacity-building tool for enhancing long-term success. Government initiatives like Stand-Up India, Skill India, and Mudra Yojana can integrate this invention to improve policy targeting and resource allocation.

In educational settings, the invention can be used to tailor entrepreneurship curricula for women students, aligning academic content with industry readiness and regional market dynamics. In incubation ecosystems, it helps decision-makers assess not just business ideas but also the entrepreneur's readiness, ensuring that support is given where it will have the highest impact. For banks and investors, it de-risks funding by offering deeper insights into the entrepreneur's capability to execute their vision, especially in traditionally underbanked segments. The invention also serves as a strategic decision-making tool for policymakers. By aggregating anonymized data across users, it generates heatmaps and dashboards that display the distribution and strength of human capital among women entrepreneurs in different regions, industries, and economic strata. These visualizations help in identifying gaps—such as states with high ambition but low skills—and in designing localized development interventions. Ministries such as the Ministry of Women and Child Development, Ministry of MSME, and NITI Aayog can use these insights to shape more inclusive entrepreneurship development policies.

In terms of innovation, what sets this invention apart is its integrative and adaptive approach. Most entrepreneurship support mechanisms focus on finance, infrastructure, or marketing. This invention instead centers on the human behind the enterprise. It recognizes that the long-term viability of a business is not only determined by market forces but also by the

entrepreneur's learning agility, self-efficacy, and capacity to lead in complexity. These traits, often underrepresented in conventional assessments, are rigorously measured and nurtured in this invention. To ensure cultural relevance, the invention is designed with deep respect for India's linguistic, regional, and cultural diversity. All modules, assessments, and tools are multilingual, with regional customization options. For example, a woman entrepreneur in Tamil Nadu running a weaving business would receive case studies, mentor options, and learning materials that resonate with her local context. This localization increases the relatability and effectiveness of the invention's outputs.

Security and ethics are fundamental to the invention's design. The data collected is encrypted, anonymized, and governed by strict consent protocols. Users have full control over who can view or access their human capital profile. For institutional users, role-based access ensures that only authorized individuals can see sensitive information. The invention is compliant with India's Data Protection Bill and aligns with global best practices for digital data ethics. From a technical standpoint, the invention is cloud-based and scalable. It operates on an API-first architecture, enabling integration with existing educational, financial, and governmental platforms. It also supports mobile-first deployment, ensuring reach among users who rely solely on smartphones. The backend AI is continually updated using machine learning models trained on new data to improve the relevance of suggestions, success predictions, and mentorship matchings.

The social impact of this invention is substantial. It empowers women not just to start businesses but to lead sustainable and impactful enterprises. By strengthening the human capital at the core of every business, it catalyzes higher survival rates, better performance, and increased contributions to local economies. In turn, this leads to job creation, community upliftment, and a more inclusive national growth trajectory.

We Claim:

1. An invention for evaluating human capital's impact on businesswomen's entrepreneurship using multi-dimensional data analysis.
2. A method for generating a human capital index based on formal and informal educational variables.
3. A predictive model using machine learning algorithms to forecast entrepreneurial success probabilities.
4. An adaptive framework that adjusts recommendations based on cultural, regional, and social influences.
5. A decision-support interface for stakeholders to customize development programs.
6. A scoring matrix linking individual competencies to performance outcomes.
7. An integrated feedback mechanism enabling dynamic policy interventions for inclusive growth.

Dated this 8th April 2025

THE INFLUENCING HUMAN CAPITAL ON THE ENTREPRENEURIAL SUCCESS OF BUSINESS WOMEN IN INDIA

ABSTRACT

This invention explores how human capital affects the entrepreneurial success of businesswomen in India. It provides a structured framework integrating education, skills, and experience with performance indicators. Utilizing AI-driven analytics, it identifies key predictors of entrepreneurial outcomes. The invention adjusts for regional and socio-cultural disparities. It employs a mixed-method approach combining qualitative and quantitative data. A Human Capital Index is calculated to forecast business potential. Custom interventions are suggested based on individual analysis. It supports institutions in optimizing resource allocation. The invention promotes inclusive entrepreneurship development. It enhances training, mentorship, and strategic planning programs. Results are measurable, scalable, and policy-informative. The goal is to empower women through data-driven human capital insights.