

Two Day National Seminar
On
**INDIA'S \$5 TRILLION ECONOMY:
THE VISION, CHALLENGES, AND ROADMAP
[5TE-2024]**

Editors

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Dr. Dhanabalan Thangam
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Dr. Sendhilkumar Manoharan

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"INDIA'S \$5 TRILLION ECONOMY: THE VISION,
CHALLENGES. AND ROADMAP"

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Dr. Nissar Ahmed

Chairman - Presidency Group of Institutions

MESSAGE

Dear Esteemed Participants and Distinguished Guests,

I am delighted to extend a warm welcome to each of you on behalf of Presidency College as we embark on an enlightening journey through the corridors of economic aspirations and challenges. It is with immense pleasure and a sense of purpose that we announce the upcoming National Seminar on *"India's \$5 Trillion Economy: The Vision, Challenges, and Roadmap (5TE -2024)."*

In the ever-evolving landscape of global economics, India stands at a pivotal juncture, envisioning a trajectory towards a \$5 trillion economy. This seminar serves as a platform for thought leaders, policymakers, scholars, and industry experts to converge, exchange insights, and deliberate on the multifaceted aspects of this ambitious vision. We believe that achieving sustainable and equitable economic progress is intricately linked to fostering inclusive growth and robust social development.

Our distinguished panel of speakers and participants will delve into the various dimensions of India's economic landscape, exploring the challenges, opportunities, and the roadmap ahead. As we navigate through discussions on economic diversification, policy reforms, infrastructure development, global integration, inclusive growth, and technological advancements, we aim to contribute meaningfully to the ongoing dialogue shaping India's economic future.

I extend my gratitude to all the participants for their valuable contributions and to the organizing committee for their dedicated efforts in making this seminar a reality. May this platform ignite insightful conversations, foster collaborations, and pave the way for innovative solutions that propel India towards economic prosperity.

Wishing you an enriching and fruitful experience at the National Seminar...

Warm regards,

Dr. Nissar Ahmed

Chairman - Presidency Group of Institutions



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Mr. Suhael Ahmed
Vice Chairman

MESSAGE

Dear Esteemed Participants and Respected Guests,

I am thrilled to extend a heartfelt welcome to all of you as we prepare to embark on a significant intellectual journey at Presidency College. It is with great enthusiasm and anticipation that we announce the forthcoming National Seminar on *"India's \$5 Trillion Economy: The Vision, Challenges, and Roadmap - (5TE-2024)." As Vice-Chairman of the college, I am honored to be part of an event that promises to be a catalyst for insightful discussions and meaningful exchanges.*

In the dynamic landscape of the global economy, India is poised at a pivotal juncture, aspiring to reach the remarkable milestone of a \$5 trillion economy. This seminar serves as a pivotal platform for distinguished thought leaders, scholars, policymakers, and industry experts to converge and deliberate on the intricate facets of this vision. At the core of our discussions is the recognition of the pivotal role played by inclusive growth and robust social development in achieving sustainable and equitable economic progress.

Our distinguished lineup of speakers and panelists will delve into the complexities and opportunities presented by India's economic trajectory. Through comprehensive discussions on economic diversification, policy reforms, infrastructure development, global integration, inclusive growth, and technological advancements, we aim to contribute substantively to the ongoing discourse shaping India's economic future.

I express my sincere appreciation to all participants for their invaluable contributions and to the organizing committee for their tireless efforts in orchestrating this enlightening event. May the *National Seminar - 5TE-2024* be a forum where ideas flourish, collaborations blossom, and insights pave the way for innovative solutions, propelling India towards economic prosperity.

Looking forward to engaging discussions and a memorable seminar experience...

Warm regards,
Mr. Suhael Ahmed
Vice-Chairman
Presidency Group of Institutions



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Dr. Suchithra R
Principal

MESSAGE

Dear Esteemed Participants and Esteemed Colleagues,

It is with great pleasure and anticipation that I extend a warm welcome to all participants and guests of the upcoming National Seminar on "*India's \$5 Trillion Economy: The Vision, Challenges, and Roadmap - (5TE-2024)*" at Presidency college. As the Principal of this esteemed institution, I am honored to be part of an event that promises to be a significant forum for knowledge exchange and intellectual discourse.

In the current dynamic economic landscape, India stands at a crucial juncture, envisioning a path towards a remarkable \$5 trillion economy. This seminar provides a unique opportunity for scholars, policymakers, industry experts, and students to converge and deliberate on the multifaceted aspects of this ambitious vision. At the heart of our discussions lies the recognition that inclusive growth and social development are indispensable pillars for achieving sustainable and equitable economic progress.

Our distinguished lineup of speakers and panelists will delve into the intricacies of India's economic trajectory, exploring challenges, opportunities, and the strategic roadmap ahead. Through engaging discussions on economic diversification, policy reforms, technological advancements, global integration, and inclusive growth, we aim to contribute substantively to the ongoing dialogue shaping India's economic future.

I extend my heartfelt gratitude to all participants for their valuable contributions and to the organizing committee for their diligent efforts in orchestrating this intellectually stimulating event. May the National Seminar - 5TE-2024 be a platform where ideas flourish, collaborations thrive, and insights pave the way for innovative solutions, propelling India towards economic prosperity.

Wishing you all a rewarding and enlightening seminar experience...

Warm regards,
Dr. Suchithra R
Principal
Presidency College



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Dr. Dr. Chandan Chavadi

Dean - Presidency Business School

PREFACE

Dear Esteemed Participants and Distinguished Colleagues,

I am delighted to extend a warm welcome to all participants and esteemed guests of the upcoming National Seminar on "India's \$5 Trillion Economy: The Vision, Challenges, and Roadmap - (5TE-2024)" hosted by Presidency Business School. As the Dean of this esteemed institution, I am honored to be part of an event that promises to be a pivotal platform for scholarly discussions and insightful deliberations.

In the ever-evolving landscape of the global economy, India finds itself at a critical juncture, aiming for the significant milestone of a \$5 trillion economy. This seminar provides a unique opportunity for scholars, policymakers, industry experts, and students to converge and engage in a comprehensive exploration of the intricate facets of this ambitious vision. At the core of our discussions is the acknowledgment that inclusive growth and social development are indispensable drivers for achieving sustainable and equitable economic progress.

Our distinguished panel of speakers and experts will delve into the complexities and opportunities inherent in India's economic trajectory. Through thought-provoking discussions on economic diversification, policy reforms, technological advancements, global integration, and inclusive growth, we aspire to contribute substantively to the ongoing dialogue shaping India's economic future.

I extend my sincere gratitude to all participants for their valuable contributions and to the organizing committee for their dedicated efforts in orchestrating this intellectually enriching event. May the National Seminar - 5TE-2024 serve as a platform where ideas flourish, collaborations blossom, and insights pave the way for innovative solutions, propelling India towards economic prosperity.

Wishing you all an enlightening and rewarding seminar experience...

Warm regards,
Dr. Chandan Chavadi
Convener - 5TE-2024
Presidency College



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Dr.Dhanabalan Thangam
Associate Professor

Dear Esteemed Participants and Respected Colleagues,

It is with great enthusiasm that I extend a heartfelt welcome to you all for the upcoming National Seminar on "India's \$5 Trillion Economy: The Vision, Challenges, and Roadmap - (5TE-2024)" as the Co-Convener. This seminar holds immense significance as it brings together a diverse group of scholars, experts, and practitioners to deliberate on the critical facets of India's economic journey.

Our collective focus on the vision, challenges, and roadmap for achieving a \$5 trillion economy is timely and crucial. As Co-Convener, I am eager to witness the exchange of insightful ideas and the forging of meaningful collaborations that will undoubtedly emerge during the seminar. The comprehensive agenda, featuring discussions on inclusive growth, sustainable development, policy reforms, and technological advancements, promises to be intellectually stimulating and contributes to the ongoing discourse on India's economic trajectory.

I extend my gratitude to the organizing committee for their tireless efforts in putting together this significant event. I am confident that the seminar will serve as a platform for generating innovative solutions, fostering academic exchange, and contributing to the broader narrative on India's economic aspirations.

Looking forward to engaging discussions and fruitful interactions during the National Seminar - 5TE-2024...

Warm regards,

Dr. Dhanabalan Thangam
Co-Convener - 5TE-2024
Presidency College

CONTENTS

S. No	Title	Page No.
1	Indian States and their Contribution Towards India's 5 Trillion Dollar Economy Mission R. Naveen, M. Sivakumar & P. Karthikeyan	1
2	Digitalisation of MSMEs – An Analysis G.B. Chikkannaswamy & Dr. T. Rajendra Prasad	7
3	Digital Transformation and its Impact on India's Economic Growth Rohan Sagar	16
4	Harmony in Diversity: the Vibrant Colours of India's Economic Success Dr. Subha Chelliappan & Dr. S. Jaishree	25
5	Harmony in Diversity: The Vibrant Colours of India's Economic Success Dr Subha Chelliappan & Dr. S. Jaishree	34
6	India's \$5 Trillion Economy - The Vision, Challenges and Road Map Mohammed Shoaib, A.S. Monika Sharma & Sheetal M Padasalagi	44
7	India's Economic Symphony: A Melody of Growth and Innovation Ms. Sunni Yasmin A Hakim & Dr. Y. Babu Vinothkumar	51
8	Navigating the New Normal: Unraveling the Dynamics of India's Economic Landscape Ms. K. Tharani, M. Sivakumar & Dr. S. Jaya Bharathi	56
9	Billion Dreams, Trillion Economy: India's Ascent to Economic Eminence Dr. A.S. Lakshmi & Ms. J. Gayathri	65
10	Unlocking India's Potential: Journey Toward A 5 Trillion Dollar Economy and Better Ease of Doing Business R. Adarsh, N. Fahad & Jith Rajan	74
11	India's \$5 Trillion Economy: The Vision, Challenges, and Roadmap Mr. V. Karthick & Dr. J. Prabhakaran	79
12	Innovation Nation: India's Economic Renaissance in the 21st Century Ms. D. Ashwini & Mrs. K. Kavitha	90
13	Navigating the New Normal: Unraveling the Dynamics of India's Economic Landscape Ms. K. Tharani & Dr. S. Jaya Bharathi	95

14	Agriculture's Place in India's Aim for A \$5 Trillion Economy Dr. P. Nandeeswara Rao & Dr. G.N. Ramakrishna	104
15	Economic Marvel: India's Journey to the Pinnacle of Global Prosperity Ms. R. Ranjitha & Dr. NV. Poovendhiran	111
16	Infrastructure Development and Economic Growth in India Saviotony P Ruzario & Rohan Sagar	117
17	A Study on Global Wave: Unveiling the Economic Benefits of Globalization for India's Five Trillion Dollar Quest Dr. Jitendra Chouhan	123
18	The Agricultural Sector of India Helping India to Become A 5 Trillion-Dollar Economy Ms. C. Lakshmi & Ms. T.G. Ashwini	129
19	Economic Benefits of Five Trillion Dollar Economy Dr. M. Dhanalakshmi, Mrs. K. Keerthana & Ms. Haritha	134
20	Empowering the Future: A Study on India's Economic Strategies for a Five Trillion Dollar Milestone Ms. Rajput Kanchan Gulabsing, M. Monith Balaji & Adil Ahmed Arab	137
21	The Pivotal Role of Technology in Indian Economic Growth S. Rakshith	146
22	Data-Driven Personalization Strategies: Propelling India's Economic Growth in the Digital Age Ms. Mitali Dutta & Dr. K. Poornima	154
23	Unlocking India's Potential: Journey Toward A 5 Trillion Dollar Economy and Better Ease of Doing Business R. Adarsh, N.M. Fahad & R. Jith	163
24	Women's Role in Driving Economic Growth: A Comprehensive Review of Their Participation in the \$5 Trillion Economy Farhatnida Unnisa & Dr. Nilaish	168
25	Agro-Economy: Examining the Contribution of Agriculture Sector in Indian Economy T. Naga Chandra Shekar, R. Harshitha & G.S. Alekya	178
26	Empowering Progress: A Study on Women's Key Role in India's Ascent to A \$5 Trillion Economy H.N. Swapna, Pichili Bhavana & A. Kiran Kumar	187
27	Globalization Dynamics and India's Five Trillion Dollar Economy Vision: A Comprehensive Study B.V. Chandan, C.N. Rithesh & T.S. Vishnu	197
28	Virtual Employee Management- A Digital Symphony in Achieving India's 5 Trillion Economy A. Anandha Babu & Dr. P. Thirumoorthi	207

29	Precision Agriculture: Catalyst for India's Economic Growth to \$5 Trillion Mohamed Rafeek	214
30	An Exploratory Analysis of the Role of Artificial Intelligence in Satellite and Space Travel Marketing and its Influence on Indian Economic Growth Dr. Prasad Kulkarni, Dr. Alok Gaddi, Dr. Praveen Patil, V. T. K. Prof. Sreevas & Dr. Joel Gnanapragash	221
31	Role of Women in India's Five Trillion-Dollar Economy Vision Arjun Vinod, Desteena James, G. Kishore Kumar & V.P. Sriram	234
32	Unleashing India's Potential: Where Education, Entrepreneurship, and Technology Meet for A \$5 Trillion Economy J. Vijay Maruthi, A.R. Vidyashree, S.V. Vishwas Sendhilkumar Manoharan & Karthick Thirunavukarasu	239
33	PM Gati Shakti National Master Plan: India's Move Towards 5 Trillion Dollar Economy Shubham Singh & Sendhilkumar Manoharan	248
34	Gen z Investment Perspective in Canara Bank Ballari - An Empirical Study B. Sanya Yadav	256

INDIAN STATES AND THEIR CONTRIBUTION TOWARDS INDIA'S 5 TRILLION DOLLAR ECONOMY MISSION

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Abstract

The Uttar Pradesh government has signed 30 MoUs for investments worth ₹35 lakh crore at the Global Investor Summit (GIS). The state's district magistrates are now responsible for making land available for manufacturing facilities committed through these MoUs. The government's goal is to hold a ground-breaking ceremony for projects worth at least ₹10 lakh crore during the year. The progress made by each magistrate is being monitored by Chief Secretary and Chief Minister Yogi Adityanath. Investors are expected to receive land parcels by December 2023. The U.P. government's efforts are part of a larger \$1 trillion economy mission, announced after Prime Minister Narendra Modi set a \$5 trillion target for the economy by FY25. India's economy, at \$3.5 trillion in FY23, is likely to meet the \$5 trillion target in the next two years. The deadline for the U.P. chief minister is FY28. The top five states in terms of GSDP have also set their own targets to contribute to India's ambitious economic growth plan. With this backdrop, paper made an attempt to explain the various states contribution towards india's 5 trillion dollar economy mission.

Keywords: 5trillion, Indian Economy, States, Development, Economy Uplift

Introduction

Uttar Pradesh government's Worldwide Financial specialist Summit (GIS) saw 30 MoUs marked for ventures worth ₹35 lakh crore. Before long after, each area officer within the state was entrusted with the work of making arrive accessible for fabricating offices committed through these MoUs. The government's target was a ground-breaking ceremony (GBC) for ventures worth at slightest ₹10 lakh crore amid the year. Right now, the advance made by each locale judge is being observed and surveyed by the chief secretary and chief serve Yogi Adityanath himself. Investors were anticipated to get the arrive bundles by December 2023.

The U.P. government's exertion is portion of a greater arrange a \$1 trillion economy mission which Adityanath reported promptly after Prime Serve Narendra Modi set a \$5 trillion target for the economy by FY25, before long after taking charge for a moment sequential term in 2019. The U.P. government anticipates ventures within the fabricating division to translate into higher development in its Net State Residential Item (GSDP) within the coming a long time.

India's economy, at \$3.5 trillion in FY23, is likely to meet the \$5 trillion target set by Modi within the following two a long time. The due date given by the U.P. chief serve for his state is FY28. Considering that U.P.'s GSDP is less than \$300 billion, the target won't be

simple. But that hasn't avoided the state from making a commitment. And it's not U.P. alone. In later a long time, the beat five states in terms of GSDP, or the five biggest state economies of the nation, have set their possess targets to contribute to India's yearning financial development arrange. In spite of the fact that U.P. has been the primary to declare its mission, Maharashtra, Tamil Nadu, Karnataka and Gujarat too point to twofold or triple their economies to meet their particular GSDP objectives with their claim due dates.

THE ROADMAP						
GSDP at current prices (₹ crore)						
State	FY23 (\$ billion)	FY24 (\$ billion)**	Target	Target date	EY estimate	Key focus sectors
Maharashtra	424	466	\$1 trillion	FY29	FY34	Metals, capital goods, petroleum products, renewable energy, defence equipment
Tamil Nadu	282	340	\$1 trillion	FY31	FY37	Semiconductors, fabs & circuit boards, pharmaceuticals, aerospace, defence
Karnataka	269	309	\$1 trillion	FY33	FY37	IT, biotechnology, artificial intelligence, machine learning, startups
Gujarat	**271	308	\$500 billion	FY27	FY29	Smart manufacturing, green manufacturing, fintech, tourism, IT
Uttar Pradesh	*271	293	\$1 trillion	FY28	FY37	Manufacturing, agriculture, tourism, electronics, IT services

* REVISED ADVANCE ESTIMATE, GOVT OF UP; ** PRS BUDGET ANALYSIS; SOURCE: MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION, PRS, EY

Gujarat aims to be a \$500 billion economy by FY27 from the current \$271 billion. Maharashtra aims to achieve a GSDP target of USD 1 trillion by 2028 from the current USD 424 billion. Tamil Nadu has set a target year of 2030 to reach the milestone of a \$1 billion economy from the current \$282 billion. Karnataka has targeted a \$1 trillion economy by 2032, growing rapidly from the current \$269 billion. All states except U.P. published its vision document. UP The board discusses the report prepared by the consulting company Deloitte. But are these goals realistic? In its March 2023 India Economy Watch report, global consultancy EY projected the cumulative nominal GDP of Maharashtra (\$0.5 trillion), Tamil Nadu, Uttar Pradesh and Gujarat (\$0.3 trillion each) at \$1.81 trillion in FY24. over 47 percent of India's \$3.8 trillion GDP. If the numbers hold, the trillion-dollar dream in these states could last a lot longer. According to D.K. Srivastava, Senior Policy Advisor, EC India, Maharashtra is the closest in terms of time to achieving the \$1 trillion target by FY34. "Karnataka, Uttar Pradesh and Tamil Nadu are likely to reach the target around FY37. Individual growth rates may accelerate in countries where new technology is used. They may reach the \$1 trillion target in a year or two before, ie by FY35," says Srivastava. He considers Gujarat's GSDP target of \$500 billion as the most realistic and feels the state could achieve it in FY29. "Maharashtra and Uttar Pradesh may achieve USD 0.72 trillion and USD 0.50 trillion in GDP respectively in FY29. Tamil Nadu may achieve USD 0.59 trillion in FY30 and Karnataka USD 0.78 trillion in FY33. Those seem like more achievable goals, he adds.

The Plan

Maharashtra, leading in Gross State Domestic Product (GSDP), engages in 16 industries encompassing Metals, Automobiles, Chemicals, Food, Pharmaceuticals, Capital goods, Cement and Ceramics, Coke and Refined Petroleum Products, Rubber and Plastics, Electrical Appliances, Cotton Cleaning, Textiles and Apparel, Electronics Gems, Jewelry, and

furniture, aiming to foster GSDP growth. Six emerging industries—electric vehicles, semiconductors, health foods, defense equipment, renewable energies, and telecommunications equipment—have been identified as priorities. The Maharashtra Economic Advisory Council's (MEAC) \$1 Trillion Economic Report projects that these key manufacturing sectors will contribute \$182 billion in gross value added (GVA) by FY28. The council asserts that the nation can attain these objectives by capitalizing on global trends related to sustainable supply chains and responsiveness to domestic demand. Presented on July 12, 2023, the council's report aims to generate over 15 million jobs, enhance the quality of life in various cities, and expedite economic growth across regions. N. Chandrasekaran, Chairman of Tata Sons and MEAC, emphasizes the extensive collaboration with more than 500 stakeholders from various districts, providing invaluable insights into challenges and opportunities in each region. He also highlights the consultation with over 75 industry experts and associations. Chandrasekaran emphasizes the need for Maharashtra to formulate a state-level integrated infrastructure master plan aligning with planned economic cluster growth and urban infrastructure plans, suggesting increased infrastructure investment to support this plan.

STATES ON GROWTH PATH													
GSDP at current prices (₹ crore)								YoY GSDP growth (%)					
State	FY18	FY19	FY20	FY21	FY22	FY23	FY24 (projection)	FY18	FY19	FY20	FY21	FY22	FY23
Maharashtra	23,52,782	25,28,854	26,57,371	26,27,542	31,08,022	35,27,084	38,79,792	7	7.5	5.1	-1.1	18.3	13.5
Tamil Nadu	14,65,051	16,30,209	17,43,144	18,08,239	20,65,436	23,49,143	28,30,000	12.5	11.3	6.9	3.7	14.2	13.7
Karnataka	13,33,240	14,79,391	16,11,134	16,25,073	19,62,725	22,41,368	25,70,000	10.4	11	8.9	0.9	20.8	14.2
Gujarat	13,29,095	14,92,156	16,17,143	16,36,781	19,57,583	22,61,715**	25,62,975	13.9	12.3	8.4	1.2	19.6	13.5
Uttar Pradesh	14,39,925	15,82,180	17,00,530	16,41,801	19,16,913	22,57,575*	24,39,171	11.7	9.9	7.5	-3.5	16.8	17.8

* REVISD ADVANCE ESTIMATE, GOVT OF UP; ** PRO-BUDGET ANALYSIS, SOURCE: MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION

Tamil Nadu, the second-largest state economy, is strategically focusing on semiconductor manufacturing, fabs & circuit boards, medical technology, pharmaceuticals & biotechnology, aerospace & defense, specialty chemicals, and technical textiles to drive its Gross State Domestic Product (GSDP) growth. The state's nodal agency for investment promotion and facilitation, Guidance, aims to attract investments totaling ₹23 lakh crore over the next decade, generating employment for 46 lakh individuals. In addition to financial incentives, the state is offering new industrial parks to entice investors.

Palanivel Thiagarajan, the Minister of IT and Digital Services, underscores the state government's commitment to skill development, facilitating MSME growth, and promoting global investments. He emphasizes leveraging the demographic dividend by creating employment opportunities for the youth, foreseeing significant contributions from the IT sector in job creation.

Karnataka, with a vision for a \$1 trillion GSDP announced in September 2022, capitalizes on its strengths in IT and high-tech services. The economic growth agenda, based on the Economic Survey of Karnataka 2021-22, outlines a 13-point plan, emphasizing investments in specialized hi-tech industries like biotechnology, semiconductors, electronics component design, and materials innovation.

The plan aims to consolidate Bengaluru's position as a global hi-tech city and identifies artificial intelligence, machine learning, internet-of-things, cybersecurity, and agri-tech as growth drivers. The state envisions creating more economic hubs beyond Bengaluru.

Contrary to the \$1 trillion targets, the Gujarat government, led by a task force headed by former finance secretary Hasmukh Adhia, focuses on enabling India to become a \$5 trillion economy. The report suggests achieving a GSDP of \$500 billion by FY27, increasing the state's share in the national GDP, and aiming for a 14.5% Compound Annual Growth Rate (CAGR) for five years. The emphasis is on revamping the growth strategy, with a significant contribution from the manufacturing sector.

Uttar Pradesh takes a holistic approach, addressing all components of GSDP primary (agriculture), secondary (manufacturing), and tertiary (services) sectors. The state is keen on accurate data capture to reflect the actual growth and has identified areas where GSDP reporting needed correction. The focus is on improving agricultural productivity, formalizing the economy in the manufacturing and services sectors, and ensuring accurate assessment of economic activity across all sectors. Each state—Tamil Nadu, Karnataka, Gujarat, and Uttar Pradesh—approaches economic growth with unique strategies tailored to their strengths, industries, and challenges, contributing to India's overarching goal of becoming a \$5 trillion economy.

The Hope

If India attains the \$5 trillion GDP target established by PM Modi, recognition will extend beyond the five leading states to include others. EY has identified the next set of states in line, including West Bengal, Rajasthan, Andhra Pradesh, Telangana, Madhya Pradesh, and Kerala. However, the pursuit of the \$1 trillion aspiration will be the responsibility of each state, with a significant obstacle being the slowdown in the global economy. EY's Srivastava notes that states heavily reliant on exports may face constraints due to the ongoing global economic sluggishness. EY emphasizes the need for deliberate efforts to boost growth in state economies, requiring governments to increase capital expenditures relative to their Gross State Domestic Products (GSDPs). Additionally, there is a recommendation to progressively enhance the share of services and industry in Gross State Value Added (GSVA) compared to agriculture, as it would be beneficial for both output and employment growth.

Rahul Ahluwalia, Founding Director of the Foundation for Economic Development, underscores that exports are a crucial avenue for rapid growth in a country like India. Despite global merchandise exports reaching \$25.3 trillion in 2022, India's share was only 1.8%. Ahluwalia advocates for India to enhance competitiveness as a manufacturing destination, aiming to increase its share of global exports. This strategy is anticipated to generate a growth surge similar to the IT and ITES sectors' success over the past two decades. B.V.R. Subrahmanyam, CEO of Niti Aayog, hinted in October at the formulation of a strategy for the next decade. Prime Minister Modi is expected to unveil a vision document for 'Viksit Bharat@2047,' outlining a vision for a developed India on its 100th year of independence. The objective is to transform into a \$30 trillion economy by 2047, driven by policy changes, reforms at the central level, and substantial support from states.

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DIGITALISATION OF MSMEs – AN ANALYSIS

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Abstract

In recent years, India's micro, small and medium enterprises (MSMEs) have faced unprecedented challenges, including the introduction of the GST system and increasingly intense international competition. These challenges also present an opportunity to jump on the digital bandwagon to overcome difficult situations. The inherent growth capabilities of MSMEs and the adoption of digital business methodologies will definitely help the sector realize its true potential. Traditionally, the MSME sector has been one of the most important drivers of the Indian economy. India's MSME sector contributes around 33% to the country's total GDP and is expected to contribute \$1 trillion to India's total exports by 2028. The upcoming Budget 2024-25 will make MSMEs participate in international trade more affordable. India has a large base of 7.9 million registered small and medium enterprises (MSMEs). The sector accounts for approximately 33% of the country's total GDP and provides approximately 120 million jobs across sectors and regions. These numbers testify to the collective impact that this country's mid-sized businesses have on our economy. This study discusses digitalization of MSME in Indian economy.

Keywords: Digitalization. Export, Credit, Initiatives, Growth.

Introduction

Traditionally, the MSME sector has been one of the most important drivers of the Indian economy. The contribution of the small business sector to the country's GDP in 2011 was 17%, which has increased significantly during this decade. It continues to grow and is expected to contribute around 22% to the economy by 2020. The small and medium enterprise sector currently accounts for 45 percent of our country's total output and at the same time provides employment to 40 percent of the total workforce. The share of the MSME sector in the country's total exports is estimated to be around 40%. These numbers testify to the collective impact that this country's mid-sized businesses have on our economy.

Micro, Small and Medium enterprises (MSMEs) have faced unprecedented challenges, including the introduction of the GST system and increasingly intense international competition. These challenges also present an opportunity to jump on the digital bandwagon to overcome difficult situations. The inherent growth capabilities of MSMEs and the adoption of digital business methodologies will definitely help the sector realize its true potential. Traditionally, the MSME sector has been one of the most important drivers of the Indian economy. India's MSME sector contributes around 33% to the country's total GDP and is expected to contribute \$1 trillion to India's total exports by 2028. The upcoming Budget 2024-25 will make MSMEs participate in international trade more affordable. India has a large base of 7.9 million registered small and medium enterprises (MSMEs). The sector accounts for approximately 33% of the country's total GDP and provides approximately 120 million jobs across sectors and regions. These numbers testify to the collective impact that this country's mid-sized businesses have on our economy.

Economy, July 1, 2015, under the leadership of the Honourable Prime Minister Mr. Narendra Modi has taken the first significant step towards "digitalizing India". His aim is to connect rural India with internet connectivity, make them familiar with digital literacy and understand developments in their environment. To improve and inform the industry. India is one of the fastest developing countries, Digitalization can only be clearly observed if individuals are able to carry it out. To understand and adopt these, each individual must have financial knowledge. This enables financially sound decision even after digitization. To keep track of the digital financial world, transactions must be carried out over the internet. Literacy has become essential knowledge, and through digitalization we can transform society. Improve your business model and create new sales and value creation opportunities. This paper focuses on how digitalization has affected the MSME sector.

Table-1 Number of MSMEs registered on Udyam portal up to December 2022.

Number of MSMEs registered	Micro	Small	Medium	Total
	11,870,882	428,289	39,524	12,338,695

Source: pib.gov.in

In 2022, 8.59 lakh women-led MSMEs were registered on the Udyam portal, accounting for 17% of the total MSME registrations. Approximately 63.4 million MSMEs account for 6.11% of India's manufacturing GDP and 24.63% of its services sector GDP.

Table-2 MSME share in exports during 2022-23

Description	2019-20	2020-21	2021-22	2022-23
Exports of MSME-related products as a percentage of India's total exports.	49.77	49.35	45.03	42.67

Source: pib.gov.in

Directorate General of Commercial Information and Statistics (DGCIS) has released data on exports of selected MSME-related products in India's total exports. In the financial year 2022-23 (ending August 2022), despite an increase in the number of active MSMEs, it decreased by 25.03% year-on-year to 42.67%.

Review of Literature

Upadhyaya, Thayyil, & Manjunatha Prasad (2013) using a sample of 122 Indian MSMEs the study identifies the barriers impeding the adoption of B2B E-Market place inability of service providers to understand the needs of the MSMEs was found to be the major barrier. It was found that entrepreneurs are reluctant to use a digital platform because their trading partners are not ready to do so.

Malviya & Chakraborty (2013) analyze the adoption of cloud computing by MSMEs and its benefits. Cloud computing emerges as an affordable solution for MSME entrepreneurs as it eliminates the need of building and developing an enterprise own infrastructure for the use of major internet tools.

Singh & Singh (2014) suggested that in the context of globalization there is a need to create a conducive business environment for the MSMEs which can be done by overcoming the problem of technology backwardness.

Setya wati, Nimran, Zulkhirom, & Kumadji (2014) analyze the impact of Information technology on competitive advantage and business performance of Indonesian MSMEs. The relations were found significant and thus the adoption of information technology in business is identified as a key to keep the enterprise strong.

Pendse, Welingkar, & Minakshi Agrawal (2015) analyse the factors which hinder the adoption of IT in SMEs, it also analyse the awareness of owners with respect to adoption of IT. The survey found lack of IT awareness, non availability of skilled manpower, finance as the major challenges. It was found that only 27% of SMEs make use of websites for selling, majority use it just for promotional purpose. Majority of the enterprises did not have a separate budget for the development of IT.

Matt and Kayal (2017) investigated the influence of digitalization on MSME and discovered that by automating product and process automation, MSME performances were enhanced. It also increases sales and provides new means of acquiring funding for the enterprises in the digital platforms.

Digitalization of MSMEs will also assist entrepreneurs in determining effectiveness in the competitive digital world, however there is little passion and innovation among MSMEs that have incorporated digitalization to existing digital platforms (Tayibnapis et al, 2021). People are accessing the internet more as digital connections getting larger and quicker, and as customers move swiftly toward digitalisation, the need for digitalization increases.

Objectives of THE Study

- To study digitalisation in MSME sector in India
- To analyse the Impact and Challenges of digitalisation In MSME sector.
- To suggest suitable remedial measures for the better digitalisation of MSMEs

Research Methodology

The research analysis follows a qualitative approach. The data collected comes from various articles, Indian government reports, published research articles, MSME annual report and other relevant institutions and websites. The results include a conclusion followed by a set of recommendations.

Digitalisation in MSME Sector in India

During 1st July 2015 Modi government's flagship programme the 'Digital India' was introduced. This programme is to transform the entire ecosystem of public services through the use of information technology. The services are provided to the people with the help of mobile phones, personal computers, laptops, tablets, televisions, radios and internet. The vision is to transform India into a digitally empowered society and knowledge economy electronically (McKinsey Global Institute 2017). It focuses on making the government administration accessible to every citizen electronically by reducing paper work. This programme aims to remove the gap between the rural and urban people. This initiative consists of plans to connect rural areas with high speed internet networks. The Digital India programme covers agricultural, industrial, service sectors which constitute the growth of the economy. It focuses on three core areas: digital infrastructure a utility to every citizen, digital empowerment of citizens, governance and services on demand. This big initiative came up with big investments in the technology sector with Rs 1.13 lakh crore which help in creating a participative, transparent and responsive government. It will push the usage of technology

to connect and empower people in areas relating to health, education, labour and employment, commerce, etc. This programme creates employment opportunities in the country and thereby increases the GDP, per capita income and improves the lifestyle of the people.

Furthermore, the government has intended to make digital village' across the country via linking all schemes with modern technology. Villages and rural areas would be connected with solar energy, LED lighting, e-services, skill development and e-education. According to government website, electronic transaction accounted for more than 3.53 billion transactions in 2014 but in 2015, the transaction recorded were 6.95 billion. Digital India programme will boost GDP up to \$1 trillion by 2025 thus acting as key role in macro and micro economic factors such as employment generation, GDP growth, growth in number and labour productivity of businesses and revenue leakages for the government. Based on World Bank report, if mobile and broadband penetration increases by 10percent, the per capita will increase by 0.8percent and GDP by 1.38percent respectively. There is huge economic opportunity at India since the tele-density in rural regions is at 45percent implying that more than 65percent of the population lives in digitalized communities. Future growth of telecommunication industry in terms of number of subscribers is expected to come from rural areas as urban areas are saturated with a tele-density of more than 160percent.

The Government of India has decided to introduce the Digital MSME Scheme in 2017 to promote Information and Communication Technology (ICT) in the MSME sector. MSMEs in India need to increase their competitiveness through various strategies. Adoption of ICT is one of the important strategies that can greatly assist MSMEs in all aspects of their operations. The main objective is to digitize MSMEs to implement ICT technologies in their manufacturing and production operations, with a focus on improving competitiveness in domestic and international markets.

Digital MSME Measures – 2019 are as Follows

- **Awareness and Workshops:** The aim of awareness campaigns is to raise awareness among implementing organizations and MSMEs about the benefits of using ICT in business.
- **Creation of E-platform:** India Enterprise Portal will be created to provide multiple services to MSMEs. The portal should also have capabilities for e-marketing operations, a knowledge-based back-end system with artificial intelligence, and the ability to adapt to future significant developments if necessary.
- Development of software/apps for relevant departmental functions of MSMEs.
- **Digital competence and e-marketing:** E-competence measures are being implemented to digitally strengthen MSMEs. Comprehensive awareness programs for MSMEs, schools, etc. can be organized to educate participants on the benefits of using digital working methods for various aspects of business operations.
- Training for MSME personnel, MSMEs, professionals, etc.

Digital MSME Measures – 2021 are as Follows:

- Enabling MSMEs to use IT as a means of communication to expand their reach and market access and improve their managerial and technical expertise through dynamic and static digital resources.

- Providing software interventions such as: B. Increase internal efficiency through centralized ICT input and automation systems to save costs, teach digital literacy, and improve the ability to access, process, collaborate, and disseminate information.
- Provide MSMEs with a secure range of customized digital solutions designed keeping in mind the diverse needs of the ecosystem to protect them from the pitfalls of hasty and indiscriminate technology adoption.

Key factors driving MSME growth in India 2022-2023 are as Follows

- **Government initiatives:** The government's Digital India vision is like a bridge that connects MSMEs to the digital world and enables them to realize their full potential and thrive in the digital age. The government is working hard to make the vision of Digital India a success by launching various schemes, schemes and networks to help MSMEs save time and money while boosting their business.
- The two programs that have boosted MSME growth the most in India are:
 - **Emergency Credit Line Guarantee Scheme (ECLGS)** -Introduced to provide additional credit options to small and medium-sized businesses. The total amount allocated under this scheme is Rs 5 billion, of which 71% of the total amount is expected to be disbursed already by December 2022.
 - **Open Network for Digital Commerce (ONDC)** -It is a platform launched to enable small and medium-sized businesses to develop innovative digital commerce applications and services by leveraging open APIs, interoperability, and open source technology. The platform aims to foster digital inclusion and support the growth of India's digital economy.
- **FinTech innovations in credit availability:** Before FinTech innovations, when MSME founders were looking forward to starting from scratch, it was difficult to get financing with no credit or bad credit. Banks and other financial institutions wanted to build a secure portfolio while lending to existing companies. The shift towards digital mode by MSMEs is creating a digital trail of financial transactions for the new age FinTech players to assess their credit worthiness and disburse loans instantly. Regular digital transactions prove a company's financial health and ability to grow in this competitive business environment. Digital lending platforms and microcredit allow MSMEs to grow faster and without interruption. Experian reports that India's digital lending market will be worth \$270 billion in 2022 and is expected to reach \$250 billion by 2023.
- **Digital Payments to drive growth:**Incidentally, demonetization and the corona virus pandemic were the main factors driving the use of digital technologies in payment transactions. Comparing the growth of digital payments before and after COVID-19, we find that the volume of digital payments has increased by more than 200% over the past four years, from 2018-19 to 2021-22. Adoption of digital payments is like a key that opens the door to success for MSMEs, just like a key unlocks a door, it allows payments to be received faster and further payments to be processed in less time. Can be shortened and improve cash flow.

The Impact of Digitalization in MSME Sector

- **Increase in revenues:** Physical presence alone limits an organization's market to reach. Modernizing digital technology and providing online accounts Presence offers

great growth opportunities for small and medium-sized businesses and increase your sales. Corporate initiatives switching to a website or e-commerce platform could increase sales by enabling small and medium-sized businesses to access new customers domestically and internationally, market. Flexible in terms of time and geography shipping for business transactions. Findings from Snapdeal include it reads, "The impact of e-commerce on small and medium enterprises in India." The company's revenue could increase by about 51%. Therefore, today's small business growth is driven by e-commerce.

- **Accessibility to a wider customer base:** Increased digital engagement allows small businesses to discover new things a market where you can compete with market leaders industry. E-commerce provides cost-effective solutions for customers who: Companies that network and trade in metropolitan and rural areas alike with customers all over the world. Small businesses often lack the necessary skills Unable to enter international markets due to limited knowledge and language Barriers, ignorance of cultural differences, narrowness business outlook.
- **Operational efficiencies:** Access to e-commerce platforms allows small businesses to lose weight overall Expenses by optimizing operational and marketing costs such as Call centers, trade shows, individual product advertising. Snap deal study finds small businesses can optimize marketing spend It costs 60% to 80% of the total cost.
- **Enriched customer engagement:** Data Analytics and Business Intelligence Offers MSME have the opportunity to make better decisions by providing: Deepen your understanding of your customers. Use by customers Intelligence and insights to anticipate needs and create new designs Products that meet your needs and deliver the right thing. Equipped with the product at the right time at a cost-effective price Small businesses with next-generation customer engagement capabilities. This is limited due to the high cost of software and technology Companies have historically been prevented from developing such capabilities.
- **Ignoring digitalization may be a bad decision:** Offline MSMEs quickly identify missed growth opportunities due to lack of online presence. Introduction of digital technology Integrate with the tools of your own sales platform on digital channels Important for survival in today's rapidly growing local and global world competitive market. Companies that take an ignorant approach For lack of online presence or acceptance of digital channels may have to face serious challenges to survive the present A data-driven ecosystem.

Challenges in the Way to Digitalization

- **Lack of Knowledge regarding technology-enabled services:** Many MSMEs are yet to realize the benefits of technology-based services such as e-commerce and social networks. Little knowledge of future technologies Skepticism hinders companies from becoming more digitally proactive initiative. Benefits of technology-enabled services such as social networking platforms and e-commerce remain unknown to many small businesses. Lack of digitalization prevents companies from implementing digital strategies Knowledge of cutting-edge technology and scepticism.
- **Lack of understanding of the impact of digital transformation:** Not recognizing the impact digital transformation will have on ease of doing business, growth, and

customers many small businesses have commitment and loyalty. This results in many postponements or complete postponements. Avoid the decision to embark on a digital transformation journey. As a lack of innate skill. Creating your own digital transformation roadmap is difficult for small and medium-sized businesses. They rarely have any inherent technical ability. There may also be considerable resistance. Also consider hiring an external auditor. Insufficient development limits a company's development. Access to management skills and specialist talent. Manage better. Businesses tend to be larger, more likely to last longer, and larger productive. Traditional small and medium-sized enterprises that have developed strongly doing business through offline means tends to be less expensive. Money and time on digital platforms.

- **Poor Infrastructure and Fund:** According to a report by the International Finance Corporation (IFC), the total funding demand gap in 2016 was a huge 2.93 trillion yen. India's SME sector. Indian SMEs face major challenges poor infrastructure and inadequate funding.
- **Ineffective regulatory structure:** Privacy concerns are further exacerbated by inadequate technology. Data processing and protection unauthorized access, alteration, damage, or disclosure of information to unauthorized third parties is prohibited. It's called data security. Security concerns are mainly caused by malware and cyber attacks. in spite of Due to strict regulations regarding cybercrime in our country, small and medium-sized enterprises are reluctant to introduce innovative DT.

Remedial Measures for the Better Digitalisation of MSMEs

To compete globally, India needs to be at the cutting edge of technology and introduce new business models. As one of the fastest growing economies, India has a lot of untapped potential. India has the second largest population, the majority of whom are young, offering many opportunities for development. India's small and medium enterprises are the backbone of the country and can contribute significantly to the country's economy. To achieve this, it is important to address the root causes of barriers and remove them.

- Education should be the main concern when it comes to digitalisation. It is important that unskilled workers receive appropriate training and education. Awareness of the benefits of digitalization also needs to be raised among mid-sized businesses. First, it's important to understand the importance of the Internet, e-commerce, and other tools, and what happens if you don't adapt to changing technologies and business models. Education, training and awareness are therefore fundamental steps to becoming a successful digital MSME.
- Investment in small and medium-sized enterprises should be supported by governments, especially to enable them to take advantage of digital infrastructure. Small businesses need a variety of financing options to meet their needs. This can be achieved not only through government, but also through a variety of public and private means.
- Most MSMEs are limited to local markets due to lack of funds to acquire more customers. Using online platforms for sales is an easy and cost-saving way to reach the maximum number of customers not only in the same state but also on national and international platforms.

- Many startups use WhatsApp and Facebook as a means of advertising and communicating with customers. Most small businesses use digital payments. This is not only easy but also keeps a record of all your financial transactions.

Conclusion

A digital environment for the working of MSME sector has been created by the government through various policy initiatives. Although the pace was slow but now it is gaining momentum and this launch of the above mentioned policies (Digitalisation of MSME) is helping the SMEs sector and giving a boost to them to go digital still the sector is yet to take off in a big way. The introduction of digital aids would act As catalyst to turn the traditional business model into innovative and effective business model to compete globally in this digital space. Though government is making effort for the ease if doing business still problems have been faced by the entrepreneur's during implementation stages. Digitalisation id a significant factor to take an enterprise a level up, MSMEs are upgrading their ways of doing business but remains weak due to use of unsophisticated technology. The entrepreneurs do not have all the required skills, knowledge and resources to adopt these technologies thus it becomes the responsibility of the government to provide a helping hand for making advancement.

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DIGITAL TRANSFORMATION AND ITS IMPACT ON INDIA'S ECONOMIC GROWTH

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Abstract

The Digital Transformation has significantly impacted the global economy, with India's economic growth being a key focus. The integration of digital technologies across various sectors, such as finance, healthcare, education, and governance, has altered traditional business models and operational paradigms. This study examines the impact of digital transformation on India's economic growth, focusing on increased efficiency, innovation, and new market opportunities. It also explores the socio-economic implications of digital transformation, focusing on its role in fostering inclusive growth and bridging existing disparities. The study assesses the potential of digital technologies to empower marginalized communities and drive financial inclusion. The review also analyses policy initiatives and regulatory frameworks implemented by the Indian government to facilitate and regulate digital transformation. Understanding the challenges and opportunities posed by this paradigm shift is crucial for policymakers, businesses, and stakeholders to formulate strategies aligned with sustainable economic development. This secondary research review aims to contribute valuable insights to the ongoing discourse on the role of technology in fostering economic growth and development in India.

Keywords: Digital Transformation; Technology; Economic Development; Government Policies; Innovation

Introduction

Digital transformation is the strategic integration of digital technology into various business areas to improve productivity, increase agility, and shift the company culture to embrace the digital age. It involves changing traditional roles across departments to meet market and business needs. Digital transformation is a long-term journey that requires senior executives and human resources to introduce strategies and technology partners that encourage employee buy-in. Spending on digital transformation should focus on the right technology, including an agile I.T. environment and training. The cloud, whether public, private, or hybrid, is crucial for modernizing businesses as it enables seamless application connectivity, making them faster, more dynamic, collaborative, and flexible. Companies often start by investing in a CRM system and business technology to keep the organization connected to the internet. The next steps involve gaining the right mix of talent and digital transformation projects, enabling employees and business units to leverage technology and new processes confidently. (Consero, 2024). India's micro, small, and medium enterprises (MSMEs) sector face a significant credit gap, with 92% lacking access even before the COVID-19 pandemic. This is due to credit access being skewed towards larger firms and those with tangible assets, leaving MSMEs and individuals without collateral struggling to obtain loans. The introduction of Account Aggregator (AA) might completely change the way that credit is provided in the country, facilitating access to formal financial institutions for both individuals and companies with less-than-ideal credit histories or asset-backed collateral. (Report of the Expert Committee on MSME, 2019). The India stack, a Digital Public Infrastructure (DPI) established through a public-private partnership, consists of three interconnected layers: identity, financial, and data and information layers. These layers provide a digital identity to every Indian and facilitate easy, cost-free, mobile-first digital transactions. The AA architecture is built on the ecosystem created by each layer, projected to supercharge India's credit environment.

Identity Layer

In 2010, the Indian government introduced the Aadhaar number, a 12-digit biometric identity, marking a significant step in the country's digital transformation. Aadhaar is the first layer of the India stack, enabling government and private sector efficiencies and innovation. It has transformed the authentication ecosystem, replacing multiple government IDs. The government is pushing for zero-balance bank accounts under the Pradhan Mantri Jan Dhan Yojana, opening over 450 million accounts by 2022. Aadhaar has facilitated the KYC process, reducing the cost of e-KYC from \$12 to 6 cents, improving financial inclusion and reducing corruption.(Livemint.com, 2022).

Financial Layer

The Unified Payments Interface (UPI), introduced in 2016, is the second layer of India's payment system, providing a 24/7 channel-independent payment system accessible through mobile phones, the internet, ATMs, and Unstructured Supplementary Service Data (USSD). Developed by the National Payments Corporation of India (NPCI), UPI was created by a consortium of the Reserve Bank of India (RBI), public and private banks, and the Indian government. Despite demonetization and COVID-19 lockdowns, UPI's success is attributed to quick money transfers, instant payments using fiat currency, and zero transaction costs.

Digital or E-governance Layer

India is implementing the Data Empowerment and Protection Architecture (DEPA) to empower individuals by giving them control over data collected from multiple sources. This approach consists of three pillars: a personal data-protection bill, an electronic consent artifact, and newly regulated entity Account Aggregators (AAs) in the financial sector. The current data-fiduciary-centric model inhibits data use for financial empowerment and inefficient storage methods. AAs provide a secure interface for users to consent to share private and sensitive data, democratizing data use and sharing. As the system matures, it could transform industries like health, insurance, personal financial management, and advisory services. Access to digital data will be limited to financial data, social media, credit card points, ride share data, health data, and other digital data, with private participation encouraging innovation.

Literature Review

The Indian IT industry has experienced significant growth, with a CAGR of over 15% from \$196 billion to over \$225 billion in FY22. If current growth rates continue, the IT industry will be worth approximately \$394 billion by 2027. However, to achieve India's goal of becoming a \$1 trillion digital economy, efforts must be significantly increased. To achieve this, India needs to invest in digital transformation and achieve a 25% CAGR, which will help India become a \$687 billion IT powerhouse by 2027. Digital technologies are essential for R&D operations, and R&D is critical to advancing India's digital vision. To keep up with and fuel India's digital transformation, continuous research and development of new IT products and services, as well as the production of innovative solutions, are required. It is essential to incorporate next-generation technologies like automation, cloud platforms and solutions, AI/ML, data analytics, cybersecurity, and metaverse to create tools for many industries, including manufacturing, healthcare, and agriculture. Provisions like tax benefits for businesses and the creation of networks of innovation hubs housing industry, R&D labs,

educational institutions, start-up incubators, and production facilities are two ways to fund greater R&D spending. Initiatives like the innovation clusters offered by FICCI can support innovation in India by catalysing actions to realize the country's full economic potential. **(economictimes.indiatimes.com,2023)**

The IT sector will require a large number of highly skilled tech professionals, including developers, network engineers, coders, data scientists, 3D, AR/VR professionals, and others. A workforce equipped with the right skills can address emerging challenges and assist businesses in growing by increasing the value quotient. Approximately one million skilled professionals will be required in AI and data science roles alone by 2024. India requires an additional 10 million skilled workers to reach the \$453 billion mark, and 15 million workers to reach the \$687 billion mark. To make this happen, a pan-India network of IT education and skill development is required. Increased emphasis on vocational skills in elementary and secondary education, more degree apprenticeships in universities, opportunities for continuous skill development and upskilling offered by organizations, and a loosening of UGC blended learning guidelines are all necessary to prepare a workforce that is ready for the future. Government initiatives and regulatory improvements have made India the world's top outsourcing destination and have aided in the country's continuous IT evolution. Digital transformation in a number of industries has been guided by the Digital India framework, and the recent Union Budget 2023 is a step in the right direction by highlighting the significance of digital to the Indian economy. **(Jagdish Mitra, 2023).**

Digital Transformation Initiatives in India

Since 1947, India has made significant strides in science, infrastructure, and technology, transitioning from a colonized nation to a rapidly growing free market economy. The country has introduced digital innovations like UPI, demonstrating its potential as a future leader. Prime Minister Modi's vision for a complete digital transformation aims to enable every Indian with smartphones and fast-speed internet, focusing on low cost-effectiveness, inclusivity, and indigenous nature. Achieving PM Modi's billion-dollar digitized economy dream should motivate Indian citizens through entrepreneurship, blockchain, artificial intelligence, IT sector development, and 5G connectivity.

What Makes India a Digital Hotspot?

India's digital renaissance is a testament to its dynamic industry providers, tech-savvy innovators, optimistic lawmakers, and ambitious citizens. By the end of this decade, the Indian economy is expected to be worth US\$5 trillion, with US\$1 trillion attributed to the digital economy. India's ideal candidate for digital transformation is due to its technically inclined workforce, competitive commercial markets, and middleclass expansion.

Government Lending Support

The Indian government is implementing various digital initiatives and campaigns to promote business growth and regulation. They are working to make it accessible for all companies to invest, set up operations, and participate in economic development. Public interest initiatives like the Aspirants District Programme aim to spread technology and improve participation. Data-driven laws supported by IT norms are being implemented to solidify growth potential. Some notable government-led digital programmes include the Aspirants District Programme.

Digital India

The Modi-led government in India has launched the Digital India programme to empower the common man with technology. The programme aims to digitally transform the country through various schemes and policies, such as the Jan-Dhan-Aadhaar-Mobile (JAM) trinity, which ensures timely benefits for poor people, and the SWAMITVA Yojana, which digitizes land records. Digital India also aims to provide internet access to remote areas and introduce digital literacy programs.

UPI (Union Paid Interface) Apps

The Indian government's Union Paid Interface (UPI) method of digital payments has simplified transactions and increased citizens' faith in technology. In July 2022, UPI transactions reached \$6 billion, demonstrating the collective resolve of Indian citizens to embrace digital technology and make the economy cleaner. This shift from direct payment models is a significant step towards digital transformation.

CoWIN App

The Indian government has introduced the CoWIN app as a digital platform to support Covid-19 vaccination efforts, simplifying the vaccine administration process and providing crucial lessons for strengthening digital service delivery architecture in the healthcare sector. CoWIN has also contributed to better information inflow in the 2019 service delivery ecosystem.

MyGov App

The government has launched the MyGov app, aiming to promote inclusivity among citizens. With 24.5 million registered users, the app connects users with the government and promotes ideal governance. It features events, workshops, campaigns, and contests, and encourages citizen engagement through feedback portals, editorials, quizzes, and opinion polls to bridge socio-political gaps.

Startups Society

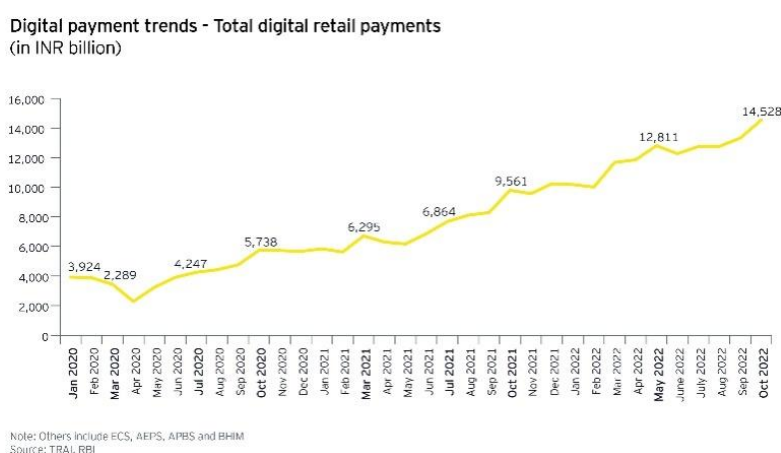
Indian startups are transforming the global economy, driving the digital renaissance. As an emerging nation with rapid digital growth, India is leveraging its startup society to promote technology and economic development. As a key player in this process, India is demonstrating its commitment to fostering a global startup culture, demonstrating its commitment to fostering a vibrant and innovative economy.

The Objectives of Digital Transformation on India

The campaign aims to transform India by fostering a digitally empowered society and knowledge economy through improved technological infrastructure, increased tech literacy, and innovative digital ecosystem. Other objectives include ensuring high-speed internet connectivity in all gram panchayats, consolidating ideas into a comprehensive vision, facilitating easy access to Common Service Centres, and restructuring existing schemes for synchronized implementation.

Economic Indicators and Metrics

India's digital economy has expanded rapidly; in 2019, the country's digital economy accounted for almost 22% of GDP. With a growth rate of 15.6% between 2014 and 2019, it expanded 2.4 times faster than the Indian economy as a whole. Growth has been fuelled by investments, and the technologically dependent economy employs 62.4 million people. To improve the efficiency of governance outcomes, the government has been digitizing its engagement with citizens. To handle procurement, the government has also established Government marketplace, a centrally administered marketplace. With 765 million mobile broadband users and 17GB of data traffic per person, India's broadband consumption has skyrocketed. Rural India is predicted to experience the next wave of smartphone adoption; by 2030, India is predicted to have the second-largest internet purchasing market worldwide.



Impact on Businesses and Industries

India's digital transformation has significantly impacted the country's economy, with e-commerce being one of the main areas of growth.

E-commerce

The Indian e-commerce market is expected to reach \$200 billion by 2026, up from \$38.5 billion in 2017, driven by increased internet access among Indians. Digital platforms like Amazon and Flipkart have gained traction in the Indian market, while players like JioMart, Milkbasket, bigbasket.com, Blinkit, and Dunzo provide quick delivery services.

Financial Services

The Indian government's focus on digital payments has led to a significant increase in the use of digital payments, contributing to the growth of e-commerce. The financial sector has also been significantly impacted by digitalization, with the adoption of digital payment systems like UPI making transactions easier and more convenient. Digital banking has also grown, with more people using smartphones to access banking services, improving financial inclusion.

Digitalization has significantly impacted manufacturing, increasing efficiency and productivity. Indian manufacturers can compete more effectively in global markets, and the government's "Make in India" initiative encourages foreign investment. However, data privacy and security issues need to be addressed to ensure trust. Despite the positive impact

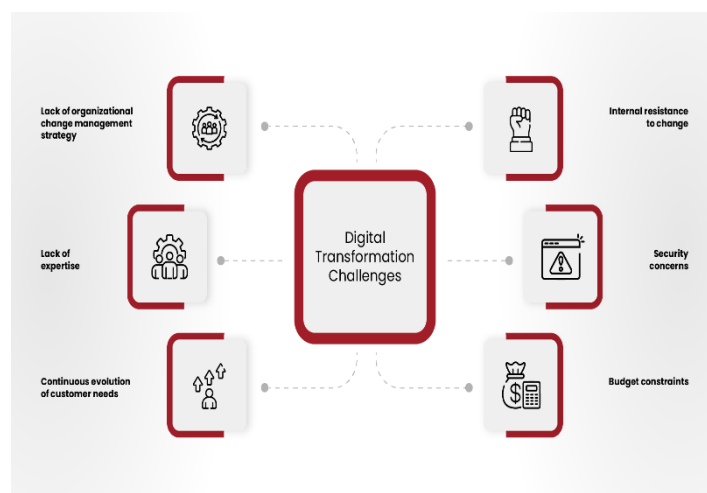
on India's economic growth, more work is needed to ensure everyone benefits from digitalization opportunities and improve citizen welfare.

Digital Transformation and Job Creation

The RBI report indicates limited employment in India's digital sectors, with 4.9 million workers in the core digital economy. Computer programming consultancy and related activities have the highest employment share at 59.8%. India's rapid digitalization, particularly from 2011 to 2019, has been high, with a CAGR of 10.6% in the ICT sector. With 5G and semiconductor industries, India is expected to accelerate its digitalization pace in the coming decades.(EY.com,2023)

Challenges and Barriers

Digital transformation presents several challenges for organizations. These include a lack of organizational change management strategy, a lack of expertise, the continuous evolution of customer needs, internal resistance to change, security concerns, and budget constraints. Organizations must have a strong change management strategy to ensure smooth transition and achieve their transformation objectives. Skilled employees in areas like cloud computing, AI, mobile app development, UX design, blockchain, cybersecurity, and DevOps can help close the digital skill gap. Additionally, organizations must address security concerns and budget constraints to protect their valuable assets and ensure the smooth transition.



(Pecb.com, 2022)

India has made significant strides in digital technology and internet penetration, with the government pushing for a Digital India initiative to transform the country into a knowledge economy. However, a major challenge is the lack of digital literacy among a significant section of the population. With 352 million internet users in rural areas, India now has over 800 million internet users, making it the largest connected nation in the world. The government launched a Digital Literacy Program in 2023 to increase digital literacy, covering 6 crore households. However, only 34% of rural households have access to the internet, a significant barrier to digital literacy. The lack of digital literacy among older adults and women underscores the need for targeted efforts.

Conclusion

This study examined the significant effects of digital transformation on India's economic expansion and found that the country is experiencing innovation, efficiency, and paradigm shifts. The process of digitalization, as demonstrated by programs like Digital India, GSTN, and UPI, has sparked significant industry-wide changes by improving productivity, reinventing business models, and promoting inclusive growth. There has been a noticeable effect on economic metrics, such as higher GDP growth, the creation of jobs, and improvements in financial inclusion. Digitalization has become a major force behind company expansion, propelling the development of industries like finance, e-commerce, and technology-driven services. The potential for transformation exhibited by programs such as Aadhaar and the Smart Cities Mission highlights the diverse aspects of India's digital development. It is clear that there are obstacles to overcome, ranging from a lack of digital literacy to infrastructure limitations, and that comprehensive approaches are required to guarantee that the advantages of digital transformation are both long-term and equitable. India's distinct status as a dynamic player in the global digital arena is reaffirmed by the comparison with global trends. As India advances toward its lofty targets for economic growth, entrepreneurs, stakeholders, and governments must all strive to create an environment that is supportive to digital innovation. In order to optimize the benefits of digital transformation, it is crucial to resolve obstacles, advance digital literacy, and adjust regulations, according to the research's suggestions. By achieving this, India will be able to fulfil its economic goals and position itself as a leader in the global digital economy.

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HARMONY IN DIVERSITY: THE VIBRANT COLOURS OF INDIA'S ECONOMIC SUCCESS

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Introduction

India has been one of the world's fastest-growing major economies in recent years, although growth rates have experienced fluctuations. The COVID-19 pandemic in 2020 had a significant impact on economic activities, leading to a contraction in GDP. However, there were signs of recovery in subsequent quarters. The services sector, particularly information technology, business process outsourcing, and software services, has been a major contributor to India's GDP. It has played a crucial role in attracting foreign investment and generating employment. The "Make in India" initiative aimed to boost the manufacturing sector, promoting domestic production and self-reliance. The sector is crucial for economic diversification and job creation. The government has implemented fiscal policies to stimulate economic growth, including budgetary allocations for infrastructure development, social welfare programs, and reforms to enhance the ease of doing business. India has been undergoing a digital transformation, with a focus on digital infrastructure, financial inclusion, and e-governance. Initiatives like Digital India aim to leverage technology for economic development. India faces challenges such as income inequality, unemployment, infrastructure deficits, and regulatory complexities. Addressing these challenges is crucial for sustaining and accelerating economic growth.

The provisional GDP estimates for the fiscal year 2023, released in May, surpassed the consensus estimate, driven by a robust performance in the final quarter. This propelled the annual GDP growth to 7.2%, exceeding the earlier February estimate of 7%. This positive deviation in growth projections extends into the current year, with various forecasting agencies revising their estimates upward for fiscal year 2024. Recent indicators show no signs of a slowdown in the initial two months of the current year. India's status as the fastest-growing major economy is no longer just a statistical fact, underscored by its remarkable growth in FY23 amid global economic challenges of inflation and monetary tightening.

Drivers of Indian Economy

The key driver of India's economic success is the resilience of its domestic demand. Despite the severe contraction in output in FY21 due to the pandemic, domestic demand has rebounded and strengthened throughout FY23. This recovery has almost bridged the gap between the pre-and post-pandemic quarterly growth trajectories, bringing the economy close to the output levels it would have achieved without the pandemic. Notably, the agriculture and industrial sectors, driven by manufacturing, played vital roles in supporting

the economy – the services sector, particularly contact-intensive services, fully recovered by the year-end.

Rising employment levels have contributed to inclusivity and reinforced domestic demand. The labour force participation rate increased during the pandemic, leading to a five-year low unemployment rate in FY22. In FY23, the urban unemployment rate continued to decline in each quarter, reflecting sustained employment growth. Policy measures implemented recently, supporting the corporate sector and small enterprises and attracting foreign capital, have boosted employment generation.

Inflation posed a significant global challenge in FY23, exacerbated by geopolitical conflicts and the impact of El Nio. However, India managed to control inflation better than many other emerging market economies and advanced economies. The Reserve Bank of India (RBI) did not need to increase policy rates as much as other central banks did. The decline in international commodity prices towards the year-end helped India bring headline inflation within the target range, although core inflation remained somewhat sticky.

The increase in repo rates, coupled with fiscal and administrative measures, successfully mitigated inflation while sustaining domestic demand. Credit growth rose in FY23, contributing to the profitability of banks. Despite external demand challenges in merchandise exports, services exports, especially in IT, remained strong. The decline in global commodity prices reduced import costs, aiding economic activity. The external sector contributed positively to the economy, including a reduced current account deficit and robust forex reserves.

Disciplined fiscal management by the central government played a crucial role in FY23, leading to a lower fiscal deficit as a percentage of GDP than the previous year. The government was able to cut duties, increase welfare spending, and maintain provisions for capital expenditure, fostering private investment. The momentum from FY23 has carried into the current fiscal year, as evidenced by various high-frequency indicators.

While geopolitical stress, global financial system volatility, and external factors may impact growth in the coming quarters, India's macroeconomic management and resilience position it for sustained and durable economic growth. The nation's strong balance sheets, digital advancements, and investments in supply-side infrastructure contribute to a positive outlook. However, maintaining financial stability remains crucial to ensure continued growth.

India's GDP Growth in FY23-Resilient Growth Path Amidst Rising Global Uncertainties

The global economy had been recovering from the aftermath of the COVID-19 pandemic until the eruption of the Russia-Ukraine conflict in February 2022. This conflict resulted in disruptions to global supply chains, financial constraints, and a surge in the prices of essential commodities. These disruptions manifested in various leading indicators of global economic activity, including the global composite PMI entering a contractionary phase, capital outflows from most emerging market economies (EMEs) to traditionally safer havens, currency depreciation, and an expansion of the current account deficit (CAD), among other effects. The International Monetary Fund (IMF) revised its global GDP projections downward for 2022, and although inflationary pressures are starting to alleviate, the impact of monetary tightening is impeding economic activity, particularly in advanced economies. In its most recent April update on the World Economic Outlook (WEO), the IMF

anticipates global growth to decline from 3.4 per cent in 2022 to 2.8 per cent in 2023 before rebounding to 3 per cent in 2024.

Despite these global challenges, India's economy maintained its growth momentum in FY23, propelled by robust macroeconomic fundamentals and swift Government and the Reserve Bank of India (RBI) policy responses. India's real GDP expanded by 7.2 per cent in FY23, surpassing the estimates in the second advance release in February 2023 and emerging as the highest among major economies. The exceptional annual growth was primarily driven by a better-than-expected performance in the fourth quarter of the fiscal year. India's real GDP growth in Q4 of FY23 stood out compared to other nations, with a year-on-year growth estimated at 6.1 per cent, surpassing the 4 per cent growth in Q4 of FY22 and the 4.5 per cent growth in Q3 of FY23. On a sequential basis, the growth in Q4 of FY23 at 8.4 per cent surpassed 3.7 per cent in the preceding quarter, indicating the sustained momentum in growth during Q4.

The growth performance in Q4 of FY23 was comprehensive, addressing concerns about the recovery of consumption and investment demand, bringing them back to the pre-pandemic growth trajectory. Fueled by the release of pent-up demand, real Private Final Consumption Expenditure (PFCE) exceeded the pre-pandemic trend trajectory. Simultaneously, a substantial increase in public sector capital expenditure over the last three years and a favourable credit environment in the country contributed to real Gross Fixed Capital Formation (GFCF), surpassing the pre-pandemic trend trajectory.

However, despite the accelerated growth in post-pandemic economic activity in the Indian economy and elevated import prices, import demand has remained high. Consequently, negative net exports in real terms have exhibited a pronounced downward trend post-pandemic compared to a slightly upward pre-pandemic trajectory. This has prevented the post-pandemic natural GDP trend line from surpassing the pre-pandemic trajectory, although it is on the verge of doing so. Anticipated reductions in India's import basket prices and a sustained increase in service exports are expected to narrow the net exports gap sooner than initially anticipated. This development is poised to enable real GDP to surpass its pre-pandemic trend trajectory shortly.

On an annual basis, private consumption (PFCE) as a percentage of GDP (at Constant Prices) for FY23 reached its highest point in 17 years, while gross fixed capital formation (GFCF) (at Constant Prices) recorded its highest proportion of GDP in a decade. However, quarterly data indicates a moderation in the share of private consumption in GDP for Q4 of FY23, with its contribution declining from 61.6 per cent in Q3 of FY23 to 55 per cent in Q4 of FY23, partly due to a surge in capital formation growth in the fourth quarter.

Gross Fixed Capital Formation (GFCF) emerged as a significant growth driver in Q4 of FY23, with its share in GDP reaching a 10-year high of 35.3 per cent. This surge was propelled by the crowding-in of private-sector investment resulting from a substantial increase in public-sector investment over the years. The share of total exports in GDP moderated to 22.8 per cent in Q4 of FY23, compared to 24.4 per cent in Q1 of FY23, as synchronized monetary tightening by significant economies led to a decline in consumer spending in advanced nations and moderation in international trade.

Private consumption, observed through various high-frequency indicators such as personal loan growth, remains robust, even in an environment with a higher interest rate. Increased spending via credit cards in Q4 of FY23 can be attributed to a surge in e-commerce and point-of-sale transactions. The outlook for consumption growth remains positive, as

indicated by substantial improvements in the RBI's Current Situation and Future Expectations Index.

GDP Indicators (Agriculture and Non Agriculture)

The supply-side components of GDP indicate a strengthening economy across all sectors. After a growth moderation in the first two quarters and a revival in the third, the agriculture sector achieved a twelve-quarter record-high growth rate in Q4 of FY23. This growth is partly attributed to an upward revision in rabi production estimates according to the third advance estimate. The anticipation of a normal monsoon, despite El Nino conditions, sufficient availability of seeds and fertilizers and ample storage capacity in reservoirs, bodes well for healthy kharif sowing in FY24.

A comfortable wheat procurement situation is a buffer for the agri-economy, with nearly 2.6 crore Metric Tonnes of wheat procured by June 21, 2023, benefiting 21.3 lakh farmers. The combined stock of wheat and rice in the central pool has reached 7.3 crore metric Tons, surpassing the buffer norm of 2.1 crore metric Tons for April-June 2023. This places India in a favourable position to meet its domestic foodgrain requirements.

The increased food grain production and rising rural wages in agricultural and non-agricultural sectors have stimulated rural demand. Year-on-year growth in Fast Moving Consumer Goods (FMCG) volume sales in rural areas turned positive in Q4 of FY23, signalling a revival in rural demand. Boosted by an increase in Minimum Support Price (MSP) enhancing farm income, easy access to finance, and a favourable monsoon, domestic tractor sales reached an all-time high in FY23. Moving forward, anticipated increases in MSP for rabi and kharif crops, a rise in Fair and Remunerative Price (FRP) for Sugarcane, and an increase in the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) wage rate are expected to enhance the financial security of rural households, further boosting rural demand.

The global industry sector faced challenges throughout FY23 due to disruptions in supply chains and elevated raw material costs, leading major economies to experience contractionary conditions in PMI Manufacturing from August 2022 onward. On the other hand, India maintained an expansionary zone in PMI Manufacturing throughout the year, supported by robust new orders and output expansion. Although the manufacturing sector's Gross Value Added (GVA) witnessed a temporary slowdown in Q2 and Q3 of FY23 due to high input costs, a revival occurred in Q4 with a decline in input costs, increased demand, and enhanced capacity utilization. The growth in manufacturing GVA, constituting around three-fourths of industrial Gross Value Added, contributed to the rebound in the overall industrial sector in Q4 of FY23, complemented by growth in the construction sector.

Several high-frequency indicators also signal a strong resurgence in the industry sector. After a modest pace in Q2 and Q3, the Index of Industrial Production (IIP) expanded in Q4 of FY23, notably in the production of capital goods and infrastructure/construction goods, indicating a revival in capital formation. The construction sector (IIP) experienced double-digit growth in Q4 of FY23 after a slowdown in Q2 due to heavy monsoons. Additional indicators, such as cement production and steel consumption, also increased in Q4 of FY23. The government's focus on infrastructure and rising housing demand fueled the sector's growth. Despite increasing home prices and higher interest rates on home loans, the Indian housing market witnessed substantial growth in sales and new house launches in FY23.

The services sector also demonstrated robust growth in FY23, primarily propelled by contact-intensive services. This sector fully recovered to pre-pandemic levels in FY23, facilitated by easing mobility restrictions, the release of pent-up demand, and widespread vaccination coverage. PMI Services remained in the expansionary zone throughout the year, supported by improvements in new business intakes, increased orders, and flagged price pressures on inputs and raw materials from October 2022 onward. Significant contributors to the growth in the services sector included Trade, Hotels, Transport, Communication, Services related to Broadcasting, Financial Real Estate and Professional Services.

The Hotel Industry exhibited a strong recovery in FY23, surpassing the average pre-pandemic level of FY20 in Q4 with increased hotel occupancy rates, Average Daily Rate (ADR), and Revenue per Available Room (RPAR). This recovery was driven by domestic leisure travel growth, business travel resumption, and social events. Small- to medium-sized domestic MICE (Meetings, incentives, conferences, exhibitions) events also increased hotel demand. The tourism sector showed signs of revival, with Foreign Tourist Arrivals (FTA) in India nearing pre-pandemic levels in Q4 of FY23, supported by the resumption of scheduled international flights. As pandemic-related restrictions eased, corporate travel surged, and domestic air passenger traffic surpassed pre-pandemic levels in Q4 of FY23.

High-Frequency Indicators (HFIs) for April/May 2023 indicate a resurgence in economic activity in Q1 of FY24, sustaining the growth momentum. Gross GST collection climbed by 12 per cent year-on-year to ₹1.57 lakh crore in May 2023, surpassing the ₹1.5 lakh crore benchmark for the fifth time since its inception. Positive growth in E-Way bills during April and May 2023 suggests the potential for robust growth in GST collection in the coming months. The increasing levels of electronic toll collection further confirm the upward trend in commercial activity. In May 2023, PMI manufacturing reached a 31-month high of 58.7, propelled by a record expansion in input stocks and a substantial rise in new orders and inputs. Growth momentum in the Services sector persisted, with PMI services expanding to 61.2 in May 2023, marking a further increase in output across sectors, reaching the second-highest pace since July 2010.

The outlook for the manufacturing sector remains positive, as emphasized in the RBI's Industrial Outlook Survey. Respondents expressed optimism regarding demand conditions, anticipating improved assessments for the overall business situation, production, order books, and capacity utilization in the next two-quarters of FY24. The services sector outlook is also promising, as the RBI's Services and Infrastructure Outlook Survey indicates. Survey respondents displayed confidence in the overall business situation and turnover during Q1 of FY24, expecting favourable employment conditions for full-time and part-time employees. The survey anticipates sequential growth in demand for services until the third quarter of FY24.

Surge of Labour Requirements Due to Economic Growth

From the year 2021 economic growth resumed in various countries despite the ongoing pandemic and its multiple variants. The demand surge, fueled by substantial fiscal stimulus, led to increased growth in advanced economies and heightened demand for labour. However, the output supply did not respond proportionately as the lingering effects of the pandemic reduced the size and participation rate of the labour force. Consequently, wage rates rose, initiating a wage-price spiral even before the onset of the conflict in Ukraine. The

labour supply has gradually been recovering in advanced economies, marking a complete recovery of the labour market in 2021-22.

According to the World Employment and Social Outlook 2023 by the ILO, global labour markets are yet to recover fully, especially in advanced economies. In contrast, India's labour force and labour force participation rate (LFPR) has increased consistently throughout the pandemic, aligning with the pre-pandemic trend. The substantial unorganized sector, relying on daily wages, overcame pandemic challenges, resulting in a continuous rise in the Worker Population Ratio (WPR). Despite temporary increases in urban unemployment rate (UR) during pandemic-induced lockdowns, the annual rural-urban combined UR declined from 2017-18 to 2021-22. In 2022-23, the urban UR continued to decrease, indicating steady employment growth in the country. The reduced urban UR also absorbed employment growth in the construction sector, providing job opportunities for rural migrants in urban areas.

Labour markets in advanced economies are experiencing tighter conditions than pre-COVID-19, leading to reduced labour force participation. In high-income countries, LFPR remained lower in 2022 at 59.8 per cent compared to 60.2 per cent in 2019. In contrast, India's LFPR was 55.2 per cent in FY22, higher than 54.9 per cent in FY21 and 53.5 per cent in FY20. The worker-population ratio increased from 50.9 per cent in FY20 to 52.6 per cent in FY21 and 52.9 per cent in FY22. Strong economic growth, supported by calibrated fiscal policy and expanded public capex, contributed to the rise in the worker-population ratio, with the UR reaching a five-year low of 4.1 per cent in FY22. Workers' Earnings increased across rural and urban areas, particularly for casual labourers in the construction sector, which expanded at a double-digit pace in FY22. Government interventions, such as Aatmanirbhar Bharat Rojgar Yojana and Garib Kalyan Rojgar Abhiyaan, along with MSME support, Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), and collateral-free loans, created employment opportunities and enhanced livelihood security.

The significant rise in employment levels, calibrated fiscal stimulus, and expanded public capex propelled a demand boost in the Indian economy from FY21 to FY23. Job creation played a crucial role in stimulating demand, indicating the growing inclusivity of India's economic growth. This inclusivity is not merely temporary but is becoming deeply ingrained, particularly with increased job creation in the formal sector driven by initiatives like Aadhaar, the e-ashram portal, the Udyam Portal for MSME registration, and GST implementation. Job creation in the legal industry has risen, evidenced by the increased net monthly payroll additions under the Employees Provident Fund Organisation (EPFO), signalling a shift towards a more formalized economy. In FY23, net EPFO members reached a four-year high, with the expert service sector contributing significantly to formal job creation. While net additions grew considerably in the first three quarters, a moderation in Q4 is partly attributed to the slowdown in employment generation in the Information Technology (IT) sector, reflecting a global trend.

There is a noticeable growth in job creation at a broader level within the manufacturing and services sector. The expansion in new business ventures is a driving force behind job generation, particularly in manufacturing sub-sectors such as electronics, auto and auto ancillary, and chemicals, as well as in the services sector, including insurance, hospitality, and banking. In the services sector, increased public awareness of health insurance products post-pandemic, a surge in business and leisure travel, and the rapid expansion of digital banking services significantly contribute to creating new jobs. The PMI's employment-

related sub-indices for manufacturing and services entered the expansionary zone in FY23. The average PMI sub-indices for employment in manufacturing and services sectors were consistently higher in all four quarters of FY23 than in FY22. The Naukri Job Speak Index, which doubled in FY23, also demonstrated a resilient overall hiring activity across all four quarters.

The growth in formal sector employment is further bolstered by improvements in education infrastructure and enhanced educational quality, leading to increased employability of the younger workforce. According to the India Skills Report 2023, final-year and pre-final-year students deemed employable rose from 33.9 per cent in 2014 to 50.3 per cent in 2023. Wheebox, in collaboration with various partners, conducts the India Skills Report, assessing students' work readiness through online skill assessments, including technical and psychometric evaluations. In 2022, over 3.75 lakh students from various domains and educational backgrounds participated in the Wheebox Employability Test, providing insights into national employability trends.

Looking ahead, employment levels are anticipated to remain robust, primarily driven by rapid digitalization, technological advancements, and the expanded implementation of the Production-Linked Incentive (PLI) scheme. This is expected to create employment opportunities for both semi-skilled and skilled workers.

The year 2022 will be remembered for high inflation affecting most economies, both advanced and emerging markets, following the easing of the pandemic, which had allowed growth to resume. A localized geopolitical conflict escalated into a significant global headwind, disrupting supply chains worldwide and causing an indiscriminate price spike. Consequently, inflation surged to decadal highs, surpassing levels in the new millennium for some nations. National governments implemented specific supply-side measures to counter this, while central banks undertook monetary tightening to restrain demand. These efforts have begun to show results, with the softening of commodity prices leading to a weakening of headline inflation in most economies in the early months of 2023. Although core inflation persists due to high input costs for some reasons, those that have declined still have more ground to cover. In its April update of the World Economic Outlook, the IMF projected a decline in global inflation for 2023.

The inflation scenario in India follows a comparable trajectory. In the first half of FY23, it reflected heightened imported inflation. Subsequently, the relaxation of global supply chains, specific governmental interventions, and monetary tightening have contributed to a softening of headline inflation in the latter half. Certain domestic factors, such as unseasonal rainfall, continue to exert upward pressure on the prices of specific vegetables, like tomatoes. Nevertheless, these are more than offset by decreasing inflation in other food items, leading to a moderation in food inflation during the second half of FY23. CPI-Core inflation remained resistant to decline before dropping from March 2023.

CPI-Core inflation in India remained around 6 per cent from May 2022 to February 2023 before experiencing a drop to a 23-month low of 5.7 per cent in March 2023. This decline was propelled by a reduction in the 'transport and communication' component of miscellaneous inflation and the pass-through of rapidly decreasing input costs associated with the significant fall in wholesale inflation. Wholesale price inflation began dropping in June 2022 and declined steeply, reaching a low of 1.3 per cent in March 2023. The decline has been particularly noticeable since October 2022, with inflation in manufactured products steadily shrinking and fuel and power inflation declining much faster. Even as core inflation

somewhat eased, food inflation decreased significantly from the third quarter of FY23. A tangible drop in food inflation overcame the resistant core inflation, resulting in a 100 basis points (bps) decline in headline inflation in Q4 of FY23 compared to Q1.

Conclusion

India's economic landscape in fiscal year 2023 showcases remarkable achievements amid global uncertainties. The country's GDP growth, exceeding expectations, is underpinned by a robust domestic demand recovery, spearheaded by resilient sectors like agriculture, industry, and services. Employment growth, supported by government initiatives, has contributed to inclusive development, while inflation management strategies have helped navigate global challenges effectively. The disciplined fiscal approach, coupled with infrastructure investments, has played a pivotal role in sustaining growth momentum. Looking ahead, while external factors pose potential challenges, India's proactive macroeconomic strategies and diverse economic drivers position it for continued resilience and growth. The positive outlook, marked by strong fundamentals and a focus on financial stability, reaffirms India's role as a dynamic player in the global economic landscape.

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HARMONY IN DIVERSITY: THE VIBRANT COLOURS OF INDIA'S ECONOMIC SUCCESS

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Abstract:

India has been one of the world's fastest-growing major economies, with growth rates fluctuating due to the COVID-19 pandemic. The services sector, particularly IT, business process outsourcing, and software services, has been a significant contributor to India's GDP, attracting foreign investment and generating employment. The "Make in India" initiative aims to boost manufacturing, promoting domestic production and self-reliance. The government has implemented fiscal policies to stimulate economic growth, including budgetary allocations for infrastructure development, social welfare programs, and business ease of doing business reforms. India is also undergoing a digital transformation, focusing on digital infrastructure, financial inclusion, and e-governance. Initiatives like Digital India aim to leverage technology for economic development. India faces challenges such as income inequality, unemployment, infrastructure deficits, and regulatory complexities, which are crucial for sustaining and accelerating economic growth. The provisional GDP estimates for fiscal year 2023 exceeded the consensus estimate, resulting in annual GDP growth of 7.2%, exceeding the earlier February estimate of 7%. Recent indicators show no signs of a slowdown in the initial two months of the current year.

Keywords: Diversity; GDP; COVID-19; Digital Transformation; Government

Introduction

India has been one of the world's fastest-growing major economies in recent years, although growth rates have experienced fluctuations. The COVID-19 pandemic in 2020 had a significant impact on economic activities, leading to a contraction in GDP. However, there were signs of recovery in subsequent quarters. The services sector, particularly information technology, business process outsourcing, and software services, has been a major contributor to India's GDP. It has played a crucial role in attracting foreign investment and generating employment. The "Make in India" initiative aimed to boost the manufacturing sector, promoting domestic production and self-reliance. The sector is crucial for economic diversification and job creation. The government has implemented fiscal policies to stimulate economic growth, including budgetary allocations for infrastructure development, social welfare programs, and reforms to enhance the ease of doing business. India has been undergoing a digital transformation, with a focus on digital infrastructure, financial inclusion, and e-governance. Initiatives like Digital India aim to leverage technology for economic development. India faces challenges such as income inequality, unemployment, infrastructure deficits, and regulatory complexities. Addressing these challenges is crucial for sustaining and accelerating economic growth.

The provisional GDP estimates for the fiscal year 2023, released in May, surpassed the consensus estimate, driven by a robust performance in the final quarter. This propelled the annual GDP growth to 7.2%, exceeding the earlier February estimate of 7%. This positive

deviation in growth projections extends into the current year, with various forecasting agencies revising their estimates upward for fiscal year 2024. Recent indicators show no signs of a slowdown in the initial two months of the current year. India's status as the fastest-growing major economy is no longer just a statistical fact, underscored by its remarkable growth in FY23 amid global economic challenges of inflation and monetary tightening.

Drivers of Indian Economy

The key driver of India's economic success is the resilience of its domestic demand. Despite the severe contraction in output in FY21 due to the pandemic, domestic demand has rebounded and strengthened throughout FY23. This recovery has almost bridged the gap between the pre-and post-pandemic quarterly growth trajectories, bringing the economy close to the output levels it would have achieved without the pandemic. Notably, the agriculture and industrial sectors, driven by manufacturing, played vital roles in supporting the economy – the services sector, particularly contact-intensive services, fully recovered by the year-end.

Rising employment levels have contributed to inclusivity and reinforced domestic demand. The labour force participation rate increased during the pandemic, leading to a five-year low unemployment rate in FY22. In FY23, the urban unemployment rate continued to decline in each quarter, reflecting sustained employment growth. Policy measures implemented recently, supporting the corporate sector and small enterprises and attracting foreign capital, have boosted employment generation.

Inflation posed a significant global challenge in FY23, exacerbated by geopolitical conflicts and the impact of El Nio. However, India managed to control inflation better than many other emerging market economies and advanced economies. The Reserve Bank of India (RBI) did not need to increase policy rates as much as other central banks did. The decline in international commodity prices towards the year-end helped India bring headline inflation within the target range, although core inflation remained somewhat sticky.

The increase in repo rates, coupled with fiscal and administrative measures, successfully mitigated inflation while sustaining domestic demand. Credit growth rose in FY23, contributing to the profitability of banks. Despite external demand challenges in merchandise exports, services exports, especially in IT, remained strong. The decline in global commodity prices reduced import costs, aiding economic activity. The external sector contributed positively to the economy, including a reduced current account deficit and robust forex reserves.

Disciplined fiscal management by the central government played a crucial role in FY23, leading to a lower fiscal deficit as a percentage of GDP than the previous year. The government was able to cut duties, increase welfare spending, and maintain provisions for capital expenditure, fostering private investment. The momentum from FY23 has carried into the current fiscal year, as evidenced by various high-frequency indicators.

While geopolitical stress, global financial system volatility, and external factors may impact growth in the coming quarters, India's macroeconomic management and resilience position it for sustained and durable economic growth. The nation's strong balance sheets, digital advancements, and investments in supply-side infrastructure contribute to a positive outlook. However, maintaining financial stability remains crucial to ensure continued growth.

India's GDP Growth in FY23-Resilient growth path amidst rising global uncertainties

The global economy had been recovering from the aftermath of the COVID-19 pandemic until the eruption of the Russia-Ukraine conflict in February 2022. This conflict resulted in disruptions to global supply chains, financial constraints, and a surge in the prices of essential commodities. These disruptions manifested in various leading indicators of global economic activity, including the global composite PMI entering a contractionary phase, capital outflows from most emerging market economies (EMEs) to traditionally safer havens, currency depreciation, and an expansion of the current account deficit (CAD), among other effects. The International Monetary Fund (IMF) revised its global GDP projections downward for 2022, and although inflationary pressures are starting to alleviate, the impact of monetary tightening is impeding economic activity, particularly in advanced economies. In its most recent April update on the World Economic Outlook (WEO), the IMF anticipates global growth to decline from 3.4 per cent in 2022 to 2.8 per cent in 2023 before rebounding to 3 per cent in 2024.

Despite these global challenges, India's economy maintained its growth momentum in FY23, propelled by robust macroeconomic fundamentals and swift Government and the Reserve Bank of India (RBI) policy responses. India's real GDP expanded by 7.2 per cent in FY23, surpassing the estimates in the second advance release in February 2023 and emerging as the highest among major economies. The exceptional annual growth was primarily driven by a better-than-expected performance in the fourth quarter of the fiscal year. India's real GDP growth in Q4 of FY23 stood out compared to other nations, with a year-on-year growth estimated at 6.1 per cent, surpassing the 4 per cent growth in Q4 of FY22 and the 4.5 per cent growth in Q3 of FY23. On a sequential basis, the growth in Q4 of FY23 at 8.4 per cent surpassed 3.7 per cent in the preceding quarter, indicating the sustained momentum in growth during Q4. The growth performance in Q4 of FY23 was comprehensive, addressing concerns about the recovery of consumption and investment demand, bringing them back to the pre-pandemic growth trajectory. Fueled by the release of pent-up demand, real Private Final Consumption Expenditure (PFCE) exceeded the pre-pandemic trend trajectory. Simultaneously, a substantial increase in public sector capital expenditure over the last three years and a favourable credit environment in the country contributed to real Gross Fixed Capital Formation (GFCF), surpassing the pre-pandemic trend trajectory.

However, despite the accelerated growth in post-pandemic economic activity in the Indian economy and elevated import prices, import demand has remained high. Consequently, negative net exports in real terms have exhibited a pronounced downward trend post-pandemic compared to a slightly upward pre-pandemic trajectory. This has prevented the post-pandemic natural GDP trend line from surpassing the pre-pandemic trajectory, although it is on the verge of doing so. Anticipated reductions in India's import basket prices and a sustained increase in service exports are expected to narrow the net exports gap sooner than initially anticipated. This development is poised to enable real GDP to surpass its pre-pandemic trend trajectory shortly. On an annual basis, private consumption (PFCE) as a percentage of GDP (at Constant Prices) for FY23 reached its highest point in 17 years, while gross fixed capital formation (GFCF) (at Constant Prices) recorded its highest proportion of GDP in a decade. However, quarterly data indicates a moderation in the share of private consumption in GDP for Q4 of FY23, with its contribution declining from 61.6 per cent in Q3 of FY23 to 55 per cent in Q4 of FY23, partly due to a surge in capital formation growth in the fourth quarter.

Gross Fixed Capital Formation (GFCF) emerged as a significant growth driver in Q4 of FY23, with its share in GDP reaching a 10-year high of 35.3 per cent. This surge was propelled by the crowding-in of private-sector investment resulting from a substantial increase in public-sector investment over the years. The share of total exports in GDP moderated to 22.8 per cent in Q4 of FY23, compared to 24.4 per cent in Q1 of FY23, as synchronized monetary tightening by significant economies led to a decline in consumer spending in advanced nations and moderation in international trade. Private consumption, observed through various high-frequency indicators such as personal loan growth, remains robust, even in an environment with a higher interest rate. Increased spending via credit cards in Q4 of FY23 can be attributed to a surge in e-commerce and point-of-sale transactions. The outlook for consumption growth remains positive, as indicated by substantial improvements in the RBI's Current Situation and Future Expectations Index.

GDP Indicators (Agriculture and Non Agriculture)

The supply-side components of GDP indicate a strengthening economy across all sectors. After a growth moderation in the first two quarters and a revival in the third, the agriculture sector achieved a twelve-quarter record-high growth rate in Q4 of FY23. This growth is partly attributed to an upward revision in rabi production estimates according to the third advance estimate. The anticipation of a normal monsoon, despite El Nino conditions, sufficient availability of seeds and fertilizers and ample storage capacity in reservoirs, bodes well for healthy kharif sowing in FY24.

A comfortable wheat procurement situation is a buffer for the agri-economy, with nearly 2.6 crore Metric Tonnes of wheat procured by June 21, 2023, benefiting 21.3 lakh farmers. The combined stock of wheat and rice in the central pool has reached 7.3 crore metric Tons, surpassing the buffer norm of 2.1 crore metric Tons for April-June 2023. This places India in a favourable position to meet its domestic foodgrain requirements.

The increased food grain production and rising rural wages in agricultural and non-agricultural sectors have stimulated rural demand. Year-on-year growth in Fast Moving Consumer Goods (FMCG) volume sales in rural areas turned positive in Q4 of FY23, signalling a revival in rural demand. Boosted by an increase in Minimum Support Price (MSP) enhancing farm income, easy access to finance, and a favourable monsoon, domestic tractor sales reached an all-time high in FY23. Moving forward, anticipated increases in MSP for rabi and kharif crops, a rise in Fair and Remunerative Price (FRP) for Sugarcane, and an increase in the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) wage rate are expected to enhance the financial security of rural households, further boosting rural demand.

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The services sector also demonstrated robust growth in FY23, primarily propelled by contact-intensive services. This sector fully recovered to pre-pandemic levels in FY23, facilitated by easing mobility restrictions, the release of pent-up demand, and widespread vaccination coverage. PMI Services remained in the expansionary zone throughout the year, supported by improvements in new business intakes, increased orders, and flagged price pressures on inputs and raw materials from October 2022 onward. Significant contributors to the growth in the services sector included Trade, Hotels, Transport, Communication, Services related to Broadcasting, Financial Real Estate and Professional Services.

The Hotel Industry exhibited a strong recovery in FY23, surpassing the average pre-pandemic level of FY20 in Q4 with increased hotel occupancy rates, Average Daily Rate (ADR), and Revenue per Available Room (RPAR). This recovery was driven by domestic leisure travel growth, business travel resumption, and social events. Small- to medium-sized domestic MICE (Meetings, incentives, conferences, exhibitions) events also increased hotel demand. The tourism sector showed signs of revival, with Foreign Tourist Arrivals (FTA) in India nearing pre-pandemic levels in Q4 of FY23, supported by the resumption of scheduled international flights. As pandemic-related restrictions eased, corporate travel surged, and domestic air passenger traffic surpassed pre-pandemic levels in Q4 of FY23.

High-Frequency Indicators (HFIs) for April/May 2023 indicate a resurgence in economic activity in Q1 of FY24, sustaining the growth momentum. Gross GST collection climbed by 12 per cent year-on-year to ₹1.57 lakh crore in May 2023, surpassing the ₹1.5 lakh crore benchmark for the fifth time since its inception. Positive growth in E-Way bills during April and May 2023 suggests the potential for robust growth in GST collection in the coming months. The increasing levels of electronic toll collection further confirm the upward trend in commercial activity. In May 2023, PMI manufacturing reached a 31-month high of 58.7, propelled by a record expansion in input stocks and a substantial rise in new orders and inputs. Growth momentum in the Services sector persisted, with PMI services expanding to 61.2 in May 2023, marking a further increase in output across sectors, reaching the second-highest pace since July 2010.

The outlook for the manufacturing sector remains positive, as emphasized in the RBI's Industrial Outlook Survey. Respondents expressed optimism regarding demand conditions, anticipating improved assessments for the overall business situation, production, order books, and capacity utilization in the next two-quarters of FY24. The services sector outlook is also promising, as the RBI's Services and Infrastructure Outlook Survey indicates. Survey respondents displayed confidence in the overall business situation and turnover during Q1 of FY24, expecting favourable employment conditions for full-time and part-time employees. The survey anticipates sequential growth in demand for services until the third quarter of FY24.

Surge of Labour Requirements Due to Economic Growth

From the year 2021 economic growth resumed in various countries despite the ongoing pandemic and its multiple variants. The demand surge, fueled by substantial fiscal stimulus, led to increased growth in advanced economies and heightened demand for labour. However, the output supply did not respond proportionately as the lingering effects of the pandemic reduced the size and participation rate of the labour force. Consequently, wage rates rose, initiating a wage-price spiral even before the onset of the conflict in Ukraine. The labour supply has gradually been recovering in advanced economies, marking a complete recovery of the labour market in 2021-22.

According to the World Employment and Social Outlook 2023 by the ILO, global labour markets are yet to recover fully, especially in advanced economies. In contrast, India's labour force and labour force participation rate (LFPR) has increased consistently throughout the pandemic, aligning with the pre-pandemic trend. The substantial unorganized sector, relying on daily wages, overcame pandemic challenges, resulting in a continuous rise in the Worker Population Ratio (WPR). Despite temporary increases in urban unemployment rate (UR) during pandemic-induced lockdowns, the annual rural-urban combined UR declined from 2017-18 to 2021-22. In 2022-23, the urban UR continued to decrease, indicating steady employment growth in the country. The reduced urban UR also absorbed employment growth in the construction sector, providing job opportunities for rural migrants in urban areas.

Labour markets in advanced economies are experiencing tighter conditions than pre-COVID-19, leading to reduced labour force participation. In high-income countries, LFPR remained lower in 2022 at 59.8 per cent compared to 60.2 per cent in 2019. In contrast, India's LFPR was 55.2 per cent in FY22, higher than 54.9 per cent in FY21 and 53.5 per cent in FY20. The worker-population ratio increased from 50.9 per cent in FY20 to 52.6 per cent in FY21 and 52.9 per cent in FY22. Strong economic growth, supported by calibrated fiscal policy and expanded public capex, contributed to the rise in the worker-population ratio, with the UR reaching a five-year low of 4.1 per cent in FY22. Workers' Earnings increased across rural and urban areas, particularly for casual labourers in the construction sector, which expanded at a double-digit pace in FY22. Government interventions, such as Aatmanirbhar Bharat Rojgar Yojana and Garib Kalyan Rojgar Abhiyaan, along with MSME support, Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), and collateral-free loans, created employment opportunities and enhanced livelihood security.

The significant rise in employment levels, calibrated fiscal stimulus, and expanded public capex propelled a demand boost in the Indian economy from FY21 to FY23. Job creation played a crucial role in stimulating demand, indicating the growing inclusivity of India's economic growth. This inclusivity is not merely temporary but is becoming deeply ingrained, particularly with increased job creation in the formal sector driven by initiatives like Aadhaar, the e-ashram portal, the Udyam Portal for MSME registration, and GST implementation. Job creation in the legal industry has risen, evidenced by the increased net monthly payroll additions under the Employees Provident Fund Organisation (EPFO), signalling a shift towards a more formalized economy. In FY23, net EPFO members reached a four-year high, with the expert service sector contributing significantly to formal job creation. While net additions grew considerably in the first three quarters, a moderation in Q4 is partly attributed to the slowdown in employment generation in the Information Technology (IT) sector, reflecting a global trend.

There is a noticeable growth in job creation at a broader level within the manufacturing and services sector. The expansion in new business ventures is a driving force behind job generation, particularly in manufacturing sub-sectors such as electronics, auto and auto ancillary, and chemicals, as well as in the services sector, including insurance, hospitality, and banking. In the services sector, increased public awareness of health insurance products post-pandemic, a surge in business and leisure travel, and the rapid expansion of digital banking services significantly contribute to creating new jobs. The PMI's employment-related sub-indices for manufacturing and services entered the expansionary zone in FY23. The average PMI sub-indices for employment in manufacturing and services sectors were consistently higher in all four quarters of FY23 than in FY22. The Naukri Job Speak Index, which doubled in FY23, also demonstrated a resilient overall hiring activity across all four quarters.

The growth in formal sector employment is further bolstered by improvements in education infrastructure and enhanced educational quality, leading to increased employability of the younger workforce. According to the India Skills Report 2023, final-year and pre-final-year students deemed employable rose from 33.9 per cent in 2014 to 50.3 per cent in 2023. Wheebox, in collaboration with various partners, conducts the India Skills Report, assessing students' work readiness through online skill assessments, including technical and psychometric evaluations. In 2022, over 3.75 lakh students from various domains and educational backgrounds participated in the Wheebox Employability Test, providing insights into national employability trends.

Looking ahead, employment levels are anticipated to remain robust, primarily driven by rapid digitalization, technological advancements, and the expanded implementation of the Production-Linked Incentive (PLI) scheme. This is expected to create employment opportunities for both semi-skilled and skilled workers.

The year 2022 will be remembered for high inflation affecting most economies, both advanced and emerging markets, following the easing of the pandemic, which had allowed growth to resume. A localized geopolitical conflict escalated into a significant global headwind, disrupting supply chains worldwide and causing an indiscriminate price spike. Consequently, inflation surged to decadal highs, surpassing levels in the new millennium for some nations. National governments implemented specific supply-side measures to counter this, while central banks undertook monetary tightening to restrain demand. These efforts have begun to show results, with the softening of commodity prices leading to a weakening of headline inflation in most economies in the early months of 2023. Although core inflation persists due to high input costs for some reasons, those that have declined still have more ground to cover. In its April update of the World Economic Outlook, the IMF projected a decline in global inflation for 2023.

The inflation scenario in India follows a comparable trajectory. In the first half of FY23, it reflected heightened imported inflation. Subsequently, the relaxation of global supply chains, specific governmental interventions, and monetary tightening have contributed to a softening of headline inflation in the latter half. Certain domestic factors, such as unseasonal rainfall, continue to exert upward pressure on the prices of specific vegetables, like tomatoes. Nevertheless, these are more than offset by decreasing inflation in other food items, leading to a moderation in food inflation during the second half of FY23. CPI-Core inflation remained resistant to decline before dropping from March 2023.

CPI-Core inflation in India remained around 6 per cent from May 2022 to February 2023 before experiencing a drop to a 23-month low of 5.7 per cent in March 2023. This decline was propelled by a reduction in the 'transport and communication' component of miscellaneous inflation and the pass-through of rapidly decreasing input costs associated with the significant fall in wholesale inflation. Wholesale price inflation began dropping in June 2022 and declined steeply, reaching a low of 1.3 per cent in March 2023. The decline has been particularly noticeable since October 2022, with inflation in manufactured products steadily shrinking and fuel and power inflation declining much faster. Even as core inflation somewhat eased, food inflation decreased significantly from the third quarter of FY23. A tangible drop in food inflation overcame the resistant core inflation, resulting in a 100 basis points (bps) decline in headline inflation in Q4 of FY23 compared to Q1.

Conclusion

India's economic landscape in fiscal year 2023 showcases remarkable achievements amid global uncertainties. The country's GDP growth, exceeding expectations, is underpinned by a robust domestic demand recovery, spearheaded by resilient sectors like agriculture, industry, and services. Employment growth, supported by government initiatives, has contributed to inclusive development, while inflation management strategies have helped navigate global challenges effectively. The disciplined fiscal approach, coupled with infrastructure investments, has played a pivotal role in sustaining growth momentum. Looking ahead, while external factors pose potential challenges, India's proactive macroeconomic strategies and diverse economic drivers position it for continued resilience and growth. The positive outlook, marked by strong fundamentals and a focus on financial stability, reaffirms India's role as a dynamic player in the global economic landscape.

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INDIA'S \$5 TRILLION ECONOMY - THE VISION, CHALLENGES AND ROAD MAP

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Abstract

India hopes to reach a \$5 trillion GDP by 2027–2028, putting it in the company of the world's most powerful economies. With industries like manufacturing, services, and infrastructure driving this ambitious quest, the "Make in India" goal has enormous promise for both India's future and the global scene. But obstacles like a lack of expertise, congested infrastructure, and environmental issues could impede its development. This study examines the main forces behind India's economic transformation, as well as any potential impediments or deterrents. It also projects two possible outcomes: either India becomes a global superpower or encounters difficulties on its path to do so. India's success ultimately depends on its ability to overcome these obstacles through innovative thinking, efficient government, and international collaboration, opening the door to a more just and sustainable future for both the country and the world.

Keywords: 5 Trillion Economy; Economic Transformation; Make in India; international collaboration

Introduction

Imagine a land of ancient spices and modern marvels, where a billion voices hum the melody of progress. This is India, a nation poised to dance from \$3.7 trillion to \$5 trillion on the world stage, its vibrant economy a tantalizing mirage shimmering in the desert of ambition. But is this just a shimmering illusion, or can India truly become a global economic giant, its rise leaving indelible footprints on the sands of time? Dive with me into the engines driving this audacious transformation, the potholes threatening to derail it, and the lives this monumental shift will touch. From bustling tech hubs to rural farmlands, we'll explore the symphony of opportunities and challenges that define India's \$5 trillion dream, a saga whispered in boardrooms and echoed in village squares. Get ready to witness a metamorphosis, an economic ballet where every step holds the potential to rewrite the future, not just for India, but for the world.

India hopes to overtake Japan and Germany as the third-largest economy in the world by achieving its target of a 5 trillion dollar GDP. Millions of jobs will be created, living standards will rise, and foreign investment will be drawn in, increasing national pride. Additionally, the objective will spur innovation and technical breakthroughs, increasing production and efficiency. Citizens of India will live better lives as a result, which will enhance social welfare, healthcare, and education. India will become a leader in cutting-edge technology like artificial intelligence and renewable energy as a result of its economic success, which will also promote growth and stability on a worldwide scale.

India wants to use many economic pillars to grow its GDP to five trillion dollars by 2027–2028. These include the advancement of infrastructure, the growth of manufacturing and industry, the application of technology and innovation, the expansion of the services sector, the advancement of social and human development, the provision of healthcare, a robust education system, financial empowerment, and sustainable development. The government wants to guarantee equitable and inclusive growth, minimize red tape, lower bureaucratic barriers, and use the experience of the private sector. These initiatives aim to enhance productivity, attract investment, and encourage economic growth while addressing poverty and inequality. The goal is broad and aspirational.

India's audacious target of having a \$5 trillion economy by 2027–2028 is fraught with difficulties and complexity. These include preserving high GDP growth, creating jobs and skill mismatches, inclusive growth and inequality, managing debt and maintaining fiscal restraint, overcoming regulatory and infrastructure bottlenecks, avoiding bureaucracy and red tape, acquiring land and addressing environmental and social development issues, managing geopolitical and global uncertainties, and dealing with trade wars and external shocks.

A multifaceted strategy is required to address these issues, including public-private partnerships, skill development and education reforms, investment in human capital, sustainable development practices, innovation and technology, and transparent and efficient governance. It will take concentrated efforts, creative thinking, and ongoing support from the public, commercial, and civil society sectors to overcome these obstacles. By tackling these issues, India can become a major force in the world economy, combat poverty, and enhance the lives of millions of people.

By 2027–2028, India hopes to have a \$5 trillion GDP thanks to a blueprint that includes targeted priority areas and tactics. Infrastructure development is one of the main pillars, along with the growth of the manufacturing and industrial sectors, the expansion of the services sector, the advancement of social and human development, the development of education and skills, the provision of healthcare and sanitation, financial inclusion and empowerment, governance and policy, equitable and inclusive growth, sustainability and the environment, and technology and innovation. Infrastructure development includes many activities such as modernizing transportation networks, increasing energy generation capacity, constructing smart cities, and endorsing "Make in India" projects. Promoting "Make in India" campaigns, putting Production Linked Incentive programs into place, and encouraging innovation and technology adoption are all necessary for manufacturing and industrial growth. The growth of the services sector in India is concentrated on enhancing the country's leadership in IT and IT-enabled services, leveraging new markets like healthcare, travel, and finance, and encouraging the export of professional and knowledge-based services. Simplifying rules and regulations, encouraging transparency, and utilizing private sector know-how for infrastructure development and technology adoption are all part of governance and policy.

Vision for a Five Trillion Economy

India's GDP is expected to rise to \$5 trillion, with significant contributions from important sectors. This shift is mostly dependent on the manufacturing and technology, services, infrastructure, renewable energy, and social sectors. The "Make in India" and PLI programs are designed to increase homegrown manufacturing in industries such as textiles,

electronics, cars, and pharmaceuticals. AI, big data, and cloud computing are examples of digital transformation that will reshape businesses, provide employment, and draw in foreign investment. Opportunities in tourism and hospitality are presented by the expanding middle class and cultural legacy.

By 2025, the Indian government hopes to have a \$5 trillion GDP thanks to several policies and programmes. These include Digital India, Skills India, Startup India, Ease of Doing Business, Production Linked Incentive Schemes, Made in India, and Startup India. Urban growth and technological integration are the main objectives of the Smart Cities Mission, whereas infrastructure projects are the emphasis of the National Infrastructure Pipeline. By 2022, India hopes to reach 100 GW of solar power capacity thanks to the National Solar Mission. Afforestation and mitigating climate change are the main objectives of the Green India Mission. Ayushman Bharat, Sarva Shiksha Abhiyan, and the Pradhan Mantri Gramme Suraksha Yojana are examples of social sectors. On the other hand, issues including deficiencies in skill development, infrastructure constraints, and ineffective bureaucracy must be resolved.

India wants to embrace innovation, technology, and a robust entrepreneurial ecosystem to grow its economy to \$5 trillion by 2025. This entails adopting disruptive technologies like as blockchain, artificial intelligence, and the Internet of Things, concentrating on locally relevant solutions, and cultivating robust relationships between research institutions, enterprises, and academia. Technology will be employed to support fintech and e-commerce, automate procedures, and close the digital divide. Talent pools, scalable solutions, and a startup ecosystem will all promote entrepreneurship. India presents many opportunities because of its huge and youthful population, developing digital awareness, and unrealized potential, but it also faces hurdles in bridging the digital divide and combating the brain drain. India can become a global leader in innovation and economic dynamism by utilizing these forces to realize its full economic potential.

Challenges in Achieving the Goal

India has set a lofty goal to become a \$5 trillion economy by 2025, but there are some obstacles in the way, including poor infrastructure, a sluggish manufacturing sector, a lack of skilled labour for construction and maintenance, a complicated regulatory environment, issues with rural-urban divides, and environmental sustainability. Progress is hampered by inadequate infrastructure, a reliance on imports, and a lack of technological developments. Unemployment and underemployment are exacerbated by skill development gaps, which include mismatches between school and work and low female labour force participation. Business efficiency is impeded by bureaucratic obstacles and corruption, and the regulatory system is opaque and convoluted. Low agricultural production and the gap between rural and urban areas also impede economic progress. Concerns about environmental sustainability include resource depletion, pollution, and vulnerability to climate change. A comprehensive strategy is needed to address these issues, one that prioritizes infrastructure development and skill investment.

India wants to grow its GDP to \$5 trillion by 2025, but this is a difficult challenge that calls for several strategies. The global economic climate, geopolitical threats, technology breakthroughs, government regulations, private sector involvement, human capital development, and social inclusion are examples of external variables. Internal dynamics include government policy, business sector participation, human capital development, and

tackling challenges like poverty, inequality, and gender inequities. The rural-urban split, regulatory restrictions, talent mismatches, and bottlenecks in the infrastructure are examples of potential obstacles. To address these issues, enact sensible legislation, make investments in human resources and infrastructure, encourage social inclusion, and strike a balance between environmental sustainability and economic advancement, a multifaceted strategy is required. Through proactive resolution of these challenges, India may transform its aspirational vision into a thriving actuality.

India has enormous potential to benefit socioeconomically and environmentally from its ambition of building a \$5 trillion economy by 2025. It could worsen already-existing income disparities, social unrest, urbanization, and the exploitation of weaker groups, but it could also result in economic expansion, the development of jobs, better infrastructure, and more access to healthcare and education. Conversely, it may result in amplified resource utilization, contamination, susceptibility to climate change, and an inequitable environmental load. India must take a sustainable and inclusive development strategy, emphasizing community empowerment, robust environmental rules, investment in green technologies, and fair benefit distribution to reduce these dangers. India can realize its ambitious vision of a sustainable future free from economic hardship by addressing potential limitations and emphasizing holistic development.

Roadmap for Economic Growth

By 2025, India wants to have a \$5 trillion economy, hence a thorough plan with implementable solutions is needed. Strong infrastructure, reviving industry, encouraging innovation and skill development, pushing renewable energy, empowering women and marginalized communities, investing in rural development, bolstering social safety nets, and imagining a sustainable future are among the important topics to focus on. Prioritizing mega-infrastructure projects, making investments in rural infrastructure, and utilizing public-private partnerships should all be part of the roadmap. It should also emphasize the use of technology, the development of innovative ideas and skills, the promotion of clean energy, the efficiency of resources, and the inclusion of the environment in the formulation of public policy. Setting specific goals, creating action plans, keeping an eye on developments, encouraging accountability and openness, and promoting cooperation between the public and commercial sectors, academia, and civil society are examples of actionable strategies.

India wants to grow its economy to \$5 trillion by 2025, but doing so will take a multifaceted strategy that involves developing strategic infrastructure, reforming institutional structures, and changing policies. Simplifying bureaucratic procedures, rationalizing tax arrangements, improving labour market adaptability, encouraging financial inclusion, lowering trade barriers, encouraging technology adoption, fortifying social safety nets, incorporating environmental sustainability, fortifying governance, enhancing education and training, enhancing public sector initiatives, streamlining the legal system, simplifying regulations, and encouraging decentralization are some of the main recommendations. Physical infrastructure, digital infrastructure, energy infrastructure, social infrastructure, rural infrastructure, and green infrastructure should all be prioritized in infrastructure development. These initiatives seek to advance sustainable practices, lessen the digital divide, and increase connection.

International partnerships and cooperation might be advantageous for India for various reasons. Access to cutting-edge technology, capital and financial resources, export and market access, talent development and capacity building, and reputation and recognition on a worldwide scale are a few of these. India may benefit from using global resources, knowledge, and skills through forming partnerships with major countries, developing economies, regional partners, and international organizations. These collaborations have the potential to accelerate India's progress in important areas such as healthcare, renewable energy, and manufacturing. On the other hand, issues including cultural disparities, intellectual property rights, and legal barriers must be handled openly and flexibly. Despite these obstacles, international cooperation has enormous potential benefits that might help India advance economically and establish itself as a major role in the world.

Conclusion

India wants its GDP to reach \$5 trillion by 2027–2028, with the manufacturing, services, infrastructure, renewable energy, and social development sectors leading the way. But there are still issues including lack of skills, congested infrastructure, and environmental concerns. Simplified regulations, entrepreneurship, and sustainable practices are only a few of the initiatives that need to be included in a thorough roadmap with doable tactics. International cooperation and institutional changes are also essential. The vision necessitates teamwork, dedication, and ongoing adaptation. Effective leadership, the distribution of resources, public involvement, technical developments, and ongoing monitoring are all necessary for success.

India has set an audacious but realistic aim of becoming a \$5 trillion economy by 2027–2028. The nation is a desirable destination due to its demographic dividend, expanding domestic market, diverse economy, strong IT sector, strategic location, opportunity for policy, and emphasis on infrastructure. But issues including skill gaps, environmental sustainability, the gap between rural and urban areas, and bureaucracy must be addressed. India remains a promising destination for investment despite these challenges, given its potential as a hub for manufacturing and services, trade opportunities, and technical collaboration. Strong political will, well-executed policies, ongoing oversight, public-private partnerships, and community empowerment are all necessary to overcome these obstacles. India can make its \$5 trillion goal a reality by building on its strengths, welcoming innovation, and encouraging cooperation, not

India's ambitious \$5 trillion agenda calls for cooperation between enterprises, stakeholders, and policymakers. They should simplify rules, give strategic infrastructure development first priority, encourage the development of talent and skills, fortify social safety nets, support clean energy, welcome innovation and technology, and encourage global cooperation to do this. Enterprises ought to allocate resources toward India's expansion prospects, integrate automation, artificial intelligence, and sophisticated manufacturing techniques, and prioritize ecological responsibility and ethical corporate conduct. To guarantee fair salaries, decent working conditions, and possibilities for skill development, stakeholders should interact with academic institutions, labour unions, and individuals. They should also support policies that promote inclusive growth, environmental sustainability, and social justice. India can foster economic change and a better future for its people and the entire globe by putting these suggestions into practice.

Future Perspectives

India's ambitious quest for a \$5 trillion economy by 2027-28 holds immense potential, not just for its future but for the global economic landscape. Let's explore two potential scenarios and the long-term impacts this transformative journey could have on the world stage. India's steady expansion propels the country into the top tiers of major global economies by generating a thriving local market, drawing in foreign investment, and creating millions of employment. India has emerged as a center for innovation in fields like artificial intelligence, renewable energy, and healthcare by utilizing its sizable talent pool and investing in R&D. Due to India's manufacturing strength, trade routes and international supply chains reorganize, forming new alliances and regional economic powerhouses. As a result of India's economic growth, it has more political weight, which creates new alliances and a more multipolar global order. Managing growing urbanization requires effective governance; environmental concerns require sustainable solutions; and inequality may worsen. India's economic potential may be hampered by bureaucracy, skill shortages, infrastructure constraints, and environmental concerns that slow down growth. India's growth trajectory could be derailed by external factors such as trade disputes, economic slowdowns, or geopolitical conflicts.

India may not fully attain the status of a global economic power, preferring to concentrate on its market and growth, even with a notable increase in GDP. If India's potential is not realized, it may be exploited by powerful nations and its ability to contribute to international solutions may be restricted. Whichever way things turn out, India's economic expansion will have a big long-term impact on the world stage: India's rise as a significant trading partner presents both new opportunities and difficulties for established economic powers, possibly leading to the adoption of more inclusive and equitable trade policies. India's dynamic economy has the potential to reenergize the world economy by fostering innovation, opening up new markets, and helping developing nations. The rise of India has the potential to tip the scales, form new alliances, alter regional dynamics, and have an impact on international security concerns. India's pioneering work in sustainable development and renewable energy can provide answers to urgent global issues, paving the way for a more just and ecologically conscious future. To recall, the tale of India's economic ascent is far from finished. We can plan for the changes it will bring about and help to shape a future in which the wealth of India benefits not only its citizens but the entire world community by being aware of the possible outcomes and long-term effects.

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INDIA'S ECONOMIC SYMPHONY: A MELODY OF GROWTH AND INNOVATION

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Abstract:

This article provides a glimpse into the harmonious economic narrative unfolding in India, a nation that has emerged as a critical player on the global stage. The metaphorical use of a symphony captures the intricate interplay of diverse economic factors contributing to India's dynamic growth and innovation. The composition begins by exploring the historical notes that have shaped India's economic landscape, from its post-independence era marked by socialist policies to the liberalization reforms of the 1990s that set the stage for accelerated growth. A key theme in this economic symphony is India's prowess in fostering innovation across various sectors. The abstract delves into the transformative role played by technology and entrepreneurship, highlighting how India has embraced digitalization and startups as catalysts for economic advancement. The narrative also touches upon the country's robust demographic dividend, illustrating how a youthful and aspirational population has driven innovation and economic productivity.

Keywords: *India, Economy, Growth, Economic Reform, Crisis*

Introduction

India's growth performance in the last 25 years resembles this unpredictably emerging narrative for a heart-stopping climax like Hollywood horror films. Previous researchers carefully examined the evidence and concluded three key points: first, growth in the 1980s was uneven, with the last three years contributing significantly; second, this growth coincided with substantial economic reforms, including trade and industrial policy liberalization; and third, expansionary policies in the 1980s, leading to sizeable external debt, fueled growth but also triggered an economic crisis.

Growth of the economy in the New Millennium

India's I.T. industry, previously constrained by government restrictions, flourished after liberalization, allowing people from diverse backgrounds to participate. The success prompted the government to provide infrastructure support. The spillover effects extended to ITes and some manufacturing enterprises, indicating a transformation fueled by market competition. India's policy supports creative destruction by opening industries to market competition and enhancing access to education to foster competition in the job market. This approach requires increased investment in education, including private and foreign contributions, rather than relying solely on quotas.

Determinants of India's Economic Growth

Discussions on economic policy in India often need a solid analytical foundation grounded in data. While the common observation suggests that the country's inadequate infrastructure is a significant growth impediment, comparisons with China are frequently cited to underscore this point. However, a rigorous analysis is required to establish a

systematic relationship between specific sectors and overall economic growth. The critical question is whether one can discern more about the impact of particular economic sectors on overall growth, and the answer is affirmative.

Over the years, government statisticians have compiled detailed input-output tables of the economy, offering a snapshot of its structure and interlinkages among various sectors. Indian economy is to grow by a robust 7.3% in F.Y. 2023-24 over and above the provisional growth rate of 7.2% during the last financial year. The construction sector has been estimated to have double-digit growth of 10.7%. All the economic sectors have fared well by witnessing more than 6%, except for the Agriculture and Allied sectors, for which the estimated growth is 1.8%. (Source: 05 JAN 2024 5:30PM by PIB Delhi)

This analysis underscores the critical importance of addressing the efficiency of the electric power sector for substantial growth gains. Policymakers must recognize the urgency and focus on reforms to enhance efficiency and investment in this sector. Despite some limitations, such empirical analysis is a valuable tool to emphasize the imperative for reforms and quantify potential benefits, mainly when aiming for robust economic growth.

Categorizing these Services Sheds Light on India's Prospects in Various Segments:

Pure Knowledge Services:

These services provide specialized information on financial assets, tax matters, and other areas requiring expertise. Access to talent pools and reputation are crucial factors. Indian firms must compete effectively to prevent foreign brands from reaping the big rewards.

Exchange Trading of Financial Instruments:

Electronic exchanges, leveraging India's I.T. expertise, present significant opportunities. The growth potential currently needs to be improved by existing policies, and unlocking this potential requires addressing regulatory barriers.

Deal-Making in Idiosyncratic Financial Instruments:

While low-margin, high-volume exchange trading is an opportunity, significant profits often come from deal-making in more complex financial instruments. Indian firms can excel by combining deal-making with specialized knowledge and financial engineering. A transparent regulatory regime is essential.

Financial Engineering:

Combining financial engineering with the ability to sell created financial products is a strategic entry point for Indian firms. Innovations in this area can lead to competitive advantages, particularly in personal wealth management, risk management, corporate treasury management, and asset management.

This business strategy perspective complements the macro perspective dominating public discussions. The IFC report rightly avoids "industrial policy" recommendations. However, it identifies areas where Indian firms could gain a competitive edge, such as exchanges for bonds, currencies, and derivatives, asset management based on algorithmic trading, and IT-based back-office components of the financial services value chain.

Success in this sector requires streamlined regulatory regimes, increased access to skilled individuals, and a focus on IT-driven services. As suggested in the IFC report, recommendations for domestic training and the inflow of human capital from abroad are

vital. Collaboration with academic talent, particularly in designing new trading institutions, can further contribute to building India's financial services sector.

Maximizing Foreign Direct Investment (FDI) Opportunities

Despite facing challenges such as high oil prices and a potential slowdown in the global economy, India is experiencing robust growth. The National Council of Applied Economic Research (NCAER) revised India's real GDP growth upward for FY23-24 to 6.3 per cent in September 2023, from 6.0 per cent in June 2023 Development Outlook, September 2023, from its previous projection of 6.4 per cent in July 2023

Studies indicate that developed countries benefit more from foreign capital, suggesting that effective absorption requires robust domestic financial development. Focusing on household savings and improved financial intermediation at home is crucial for sustained growth. India's lead in equity markets positions it well, and policies to deepen and extend the financial sector should be a priority. Also, domestic financial intermediation becomes the higher the payoff from foreign capital inflows. With its technological and organizational expertise, FDI proves to be a better option for spurring growth. Simplifying FDI approvals and reducing restrictions can further attract foreign investment.

FDI in the financial sector requires careful consideration. While it offers general benefits, concerns about cherry-picking by foreign entrants exist. Strengthening domestic incumbents, especially public sector banks, is advisable. By opening up to foreign investment, boldness in higher education could address constraints more effectively.

Sustaining India's Economic Growth

Macroeconomic policy, including exchange rates, interest rates, and capital controls, presents less consensus among economists. While monetary policy might not significantly impact long-term growth under normal circumstances, macroeconomic errors can have severe and lasting consequences. The disagreement is particularly noticeable in the realm of exchange rate management.

Looking beyond long-term issues, the focus shifts to short-term macroeconomic policy. The proactive stance of the U.S. Federal Reserve in cutting interest rates is contrasted with the European Central Bank's approach. Given controlled inflation, improved fiscal conditions, and the inevitability of a U.S. economic slowdown, the RBI is urged to consider a more aggressive strategy. While an interest rate cut may not impact long-term growth, it can help sustain short-term economic momentum, preventing a severe recession.

Conclusion

India's business schools can learn valuable lessons from the global innovation hub of Silicon Valley. With the worldwide demand for management skills rising and India's emerging prominence, strategic investments, industry partnerships, and a forward-thinking policy approach can position Indian management education for success. Notably, this recommendation isn't elitist but aligns with the growing emphasis on ethics and social entrepreneurship in the management education landscape, reflecting Silicon Valley's ethos of contributing positively to the world. Strengthening ties with Silicon Valley through India's business schools can benefit India significantly.

A measured, integrated approach toward openness is recommended regarding capital account convertibility. While some studies suggest potential risks and volatility, there are costs associated with capital controls, including forgone trade and distortions.

Finally, addressing India's infrastructure constraints is critical. The financial sector needs development to assess and finance complex infrastructure projects. Governance institutions play a crucial role, and addressing issues like corruption and incompetence is essential. India's main obstacle lies in its governance gap, and effective measures are needed to bridge this gap for sustainable development.

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NAVIGATING THE NEW NORMAL: UNRAVELING THE DYNAMICS OF INDIA'S ECONOMIC LANDSCAPE

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Abstract

Indian economy has undergone lot of changes in the domestic as well as global scenario. The GDP growth is effected by unprecedented happenings in global trade, war conflicts, sectoral fluctuations, technological advancements, pandemic surges and the like. Highfrequency economic measures depict a robust state of the economy, with resilient urban demand conditions reflected in higher growth in automobile sales, fuel consumption, and UPI transactions. Dynamic economic transactions in the national income, foreign exchange, global trade and similar indicators pressurizes the Government to control the process. Recent years have witnessed major changes in terms of employment, growth, disasters and the like. This has profound impact on the economy of the nation as a whole and no area has to be left unattended in the economic front. This article unfolds certain significant fields such as GDP growth, inflation control, current account deficit, capital expenditures, fiscal policies and other allied parameters. It throws light on the prominent Government initiatives in these areas to reveal the new normal in the landscape of Indian economic growth.

Keywords: New Normal; India's Economic Landscape; Economic Growth.

Introduction

The Indian economy has carried the momentum from FY23 into the current fiscal year. The Indian economy had grown by 7.2 per cent in FY23. Rural demand is also on the path to recovery, witnessing robust growth in two and three-wheeler sales. GST collections and the Purchasing Managers' Index for the manufacturing and services sectors continue to expand. Globally, the upswing in economic activity observed in the first quarter of 2023 has persisted into the second quarter, as evident in the expansion of the global Composite PMI. However, factors that may constrain the pace of growth include an escalation of geopolitical stress, increased volatility in global financial systems, sharp corrections in global stock markets, a significant impact of recent storms, and modest trade activity and FDI inflows due to weak global demand. If these challenges deepen and hinder growth in subsequent quarters, the external sector could challenge India's growth outlook for FY24.

The debt leverage is now following a glide path and is expected to become more pronounced as the economy continues to outperform global challenges and grow above prior rates. Given its general government debt and deficit, India's prudent fiscal approach can serve as budgetary stimulus through its impact on credit rating and the reduced cost of borrowing. Global uncertainties prompted foreign portfolio investors (FPI) to withdraw capital from EMEs, including India. However, FPI outflows from India in the first quarter of FY23 reversed to inflows from the second quarter onwards, experiencing a mild outflow in

the fourth quarter due to adverse developments in the US and European banking sectors. Overall, FPI outflows narrowed in FY23, indicating increased confidence in India's economic credentials.

Various ministries in the union government have adopted innovative approaches to infrastructure development. The Ministry of Railways and the Ministry of Road Transport & Highways are working on projects to enhance road connectivity, linking various goods sheds. Additionally, many critical infrastructure gaps in sectors like coal, steel, fertilizer, ports, and food and public distribution have been identified for prompt action. To deploy the advanced 5G network, the Department of Telecom and State Governments are leveraging the National Master Plan to identify suitable street furniture for installing 5G cells. Substantial progress has also been made in social sector planning, with social sector ministries/departments being on boarded under the scheme.

To counteract the inflationary repercussions of geopolitical shocks, the Indian government implemented a series of measures, encompassing duty reductions and increased subsidies. The aim was to mitigate the impact of soaring prices on vulnerable groups and businesses, providing them with a safety net. Simultaneously, the government ensured that the augmented capital expenditure outlay remained intact, crucial for imparting an investment impetus to the economy. In FY23, fiscal prudence was maintained by rationalizing revenue expenditure, contributing to a reduction in the Union Government's fiscal deficit. This budgetary consolidation aligns the Union Government with the glide path towards achieving a fiscal deficit target of 4.5% by 2025-26.

Ongoing negotiations for trade agreements with advanced economies, the formulation of a new foreign trade policy, the digital transformation in payments and trade facilitation, trade promotion initiatives, enhanced trade credit, and the promotion of districts as export hubs collectively anticipate an expansion in India's global market share for exports. Forecasts indicate that commodity prices, particularly those related to energy commodities, are poised to remain relatively low. This bodes well for India's merchandise trade deficit, helping to keep it narrow. Although the impact of deepening recessionary tendencies on services trade and remittance growth remains uncertain, their levels are anticipated to remain generally stable. Against this backdrop, India's current account deficit is expected to sustain its narrow trajectory throughout FY24.

Global fiscal policies have undergone significant shifts, responding to the challenges of the pandemic and geopolitical events. Initially, the pandemic-induced fiscal expansion aimed at reviving economies by bolstering demand. However, as the global economy rebounded, several governments, facing budgetary constraints, began efforts towards fiscal consolidation. These consolidation endeavours, however, were short-lived, halting in response to the new challenge of escalating prices following the general conflicts around the globe. The outbreaks necessitated additional spending on welfare measures and tax rate cuts, further limiting fiscal flexibility as economies were still recovering and contending with central banks' monetary tightening measures to curb inflation.

The government employed several fiscal measures to alleviate the impact of inflationary pressures. Excise duties on petrol and diesel were continually reduced. Duty reductions were also implemented for inputs such as naphtha, propylene oxide, and polymers of vinyl chloride. Customs duties on essential chemicals like methanol, acetic acid, and heavy feedstocks for petroleum refining were reduced, and customs duty on imported cotton was waived in April 2023. In response to rising fertilizer prices, the government increased the

outlay on the fertilizer subsidy. CGA data indicates that the Urea and nutrient-based fertilizer subsidies for FY23 exceeded the revised Budget 2023-24 estimates by 7% and 21%, respectively.

Government Measures on Inflation Control

India's inflation in July came to 7.44%, one of the highest in recent months, violating the Reserve Bank of India's upper level of tolerance, 6% for the first time from February of 2023, as prices of food and vegetable increased in the country. The central bank lowers the commercial banks' lending ability by increasing the CRR in an effort to contain inflation. As a result, there is less money moving from commercial banks to the general populace. In the process, it stops price increases to the extent that bank credits to the public are to blame. Using a range of monetary policy instruments, including the Reverse Repo Rate, Repo Rate, Open Market Operations, Bank Rate, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Liquidity Adjustment Facility (LAF), and Market Stabilisation Scheme, the RBI manages inflation and deflation.

Interest rate changes are the main tool used by monetary policy to manage inflation. However, fiscal policy is one way that governments can help combat inflation. To assist lower inflation, governments might raise taxes and cut spending. Managing the amount of money in the economy is one of the frequently employed strategies to reduce inflation. Prices will drop if the government reduces the amount of money available because less demand would exist. As a result, the government may choose to stop the use of specific coins and paper money. When prices grow, a given amount of money can purchase fewer goods and services. The general public's cost of living is impacted by this loss of purchasing power, which eventually causes economic growth to slow down.

Financial Moves by RBI

In FY23, the Reserve Bank of India (RBI) maintained consistent pressure on monetary tightening, initially observed in lending rates. However, as most savings avenues experienced lower rates amid the low-interest environment from 2020 to 2022, motivating individuals to shift their financial savings to stock markets, banks faced competitive pressures, compelling them to raise deposit rates. The simultaneous increase in lending and deposit rates enhances the efficacy of monetary policy. It restrains spending by raising the lending rate while curbing expenditure by attracting savings through increasing deposit rates. RBI implemented various monetary policy measures to control inflation.

The Monetary Policy Committee (MPC) eliminated the word "accommodative" from the forward guidance, marking the commencement of the monetary tightening cycle. Lending and deposit rates of Scheduled Commercial Banks (SCBs) have increased in harmony with policy rate changes, reflecting a moderation in surplus liquidity in the banking system and improved transmission of monetary policy. In FY23, the Weighted Average Domestic Term Deposit Rate (WADTDR) of SCBs on Outstanding Rupee Term Deposits increased by 113 bps compared to a 100 bps rise in the Weighted Average Lending Rate (WALR) on Outstanding Rupee Loans. This signifies that for every percentage increase in the repo rate, deposit rates have risen by 45 bps, exceeding the 40 bps increase in lending rates.

Despite the repo rate transmission of about 40-45 per cent, credit disbursement witnessed significant growth in FY23 due to sustained consumption demand and induced investment demand, driven by a positive outlook, maintaining high credit demand. This

enhanced banks' profitability, whose bottom lines had already improved with the decreasing Gross Non-Performing Assets (GNPA) ratio. The Net Interest Margin, an indicator of a bank's profitability, expanded; subsequently, though remaining high, it started declining as banks were compelled to raise deposit rates swiftly to mobilize deposits for credit creation. Other parameters of bank profitability also indicate substantial improvement, as seen in their balance sheets in FY23, partly attributed to the ongoing recovery in economic activities despite high inflation. Return on Equity (RoE) and Return on Assets (RoA) for SCBs exhibited notable increases during the year. Furthermore, overall bank credit grew by 15 per cent in FY23 annually, with non-food credit growing at 15.4 per cent. Concurrently, GNPA as a proportion of advances followed a declining trend and stood at 3.9 per cent in March 2023, primarily supported by various macroprudential policy measures, a lower slippage ratio and swift recovery of bad loans under the Insolvency and Bankruptcy Code (IBC).

Foreign Portfolio Investments Scenario

Foreign Portfolio Investments (FPI) movement in India's equity and debt markets has been volatile, primarily influenced by changes in Fed rates. An increase in Fed rates prompts FPI outflows, tightening rupee liquidity, thereby reinforcing monetary tightening. Conversely, when the Fed pauses rate increases, FPI flows back, increasing rupee liquidity and easing monetary tightening. However, the gradual increase in RBI's repo rates absorbed the tightening impact of outflowing FPI on rupee liquidity. As expected, the increase in RBI's repo rate since the onset of the pandemic is less than the repo rate hikes of the US Fed, as well as the average hikes for both advanced and emerging market economies, indicating India's ability to manage the impact of FPI outflows more effectively this time.

The impact of repo rate hikes, among other factors, on inflation in India has been notably satisfactory. Despite lower increases in policy rates, India's inflation rate remained within its target range. In contrast, the inflation rates of Emerging Market Economies (EMEs) and Advanced Economies (AEs) stayed considerably above their acceptable ranges, even with sharper policy rate hikes in these countries. This can be attributed significantly to India's calibrated fiscal stimulus during the pandemic compared to the significant budgetary expansions undertaken by other nations.

Foreign Portfolio Investment (FPI) flows are expected to become less volatile, given the Federal Reserve's indication of a prolonged pause in rate hikes. The Reserve Bank of India (RBI) has also halted the increase in the policy rate in its last two Monetary Policy Committee (MPC) meetings as retail inflation, along with core inflation, has started to decline. The monetary stance is likely to remain stable in the foreseeable future. However, potential inflationary pressures may arise on domestic food prices, and there could be a delay in the pass-through of the Wholesale Price Index (WPI) into retail output. Nevertheless, the lagged effect of monetary policy on credit demand might mitigate the emerging rekindling of inflation.

Situation of Global Trade

Monetary tightening began to depress demand and is expected to continue in subsequent quarters with anticipated further policy rate hikes to counter persistently high global inflation.

India's merchandise exports mirrored the global trend before the impact of the European war set in. Despite moderation, exports remained resilient in FY23. The volume growth of India's imports continued to be high through FY23, supporting sustained economic activity. The trade deficit, however, improved in the second half of FY23 as international commodity prices fell, lowering import costs. Merchandise exports grew by 6 per cent on an annual basis. A detailed analysis of export data for FY23 reveals notable strides in exports of electronic items, petroleum products, optical and medical surgical instruments, agriculture and allied products, leather and leather manufactured products, machinery, and transport equipment. Emerging commodity classes witnessed substantial growth, attributed to government policy support aimed at diversifying the export basket. Additionally, India's food diplomacy increased demand for Indian agricultural commodities in food-importing countries.

The recovery in India's industrial activity in FY23 drove the increase in imports, particularly energy products like crude petroleum and coal. Despite higher energy imports in the first two quarters due to elevated energy prices, the last two quarters saw a decline in energy prices, resulting in decreased energy imports. India's robust recovery amid high energy prices is evident in non-oil, non-gold, and silver imports growing YoY by 15.4 per cent, while imports of crude oil and petroleum products grew faster at 29.1 per cent, reflecting both volume growth and rising energy costs. Consequently, India's merchandise trade deficit widened to 8.5 per cent of GDP in FY23.

In contrast to the moderation observed in merchandise exports, services exports experienced a surge in FY23. The robust performance of services exports reflects India's rapid adaptation to a contactless world through IT, allowing highly skilled professionals to provide services online globally. A complete services trade surplus and a moderating merchandise trade deficit reduced India's overall trade deficit in FY23. The services trade balance showed improvement primarily due to enhanced services exports, growing by a substantial 33.3 per cent YoY in FY23. The unbundling of services, technological advancements, and increased demand for digitally deliverable services facilitated the growth of India's services sector. This is evidenced by the proliferation of Global Capability Centres (GCC) in India, where the highly skilled workforce provides back-end support to multinational companies. Additionally, India benefited from the rising demand for digitally deliverable services, resulting in a services trade surplus of 4.2 per cent of GDP in FY23.

Condition of Current Account Deficit

The dynamics in merchandise and services trade played a pivotal role in swiftly narrowing the current account deficit (CAD) towards the end of FY23, reinforcing macroeconomic balance. Remittances emerged as a critical factor in limiting the downside to the CAD in FY23. Despite the potential slowdown in global growth, remittance growth may continue due to declining global energy prices and the sustained performance of services exports, further narrowing the CAD in FY24. The second half of FY23 witnessed a reduction in the merchandise trade deficit and a robust performance in services exports, leading to a decline in the CAD from 3.6 per cent of GDP in Q2 FY23 to 0.2 per cent in Q4 FY23. The overall CAD for FY23 stood at 2.0 per cent, higher than the previous year's 1.2 per cent, primarily influenced by elevated commodity prices in the year's first half. Substantial growth in remittances also contributed significantly to the CAD's narrowing.

A sustainable CAD is contingent on average capital inflows. In previous years, capital flows to Emerging Market Economies (EMEs) remained subdued and volatile due to rising geopolitical uncertainties and weakened global economic activity. However, India continued to experience a net Foreign Direct Investment (FDI) inflow, unlike most EMEs and Advanced Economies (AEs) facing net FDI outflows. This contrasting capital flow scenario is attributed to India's strong macroeconomic fundamentals and an investor-friendly environment. Despite the global slowdown in investment flows to EMEs, India's net FDI inflows decreased in FY23.

Inflationary pressures and tighter monetary policies abroad impacted Foreign Direct Investment (FDI) flows to India. Gross FDI is moderated by 16% YoY in FY23. Net FDI declined by 27.4 per cent in FY23 YoY. Geopolitical considerations influenced FDI flows, with investors engaging in "friend shoring" by investing in countries geopolitically aligned with each other, resulting in a fragmentation of FDI flows globally, as indicated in the IMF's World Economic Outlook (April 2023). Thus, India must closely monitor FDI data and implement measures to facilitate FDI inflows, including addressing last-mile infrastructure issues, ensuring labour availability, and fostering significant capacity creation. This policy focus will likely demand increased attention from India in the coming months and years.

FPI became net sellers in Q1 FY23, with an outflow of US\$ 14.3 billion. However, the second and third quarters of FY23 saw an inflow of US\$ 11.2 billion, with Q4 observing a smaller flow of US\$ 1.2 billion. On an annual basis, net FPI outflows was US\$ 5.5 billion in FY23. The trend until mid-June 2023 suggests that FPIs find Indian markets attractive despite tighter global financial conditions. In FY23, the trajectory of the Indian rupee was influenced by various factors, including elevated Brent oil prices, substantial import dependence, and capital outflows resulting from tightened global financial conditions. Despite these challenges, the performance of the rupee exhibited resilience, showcasing an orderly adjustment with lower volatility than many other Emerging Market Economies (EMEs) and Advanced Economies (AEs). The rupee faced pressure during the year's initial half but rebounded later in the second half, maintaining stability within a narrow range. Factors contributing to the rupee recovery included the softening of Brent oil prices and an improvement in the current account balance.

The Indian rupee experienced a depreciation of 8.5 per cent in FY23. However, the daily volatility in INR remained at 0.3 per cent, significantly lower than other currencies of EMEs and AEs, such as the Brazilian Real (1.1 per cent), South African Rand (1.0 per cent), Japanese Yen (0.8 per cent), Euro (0.6 per cent), Chinese Yuan (0.4 per cent), and Indonesian Rupiah (0.4 per cent). The 40-currency real effective exchange rate (REER) also depreciated during the year, with the rupee recovering and appreciating by 0.7 per cent in Q4 of FY23 after declining for three preceding quarters.

Forex reserve holdings declined in the first half of FY23, primarily attributed to financing a widening Current Account Deficit (CAD) and increasing capital outflows. Subsequent developments, including narrowing CAD and Foreign Portfolio Investment (FPI) inflows, contributed to the rebuilding of reserves. FY23 concluded with India becoming the world's 5th largest forex reserve holder, with reserves sufficient to cover ten months of imports, providing a comfortable cushion against external shocks. The ongoing trend of a narrowed CAD and increased FPI inflows, facilitated by the non-aggressive stance of the Federal Reserve, is expected to enhance forex reserves further.

Potential downside risks to India's exports include the European Union's implementation of the Carbon Border Adjustment Mechanism (CBAM), requiring the reporting of carbon content in exports to the EU starting from October 1, 2023. Other uncertainties include continued concerns about the Russia-Ukraine conflict and polarization risks arising from the prevailing geopolitical situation, possibly leading to adopting trade-restrictive measures. Additionally, as highlighted by IMF research, foreign direct investment flows may be influenced more by political distance than geographical distance.

Mitigating the potential downside risks is the observed alleviation of supply chain disruptions, evidenced by the positive trajectory of globalized container trade tracked by the Kiel Trade Indicator. Additionally, the trend of moderating inflation worldwide is expected to afford policymakers some flexibility to either pause their monetary policy tightening or implement a slower pace and magnitude of tightening.

The government's consistent revenue buoyancy played a pivotal role in achieving fiscal targets. Strong revenue receipts in FY23 were facilitated by better-than-expected economic performance and robust growth in direct taxes and Goods and Services Tax (GST). Despite reducing corporate tax rates, corporate tax collections remained strong, driven by increased profits and economic activity. The GST system demonstrated stability, becoming a significant revenue source for central and state governments. Customs duty collections also showed decent growth, notwithstanding cuts in duties to counter inflation in various sectors. Non-tax revenue receipts for FY23 exceeded revised estimates, propelled by higher interest receipts and improved performance of public sector enterprises, leading to increased distribution of dividends and profits. Gross tax revenue witnessed a YoY growth of 12.7% in FY23, fuelled by robust expansion in direct taxes and GST. Direct taxes, including income and corporate tax, increased by 20% and 16%, respectively. Gross GST collections grew by 21.4%, with average monthly collections of ₹1.5 lakh crore in FY23.

Government's Capital Expenditures

On the expenditure front, geopolitical shocks increased the government's revenue expenditure requirements in FY23, primarily due to a surge in subsidy expenditure amid rising international prices of food, fertilizers, and fuel. However, anticipating an easing supply chain disruptions, the government has projected a lower subsidy expenditure for FY24. The total subsidy expenditure rose to 15.4% of revenue expenditure in FY23, surpassing the 13.9% registered in the previous year. The budget estimates project a decline in subsidy expenditure to 10.7% in FY24, driven by an anticipated decrease in international prices of food, fertilizers, and fuel.

In FY23, despite heightened subsidy requirements, the Central Government maintained a robust focus on capital expenditure (capex), accomplishing 98% of the budgeted target. The buoyancy in revenue played a crucial role in supporting capital outlay, while the rationalization of revenue expenditure safeguarded capital outlay within the stipulated fiscal deficit. Central government capex saw a YoY growth of 24.3% in FY23, surpassing the average growth of 7.8% observed in the pre-pandemic years. As a percentage of GDP, Union Government Capex reached 2.7%, constituting 21.3% of revenue expenditure in FY23, compared to 1.7% and 14.3% in FY20. In the Union Budget FY24, the capital investment outlay increased by 33%.

The Central Government continued incentivizing states for complementary policy actions to boost infrastructure investment. Grants for capital works and 50-year interest-free

capex loans were extended to state governments in FY23. The government's focus on capex also spurred its departmental arms and Central Public Sector Enterprises (CPSEs) to accelerate their capital expenditure, with CPSEs achieving over 100% of their full-year revised target of Rs 6.5 lakh crore for capex in FY23. To encourage states to enhance capex, the union government provided 50-year interest-free loans to state governments under the 'Scheme for Special Assistance to States for Capital Investment.' In FY24, the allocation under the scheme has been increased to ₹1.3 lakh crore to bolster State Capex further plans.

The government's emphasis on capital expenditure has recently been crucial, particularly as the private sector exhibited risk aversion due to its challenges in the balance sheet. However, recent evidence indicates a resurgence in private sector investments, influenced partly by the substantial scaling up of government capex. Initiatives like the National Infrastructure Pipeline, Bharatmala, Sagarmala, and PM GatiShakti have facilitated private sector involvement in major infrastructure projects. Focusing on renewable energy and digitalization has opened new avenues for private sector participation. Indicators suggest a positive trend in private investments, supported by a rebound in capacity utilization in the manufacturing sector and strong demand in the domestic economy.

According to the CMIE Capex Database, new private investment proposals surged by 78% in FY23 compared to last year. Accurate sector indicators, such as capital goods production (IIP – capital goods) and the import of capital goods, witnessed robust double-digit YoY growth during FY23. As per Axis Bank Research, financial data for a consistent set of listed companies indicates broad-based private capex growth of 22% in FY23. The RBI's Order Books, Inventories, and Capacity Utilization Survey highlights an increase in capacity utilization for the manufacturing sector. This, coupled with double-digit growth in non-food bank credit in FY23, suggests a positive inclination of the private sector to embark on new investments.

Conclusion

Despite facing unprecedented global challenges in recent years, compounded by issues in the balance sheets of Indian banking and non-financial corporate sectors, macroeconomic management has been exceptional. It has significantly enhanced India's macroeconomic stability and positioned the country on a faster recovery trajectory than many others. The government's ability to keep the fiscal deficit or GDP ratio within the budgeted target will contribute to a quicker decline in the debt ratio, reinforcing its case for an improved credit rating and lower interest rates. Investment in supply-side infrastructure raises the prospect that India can sustain economic growth for longer durations than in several decades. Robust balance sheets and advancements in digital technologies may lead to improved credit decisions, allowing India's financial cycle to endure for extended periods before encountering challenges related to bad debts. Consequently, India seems well-positioned to sustain its growth more resiliently. However, this is not a time for complacency or the risk of diluting the hard-earned economic stability. Patience is crucial, as the rising tide appears to be lifting all boats, as it has begun to do so. The article has thus highlighted important areas of concern in the Indian economy, the crucial measures taken by the Government and the major changes that has occurred to create and maintain the new normal.

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BILLION DREAMS, TRILLION ECONOMY: INDIA'S ASCENT TO ECONOMIC EMINENCE

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Abstract

One of the fast-growing economies is Indian economy and is currently ranked as the fifth largest economy with GDP of \$ 3,730 Billion. India's remarkable journey towards Billion dreams, Trillion economy is becoming an economic powerhouse. It delves into the intermingling of a billion aspirations shaping a trillion-dollar economy, examining key factors such as innovative progressions, financial movements and strategy elements impelling India toward worldwide prominence. This paper provides the perseverance and aspiration as it moves through the transformative environments of entrepreneurship, innovation, and inclusive development. From the expansion of businesses to innovative transformations, the theoretical imagines a future where bunch dreams meet into monetary success. The current paper focuses on the factors that drive economic expansion, followed by exports, investments, job creation, productivity growth and demand.

Keywords: Economy; Billion Dreams; Trillion Economy; Economic Eminence

Introduction

With average annual GDP growth rates exceeding 6-7% over the past decade, India has established itself as one of the major economies growing at the fastest rate in the world. Growing economic clout will be signified by India's nominal GDP crossing \$4 trillion and also powered aspiration to join the elite league of \$5 trillion economies within the upcoming few years. Prime Minister Narendra Modi in 2019, set a target of making India a \$5 trillion economy by 2024-25. India's economic rise over the past three decades has been powered by an increasingly open, market-oriented paradigm, a large domestic consumer base and a young demography. Trade liberalization, privatization of state-owned enterprises and Industrial deregulation have transformed the economy.

Discussions on economic policy in India often need a solid analytical foundation grounded in data. While the common observation suggests that the country's inadequate infrastructure is a significant growth impediment, comparisons with China are frequently cited to underscore this point. However, a rigorous analysis is required to establish a systematic relationship between specific sectors and overall economic growth. The critical question is whether one can discern more about the impact of particular economic sectors on overall growth, and the answer is affirmative.

Over the years, government statisticians have compiled detailed input-output tables of the economy, offering a snapshot of its structure and interlinkages among various sectors. Theoretical groundwork for understanding the key sectors influencing economic growth was provided by economist Mukul Majumdar and his student Ilaria Ossella nearly a decade ago. Under certain assumptions, they demonstrated that the maximal growth rate for the economy could be derived from an analysis of the input-output structure.

India's Upcoming Growth Driver

The focus on reform discussions has primarily revolved around regulatory changes, macroeconomic policies, and economic development's overall goals and impacts. However, an essential aspect of this endeavour involves a deeper understanding of "financial services." Unpacking this broad term could be the key to advancing progress in this sector, particularly considering the complexities of implementing reforms. A record \$43.7 billion is committed by the IFC in FY23 to financial institutions in developing countries and privately owned businesses, utilizing the force of the private sector being developed (ifc.org). The IFC report identifies 11 areas within financial services: fundraising, asset management, personal wealth management, transfer pricing, tax management, corporate treasury management, risk management and insurance, exchange trading of financial instruments, financial architecture for large projects, M&As, and financing for public-private partnerships. Additionally, rating services were discussed in a previous column.

Categorizing these Services Sheds Light on India's Prospects in Various Segments

- **Pure Knowledge Services:** These services provide specialized information on financial assets, tax matters, and other areas requiring expertise. Access to talent pools and reputation are crucial factors. Indian firms must compete effectively to prevent foreign brands from reaping the big rewards.
- **Exchange Trading of Financial Instruments:** Electronic exchanges, leveraging India's I.T. expertise, present significant opportunities. The growth potential currently needs to be improved by existing policies, and unlocking this potential requires addressing regulatory barriers.
- **Deal-Making in Idiosyncratic Financial Instruments:** While low-margin, high-volume exchange trading is an opportunity, significant profits often come from deal-making in more complex financial instruments. Indian firms can excel by combining deal-making with specialized knowledge and financial engineering. A transparent regulatory regime is essential.
- **Financial Engineering:** Combining financial engineering with the ability to sell created financial products is a strategic entry point for Indian firms. Innovations in this area can lead to competitive advantages, particularly in personal wealth management, risk management, corporate treasury management, and asset management.

This business strategy perspective complements the macro perspective dominating public discussions. The IFC report rightly avoids "industrial policy" recommendations. However, it identifies areas where Indian firms could gain a competitive edge, such as exchanges for bonds, currencies, and derivatives, asset management based on algorithmic trading, and IT-based back-office components of the financial services value chain. Success in this sector requires streamlined regulatory regimes, increased access to skilled individuals, and a focus on IT-driven services. As suggested in the IFC report, recommendations for domestic training and the inflow of human capital from abroad are vital. Collaboration with academic talent, particularly in designing new trading institutions, can further contribute to building India's financial services sector.

Approaching Inclusive Economic Growth

The recent Planning Commission approach paper and the robust responses from the RBI and the finance minister provide a significant opportunity to clarify India's growth strategy. It is crucial to acknowledge the points of consensus. Firstly, everyone agrees that growth is beneficial, and faster growth is even more desirable. Secondly, pragmatic considerations to reduce social conflict and idealistic motives drive a shared understanding of the need for more inclusive growth. Thirdly, health and education stand out as areas demanding substantial improvement, grounded in both practical and humanitarian reasons. However, the consensus also recognizes the abysmal performance of India's public sector in delivering services, including those related to health and education. Despite this common ground, achieving consensus on the path forward has been challenging. The inertia of obsolete economic models, shallow thinking, and self-interest hinder progress. The issues are vast, intricate, and interconnected, leading to diverse analyses and conclusions. While the RBI, Finance Minister, and Planning Commission may rationally differ, the approach paper displays internal contradictions, raising concerns about the clarity of arguments. It is essential for all parties involved to make their assumptions and analyses explicit, ensuring transparency in the decision-making process.

One crucial point of agreement is the acknowledgement that the government's current spending on improving the health and education of the disadvantaged is ineffective. Recommending an increase in funding without addressing the root causes of inefficiency seems counterproductive. The lack of accountability within the system prevents optimal resource utilization, making it crucial to explore alternative approaches. Decentralization, empowering citizens as taxpayers, is a potential solution. While the approach paper suggests this, it acknowledges the time required to build local institutional capacity. However, the paper's minor suggestions need to address the core issue. The Planning Commission, equipped to evaluate and fund large infrastructure projects, needs more capability to allocate funds effectively for local development needs in health and education.

A more immediate solution could involve treating state governments as responsible entities accountable to their voters. The Finance Commission could decide on non-capital transfers, replacing ineffective formulas with a new methodology. States could be granted freedom tied to requirements such as delegating significant tax authority to local governments, enhancing the functioning of state finance commissions, investing in local government capacity, and reporting results. This approach incentivizes states to improve their spending quality, fostering accountability to their voters. Reforming the Planning Commission's role and functioning can be achieved without altering existing laws or the Constitution. Collaborative reform efforts, designed with state consultations, can ensure no immediate financial losses for states while providing increased flexibility. The focus of the Planning Commission could then shift to a few impactful areas where positive contributions are feasible. Initiatives for inclusive growth should address fundamental health and education issues, necessitating the transformation of outdated government institutions.

A Prescription for Inclusive Growth

India's economic growth has surpassed many expectations, prompting a spirited debate about its causes and consequences. The primary concerns revolve around the sustainability and inclusiveness of this growth. While broad agreement exists on the desired outcomes, discussions on the means often lead to polarization. The conceptual framework for

policymaking needs to be revised, with discussions framed in moralistic terms, labelling people and policies as 'good' or 'bad.' Recognizing the mix of self-interest and altruism and focusing on system design is essential to translate good intentions into socially positive outcomes. Five systemic changes could make a significant difference in India.

- **Facilitate Entrepreneurship:** Enable entrepreneurs to start, grow, and wind up businesses more efficiently. Private sector dynamism is crucial for driving growth and generating jobs. Policy actions should include further financial sector reform, bankruptcy reform, redesigned competition policy, and supportive government regulation at the state and local levels.
- **Restructure the Civil Service:** Address the paradox of enormous talent yielding poor results in the civil service. Introduce incentives and competition by rewarding top civil servants transparently and competitively. Increase flexibility in entry and exit at higher levels, reduce lower-level positions through attrition, and align rewards with performance.
- **Decentralize Effectively:** Grant local governments the authority and resources to make a real difference in their areas. Streamline intergovernmental transfer systems, provide effective tax powers to lower-level governments, and decentralize decision-making authority. This will put more pressure on politicians to deliver while preventing elite capture.
- **Prioritize Health and Nutrition:** Focus on improving public health by supporting private initiatives and joint monitoring of quality outcomes. Address systemic failures by reinstating performance incentives for health professionals and fostering partnerships with private providers. Effective decentralization to states will enhance public health outcomes.
- **Revamp Education:** Overhaul the education system by restructuring to provide better incentives, reward good performance, and punish fraud. Replace unnecessary controls with practical certification and quality monitoring. Involve the industry as a partner in redesigning and funding education and allowing foreign investment in higher education.

It is crucial to be parsimonious in goal-setting, emphasizing incentives, information, and competition to achieve systemic change. The focus should shift from trying to please everyone to clarity and coherence in laws, regulations, and plans. By learning better and embracing effective decentralization, India can break the logjam created by interest groups and pave the way for inclusive growth.

Reforms for the Masses

IFC managing director Makhtar Diop, addressed in the capital that a proactive approach will be adopted by the corporation to scale up the investments of India. And also reinforce the effort of the country to become a manufacturing hub with the extension of financing MSMEs. Finance Minister Nirmala Sitharaman insisted the lending to India can be increased to more than \$2 billion in the upcoming two years and to \$3-3.5 billion over the next three-four years. Despite the apparent contrast between stock markets and high finance and rural credit and crop insurance, the underlying principles governing financial services provision remain consistent. Financial services aim to reallocate income across time and contingencies, relying on market mechanisms to achieve these reallocations. The challenges arise from inherent time delays and uncertainties, creating turbulence in financial markets. Modern

economies have successfully managed this turbulence through good governance and increased complexity, ensuring the smooth functioning of financial markets.

Financial intermediaries are crucial in providing matching services, information and screening, monitoring and enforcement, and transaction completion. These institutions contribute to market efficiency through economies of specialization and scale. The principles that apply to international financial centres are equally applicable to remote villages. Financial markets must be more efficient and effective in settings with poor information, few market participants, and weak enforcement mechanisms. Competition emerges as a powerful means of increasing inclusiveness and democratizing finance. Enhancing competition involves not only growing service providers but also improving the information and capabilities of users. Reducing regulation to increase disclosure and allow for appropriate escape clauses is crucial for fostering competition and efficiency. Information technology is instrumental in lowering screening and monitoring costs, enabling new entrants to offer a more comprehensive array of financial services to rural areas.

Microfinance loans are being securitized, and mini-insurance policies are emerging as growth reaches rural India. The main constraints on supply are poor regulation and inefficient state-owned incumbents. While state-owned financial institutions provided essential credit and deposit services to the rural poor, they have been co-opted by the better-off, weak, and resistant to innovation. Reform efforts should focus on lowering transaction costs and entry barriers, allowing increased competition and innovation to drive the necessary changes. A committee's role should be to create a regulatory environment fostering competition and innovation, ensuring the emergence of the best ways to make financial services more widely available and affordable.

Revamping Federalism for Improved Governance

To contextualize India for Western observers, it's crucial to recognize that Indian states boast populations comparable to European countries, with Uttar Pradesh ranking sixth globally. The magnitude of this demographic diversity has significant implications for governance. India operates under a federal system, marked by centralizing elements attenuated post-1990 due to political shifts and a relaxation of central economic control. However, discussions on Indian federalism lack a conceptual framework for guiding system redesign in a world vastly different from those faced by the Constitution-makers over 50 years ago. This redesign is pivotal for enhancing governance and boosting India's growth trajectory.

In their book "The Political Economy of Federalism in India," M. Govinda Rao and the author initiated this task, further extended by TN Srinivasan and the author in their paper "Federalism and Economic Development in India: An Assessment." Traditional concepts of federal system design have historically emphasized cooperation among sub-national units for security and stability. A newer theoretical approach underscores the benefits of competition among a federation's jurisdictions, enhancing decision-makers incentives to act in their constituents' interests. Stanford political scientist Barry Weingast introduced a more comprehensive perspective termed "market preserving federalism" (MPF), which involves decentralization, hard sub-national budget constraints, and enforcement of a national common market. While MPF emphasizes limiting government intervention to preserve market functioning, two additional terms have been coined to capture other aspects of federalism. "Governance enhancing federalism" (GEF) highlights the potential of

decentralization to improve the efficiency of government expenditure, which is essential for combating the poor quality of government spending in India. "Market disciplined federalism" (MDF) addresses the need to harden budget constraints for states, exemplified by the shift to market borrowing recommended by the 12th Finance Commission.

Integrating GEF and MDF with MPF establishes a new trinity of federal system design or redesign principles. These principles align federalism with economic performance, leading to "development enhancing federalism" (DEF). Moving beyond abstract ideas, Srinivasan and the author propose concrete policy ideas. Firstly, they suggest reconstituting the Inter-State Council as a Fiscal Review Council (FRC) to evaluate the fiscal policies of states and the Centre. Secondly, they propose an integrated approach to Centre-state transfers, rethinking the Finance Commission tax-sharing formula and transforming the Planning Commission into a Fund for Public Investment (FPI). Lastly, they recommend reconsidering public expenditure across government levels, addressing subsidies, public sector production, and horizontal equalization goals. While India has undergone federal structure reforms, local government reform still needs to grow. The GEF-MPF-MDF trinity offers a conceptual tool to break free from suboptimal governance and propel India toward development-enhancing federalism, drawing inspiration from China's adaptive federal governance system that contributed to its rapid growth.

Sustaining India's Robust Growth

Examining India's current situation and prospects, with a growth rate of around 9% and the potential for double-digit growth, experts envision sustained growth in the range of 7 to 8.5%. These estimates consider factors such as continued reforms, with the finance minister suggesting that further financial sector development could contribute 1.4 percentage points to the growth rate. Despite the optimistic outlook, risks to growth, including an overheated economy, prompt caution from policymakers. The more significant risk, however, lies in the realm of political economy. Achieving 10% growth in a country as diverse as India requires broad-based benefits to be politically viable. India's growth must benefit various constituencies, unlike more diminutive and more homogeneous achievers like Japan, South Korea, or China, with a different political system. Sectoral reforms face challenges in meeting this criterion, with power sector reforms impacting jobs and subsidies and financial sector development primarily favouring those well-connected to the thriving market economy. Consequently, the government utilizes enhanced tax revenue to improve health, education, and infrastructure in the vast rural heartland.

Merely allocating funds without addressing fundamental institutional reforms perpetuates a rent-seeking culture and accomplishes little. Structural reforms that precede increased spending on essential public services are imperative to make growth-sustaining policies politically feasible. In essence, the necessary reforms are conceptually straightforward—devolving greater revenue authority to states, reducing incentive-distorting transfers, and empowering local governments with increased expenditure and revenue authority. Despite a decade since local government reform, India remains excessively centralized, hindering proper accountability. Indian local governments estimated is raised only about 1% of government revenue and account for approximately 5% of government expenditure, starkly contrasting to China's 23% and 51%, respectively, showcasing the benefits of fiscal decentralization. Paradoxically, to overcome the reluctance

of state governments to proceed with devolution, the Centre must take the lead, fostering institutional reforms as the missing link between spending and desired outcomes.

Forging a Fresh Social Compact for India

2023 G20 Presidency and FTA with the UK taking obviously India's steps towards self-reliance is valuable for global geopolitical arena. Piyush Goyal, Minister of Commerce & Industry Government of India in his words it is understood that Ministers of India and New Zealand foreign and trade affairs consented to have a trade and economic relationship. Bilateral relations of UK-India keep on flourishing because of the dedication of the two nations to academia, women in business, digital innovation, entrepreneurship, trade, education, culture, sustainability, and so on.

- **Proactive Employment:** Encourage industry to offer employment opportunities to the less privileged through education, training, and non-discrimination policies.
- **Remuneration Restraint:** Resist excessive remuneration, necessitating effective corporate governance frameworks built with government assistance. Tax system calibration can discourage conspicuous consumption.
- **Invest in Skills:** Create an institutional framework for corporate India to invest massively in education and training by liberalizing restrictions and providing transparent financial support.
- **Non-Competitive Behavior:** Modernize competition policies and implementation, an area where the government should take a leading role.
- **Environment-Friendly Technologies:** Encourage innovation with enforceable emission and fuel efficiency standards, working through the tax code to foster environmentally friendly technologies.
- **Promote Enterprise and Innovation:** Encourage innovation within and outside firms with legal and regulatory reforms supporting entrepreneurial endeavours.
- **Fight Corruption:** Government leadership is crucial in increasing transparency, reducing needless controls, and enhancing employee selection, training, and organizational culture to combat corruption.
- **Socially Responsible Media:** While promoting socially responsible media should be a lower priority for corporate India, the government should empower civil society and the media to act as checks on corporate excess and government failure.

India urgently requires a new social contract, and the PM has successfully highlighted the issues. However, the solution is not expecting corporate India to become more moral or altruistic but comprehensive institutional reforms. The government must enhance its structures and function, incentivize businesses to align with the new social contract and empower civil society to check corporate and government shortcomings.

Conclusion

India remains at a critical juncture in its development process. Since liberalization, the economy has experienced impressive growth rates, but structural weaknesses have begun to impede its progress. Tending to major challenges around skill shortages, acquisition policies, stringent labor laws, bureaucratic red tape, infrastructure deficits, will presently hold the way to resuscitating and supporting quick development. Simultaneously, India has huge open doors with its segment profit of a youthful populace. Innovations across education, agriculture, finance and many other sectors are benefited with the spread of digital

connectivity. The enormous labor force of almost 900 million can be changed into a useful resource powering assembling and commodities. India's domestic consumption remains significant as rising earnings lift millions to the working class consistently. The spread of advanced network is empowering developments across farming, instruction, finance and numerous different areas. Transforming these open doors into substantial monetary additions will anyway require unflinching changes across different circles. To foster a thriving innovation climate, steadily strengthening intellectual property protections and rationalizing the complex tax architecture are vital. Legitimizing the complicated expense engineering and consistently fortifying licensed innovation insurances are crucial to cultivate a flourishing development environment. Expertise improvement and preparing should be profoundly reoriented towards employability and industry linkages. Utilizing innovation across administration can shrivel regulatory caution and exchange costs. India can aspire to sustain 8-9% annual GDP growth over the next decade with strategic reforms and efficient execution.

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UNLOCKING INDIA'S POTENTIAL: JOURNEY TOWARD A 5 TRILLION DOLLAR ECONOMY AND BETTER EASE OF DOING BUSINESS

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Abstract

India, one of the world's fastest-growing economies, is expected to reach high middle income status by 2047. Despite falling in FY20/21 due to the COVID-19 pandemic, real GDP growth recovered strongly in FY21/22, supported by accommodating fiscal and monetary policies and widespread vaccine coverage. India's real GDP increased by an estimated 6.9% in FY22/23, aided by strong domestic demand, solid investment activity, and buoyant private consumption. However, there have been signs of deceleration since the third quarter of FY22/23. Rising borrowing prices, tightening financial conditions, and persistent inflationary pressures are likely to impact Indian economic growth in FY23/24. Real GDP growth is projected to reach 6.3% in FY23/24, from an estimated 6.9% in FY22/23.

Key words: Consumption; International Innovation;

Introduction

India is one of the world's fastest growing economies, and it expected to reach high middle income status by 2047, the centenary of Indian independence. After falling in FY20/21 due to the COVID-19 pandemic, real GDP growth recovered strongly in FY21/22, supported by accommodating fiscal and monetary policies and widespread vaccine coverage. As a result, in 2022, India emerged as one of the world's fastest growing economies, despite significant global challenges such as renewed supply chain disruptions caused by rising geopolitical tensions, synchronized tightening of global monetary policies, and inflationary pressures. India's real GDP raised by an estimated 6.9 percent in the fiscal year 22/23. Growth was aided by strong domestic demand, solid investment activity boosted by the government's push for infrastructure investment, and buoyant private consumption, particularly among higher-income earners. The combination of domestic demand has also shifted, with government consumption lower due to fiscal consolidation. However, there have been signals of deceleration since the third quarter of FY22/23, although the overall growth pace remaining strong. Rising borrowing prices, tightening financial conditions, and persistent inflationary pressures are likely to impact on Indian economic growth in FY23/24. Real GDP growth is projected to go to 6.3 percent in FY23/24, from an estimated 6.9 percent in FY22/23.

Review of Literature

Numerous researchers have delved into the realm of journey towards India's 5 trillion dollar economy and its impact on doing business here.. Several relevant studies in this domain are summarized below. Dr.A.Shaji George (2023) conducted an evaluation on India's Economic Growth, Challenges and Opportunities on the Path to 5 Trillion Dollars in his journal Partners Universal International Innovation. The author highlights the significance of maximizing India's growth potential while addressing critical problems that hinder further expansion. With strategic policies and targeted changes, India can sustain its strong growth beyond \$5 trillion. However, persistent economic success requires deliberate efforts to remove obstacles. Swapnil Soni¹ and M. H. Bala Subrahmanya (2020) on India's Sectoral Growth Patterns and US\$ 5 Trillion Trajectory:An Empirical Investigation on Macroeconomic Impact of COVID-19 investigates the growth trajectory of these productive sectors aligning with US 5 trillion dollar GDP objective becomes more important at the challenging time of unprecedented COVID-19 pandemic and subsequent nation-wide lockdown in the economy. P Natarajan and Mohammad Raza (2017) on their journal an Analytical Investigation on Ease of Doing Business in India investigates the measures which are taken by the Indian government to accentuate ease of doing business. In conclusion, the review of relevant literature on India's 5 trillion dollar economy suggests that despite the pandemic and other challenges India faced in the recent years the projection is achievable and the easiness in doing business supports the growth.

Methodology

The methodology we used in this paper are comparative analysis using the information regarding inflation, GDP and growth rate data collected from the website of the macrotrends.com (Macrotrends, 2017), moneycontrol.com (Moneycontrol, 2023) and forbesindia.com (ForbesIndia,2023). India's rank improved to 63 in Doing Business Page 5 Report 2020 (Published in October 2019) from 142 in Doing Business Report 2015 (Published in October 2014) As a result of continued efforts by the Government, India has improved its rank by 79 positions in the last five years [2014-19]. The below graph shows this trend.

Report 2020 (Published in October 2019) from 142 in Doing Business Report 2015 (Published in October 2014) As a result of continued efforts by the Government, India has improved its rank by 79 positions in the last five years [2014-19]. India continues to maintain its first position among South Asian countries as compared to being at 6th position in 2014.

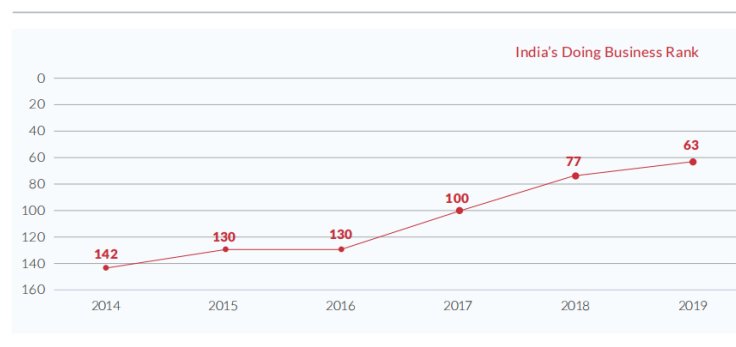


Figure 1: Ease of doing business over the past 10 years in India

From the website of Ministry of Commerce & Industry India, we can see that Andhra Pradesh top the list of states ranked based on implementation of Business Reform Action Plan for 2019 while Kerala is in the 28th position. Sikkim and Tripura occupies the penultimate and ultimate position respectively in ease of doing business.

Research Gap and Major Findings

Research gaps in India's pursuit of a 5 trillion dollar economy and improved ease of doing business are multifaceted. Firstly, there's a need for an in-depth analysis of policy implementation to bridge the gap between formulation and execution, pinpointing obstacles hindering effective policy execution. Regional disparities constitute another critical area, demanding exploration into how economic growth and business friendliness vary across states, with a focus on understanding the underlying factors contributing to these differences. Additionally, examining the impact of infrastructure deficits, skill development initiatives, technology adoption, and the entrepreneurial ecosystem could provide valuable insights into areas requiring targeted interventions for sustained growth. Furthermore, delving into the role of global trade relations, environmental sustainability considerations, digital transformation, and the effectiveness of government-business collaboration would contribute significantly to the understanding of India's progress toward economic goals.

In summary, comprehensive research is necessary to unravel the intricate dynamics of India's economic landscape. Addressing policy implementation challenges, regional disparities, and key factors influencing business operations, alongside a focus on global trade, sustainability, and digital transformation, will contribute substantially to steering the nation towards a 5 trillion dollar economy and a more favorable business environment.

Contributions of the Study

Our study was contributed by major papers on ease of doing business and online websites like Ministry of Commerce and Industry (Department of promotion of Industry and internal trade). Our study contributes to the Macroeconomic analysis, Development Drivers on Identifying the major sectors and industries that will drive India's economic development to the 5 trillion mark. This could include assessing the potential of the manufacturing, services, agricultural, and technology sectors. Also Investment Dynamics which investigates the impact of domestic and international investment in driving growth, including the efficacy of government policies and initiatives such as "Make in India" and "Skill India." Last but not the least; the fiscal and Monetary Policies of India on promoting business and investment while ensuring macroeconomic stability is contributed by our study.

Limitation and Scope for Further Research

The main limitation for preparing this paper was the unavailability of direct data (Primary data) and lack of recent research papers both online and offline. While India's journey towards a 5 trillion dollar economy is promising, significant knowledge gaps remain. Further research can delve deeper into the potential of specific sectors like manufacturing, green energy, and digital technologies. Analyzing the effectiveness of government initiatives like "Make in India" and skill development programs will be crucial. Additionally, studies on infrastructure development, financial inclusion, and the impact of growth on inequality and poverty can guide policy decisions towards a more inclusive and

sustainable future. Simultaneously, research on ease of doing business in India needs to explore the impact of recent reforms, identify lingering bureaucratic hurdles, and investigate the effectiveness of anti-corruption measures. Understanding the challenges faced by foreign investors and domestic entrepreneurs will be key to streamlining regulations and fostering a truly business-friendly environment. By addressing these knowledge gaps through in-depth analysis and practical recommendations, research can illuminate the path for India to achieve its ambitious economic goals while ensuring a prosperous and equitable future for its citizens.

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INDIA'S \$5 TRILLION ECONOMY: THE VISION, CHALLENGES, AND ROADMAP

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Abstract

India, a vibrant and diverse nation, stands at the cusp of economic transformation with an ambitious vision of achieving a \$5 trillion economy. This research paper delves into the multifaceted dimensions of this vision, exploring the current economic landscape, identifying challenges, and outlining a comprehensive roadmap for sustainable growth. The paper analyzes policy initiatives, the role of technology, infrastructure development, skill enhancement, and global partnerships as integral components of India's journey towards economic prosperity. By examining case studies, success stories, and future prospects, the research aims to provide a holistic understanding of the path ahead.

Keywords: *Economic Growth, Challenges to Economic Growth, Government Reforms, Policy Initiatives, \$5 Trillion Economy, Global Partnerships.*

Introduction

India, with its rich history and diverse cultural tapestry, has emerged as a formidable player on the global stage. Over the past few decades, the country has witnessed remarkable economic growth, transforming itself into one of the world's largest economies. In line with this trajectory, the Indian government has set a bold and ambitious goal – to achieve a \$5 trillion economy. India, a nation steeped in history and cultural diversity, has emerged as a global economic force, captivating the world's attention with its remarkable journey towards prosperity. The economic trajectory of India, especially in the latter half of the 20th century and the beginning of the 21st century, has been nothing short of transformative. From a predominantly agrarian economy to one of the world's largest and fastest-growing economies, India has navigated through various phases of development, overcoming challenges and leveraging its inherent strengths. The roots of India's modern economic aspirations can be traced back to the economic liberalization policies of the early 1990s. These reforms, spearheaded by then-Finance Minister Dr. Manmohan Singh, dismantled the License Raj, opening the doors for foreign investment and encouraging private enterprise. The impact was profound, leading to an era of robust economic growth, rapid industrialization, and a burgeoning services sector. India's Gross Domestic Product (GDP) witnessed substantial expansion, and the country's integration into the global economy became increasingly pronounced. As the new millennium unfolded, India found itself at the crossroads of opportunity and challenge. The demographic dividend, with a large and youthful population, became a central factor in the nation's economic narrative. The information technology (IT) and software services sector, in particular, emerged as a global powerhouse, earning India the moniker of the "world's back office." The success of Indian professionals in technology and services further fueled the country's economic ambitions. Building on this momentum, the Government of India, under various administrations, envisioned a path to elevate the nation's economic status to unprecedented

heights. A pivotal moment in this vision was the announcement of the ambitious goal of achieving a \$5 trillion economy. This target was not merely a numerical milestone but a strategic imperative to address pressing issues such as poverty, unemployment, and regional disparities. The vision for a \$5 trillion economy encapsulates a comprehensive approach to economic development. It involves leveraging the strengths of a diverse and dynamic population, fostering innovation and technological advancement, and implementing strategic policy initiatives. The goal goes beyond the economic realm, aiming to enhance the quality of life for millions of citizens and position India as a global economic powerhouse. However, this journey is not without its challenges. India grapples with issues such as income inequality, agrarian distress, and the need for robust infrastructure. Moreover, the global economic landscape is marked by uncertainties and complexities that pose additional challenges for a developing nation.

As India stands on the brink of this transformative endeavor, the world watches with anticipation, recognizing the potential impact not only on the Indian subcontinent but on the global economic order. This research delves into the intricacies of India's \$5 trillion economy vision, dissecting its components, identifying challenges, and outlining a roadmap for sustainable and inclusive growth.

Vision Statement

The vision for India's \$5 trillion economy encapsulates a bold and strategic commitment to propel the nation into a new era of economic prowess, global influence, and enhanced well-being for its citizens. Articulated by the government, this vision is not merely an ambitious numerical target but a comprehensive strategy to redefine India's role in the global economic landscape. At its core, the vision seeks to harness and leverage the diverse strengths that India possesses. With a demographic dividend characterized by a youthful and dynamic population, the nation aims to transform this abundance into a demographic dividend, ensuring that the vast workforce becomes a driving force for economic growth. The vision recognizes the need for inclusive development, ensuring that the benefits of economic progress permeate through all strata of society, bridging the gaps that have persisted for decades. In tandem with leveraging its demographic advantage, the vision places a strong emphasis on innovation and technology. Recognizing the transformative power of technological advancements, the goal is to position India as a global hub for innovation and a leader in cutting-edge technologies. This entails nurturing a robust ecosystem for start-ups, fostering research and development, and ensuring that the benefits of technology reach even the remotest corners of the country. Furthermore, the vision encompasses a commitment to sustainable development. It acknowledges the imperative to balance economic growth with environmental responsibility, emphasizing the need for green initiatives and environmentally conscious policies. In doing so, the vision aligns with global efforts to address climate change and ecological sustainability. Crucially, the \$5 trillion economy vision is a timeline-bound commitment, setting clear milestones and targets. This temporal dimension adds a sense of urgency and accountability to the endeavor, signaling to the nation and the world that India is resolute in its pursuit of economic excellence within a specified timeframe. Ultimately, the vision for a \$5 trillion economy is a beacon guiding the nation towards a future where economic prosperity is not an end in itself but a means to uplift the lives of millions. It envisions an India that is not just economically formidable on the global stage but one where every citizen has the opportunity to thrive and contribute to

the nation's collective success. As India embarks on this transformative journey, the vision stands as a testament to the nation's resilience, ambition, and unwavering commitment to a brighter and more prosperous future.

Current Economic Landscape

The assessment of India's journey towards a \$5 trillion economy necessitates a comprehensive examination of key economic indicators that serve as barometers of the nation's financial health and trajectory. These indicators provide crucial insights into the size, growth rate, and structural composition of the Indian economy. India's Gross Domestic Product (GDP) serves as a foundational metric in understanding the overall economic output of the nation. Over the past few years, India has consistently ranked among the world's fastest-growing major economies. However, the GDP size alone does not fully capture the nuances of economic development; it is equally important to dissect the sectors contributing to this growth. The sector-wise contribution to GDP is a pivotal economic indicator. Traditionally, India's economy has been characterized by a significant role played by the services sector, particularly IT and software services, which have propelled the nation onto the global economic stage. Manufacturing and agriculture sectors, while significant, have been subject to various challenges, contributing to the need for diversification. Employment trends are another critical aspect of the economic landscape. Job creation is not only a measure of economic vitality but also a key factor in ensuring inclusive growth. India's demographic dividend, with a large and youthful population, underscores the importance of generating employment opportunities that align with the skill sets of the workforce. As India navigates its economic trajectory, the inflation rate becomes a pivotal indicator. Keeping inflation in check is essential to maintain the purchasing power of the population and ensure stability in the economic environment. The Reserve Bank of India (RBI) plays a crucial role in managing inflation through monetary policies. Additionally, the balance of trade and current account deficit are indicators of India's economic engagement with the global market. A sustained deficit may signal challenges in managing foreign exchange reserves and the need for strategies to boost exports. In examining these economic indicators, it becomes evident that while India has made substantial progress, challenges persist. The \$5 trillion economy vision necessitates not only continued growth but a balanced and diversified expansion that addresses structural issues within the economy. The subsequent sections of this research will delve into these challenges and propose a roadmap for sustained and inclusive economic development. India's journey towards a \$5 trillion economy is fortified by a multitude of inherent strengths that position the nation as a formidable player in the global economic arena.

1. Demographic Dividend:

India's greatest asset lies in its demographic profile, characterized by a large and youthful population. This demographic dividend not only fuels a robust domestic market but also presents a dynamic and skilled workforce, essential for innovation and economic productivity.

2. IT and Service Sector Dominance:

The Information Technology (IT) and software services sector have propelled India into the global spotlight. Renowned as the "world's back office," the country has established itself

as a key player in software development, business process outsourcing, and IT services, contributing significantly to economic growth and foreign exchange earnings.

3. Policy Reforms and Ease of Doing Business:

India has undertaken substantial policy reforms to enhance the ease of doing business, attracting investments and fostering entrepreneurship. Initiatives like the Goods and Services Tax (GST) and 'Make in India' have streamlined processes, encouraging both domestic and foreign investors.

4. Diverse Economic Base:

India boasts a diverse economic base, encompassing agriculture, manufacturing, and services. While the services sector is a major contributor, efforts are underway to bolster manufacturing through initiatives like 'Make in India,' aiming for a more balanced and resilient economic structure.

5. Global Diaspora:

The Indian diaspora spread across the globe serves as a strategic asset. This network not only contributes to remittances but also facilitates business connections, technological collaborations, and foreign investments, fostering economic linkages on a global scale.

Leveraging these strengths is paramount in realizing the \$5 trillion economy vision. Recognizing the significance of these factors provides a foundation for strategic planning and targeted interventions that amplify India's economic potential and pave the way for sustainable and inclusive development.

C. Challenges

While India's economic landscape is marked by strengths, a comprehensive understanding demands acknowledgment of persistent challenges that pose hurdles to the realization of a \$5 trillion economy.

1. Income Inequality:

Income disparity remains a critical challenge, with a substantial portion of the population still grappling with poverty. Addressing this inequality is not only a social imperative but also crucial for creating a robust domestic market and ensuring widespread participation in economic growth.

2. Agriculture Sector Challenges:

The agriculture sector, employing a significant percentage of the population, faces issues such as low productivity, lack of modernization, and vulnerability to climate change. Transforming this sector is essential not only for rural development but also for ensuring food security and mitigating migration pressures.

3. Infrastructure Gaps:

Despite significant progress, infrastructure gaps persist in areas such as transportation, energy, and urban development. Insufficient infrastructure hampers the overall efficiency of the economy, affecting industries, logistics, and the quality of life for citizens.

4. Global Economic Uncertainties:

The interconnectedness of the global economy exposes India to external shocks and uncertainties. Fluctuations in global markets, trade tensions, and geopolitical challenges pose risks that necessitate strategic planning and adaptability.

5. Environmental Sustainability:

As the nation pursues economic growth, environmental sustainability emerges as a critical challenge. Balancing development with ecological responsibility is imperative to address climate change, resource depletion, and other environmental concerns.

6. Policy Implementation Challenges:

Despite progressive policy initiatives, effective implementation remains a challenge. Bureaucratic hurdles, regulatory complexities, and delays in project execution can hinder the intended impact of policies aimed at stimulating economic growth.

7. Quality of Education and Skill Mismatch:

The education system faces challenges related to quality and relevance, leading to a mismatch between the skills possessed by the workforce and the demands of the evolving economy. Bridging this gap is vital for maximizing the potential of the demographic dividend.

8. Healthcare Infrastructure:

The COVID-19 pandemic has underscored the importance of a robust healthcare infrastructure. Strengthening healthcare systems is not only crucial for public health but also for ensuring a resilient workforce and reducing the economic impact of health crises. Recognizing and addressing these challenges requires a multi-faceted approach. Policy interventions, investments in infrastructure, social reforms, and global collaborations are essential components of a comprehensive strategy. As India navigates its economic trajectory, tackling these challenges head-on will be pivotal in achieving sustained and inclusive growth on the path to a \$5 trillion economy.

Roadmap for Achieving a \$5 Trillion Economy

A. Policy Initiatives

The realization of India's \$5 trillion economy vision is intricately linked to a series of proactive policy initiatives aimed at catalyzing economic growth and fostering a conducive business environment.

1. Make in India:

Launched to boost domestic manufacturing and attract foreign investment, the 'Make in India' initiative focuses on creating a robust manufacturing ecosystem. Streamlining regulatory processes, promoting innovation, and enhancing infrastructure are key elements aimed at transforming India into a global manufacturing hub.

2. Digital India:

Acknowledging the transformative power of technology, the 'Digital India' campaign seeks to digitize governance, promote e-governance services, and enhance digital

infrastructure. This initiative not only facilitates efficiency in public services but also fosters a conducive environment for technology-driven businesses.

3. Goods and Services Tax (GST):

The implementation of GST represents a landmark tax reform aimed at creating a unified and transparent taxation system. By eliminating cascading taxes and reducing compliance burdens, GST contributes to a seamless and efficient business environment, fostering economic growth.

4. Foreign Direct Investment (FDI) Reforms:

To attract foreign capital and technology, the government has implemented a series of FDI reforms across various sectors. These reforms aim to liberalize investment norms, enhance ease of doing business, and encourage strategic partnerships between Indian and foreign entities.

5. National Infrastructure Pipeline (NIP):

The NIP is a comprehensive plan to develop infrastructure across sectors such as energy, transportation, and urban development. By prioritizing key projects and facilitating both public and private investments, NIP addresses critical gaps in infrastructure, essential for sustained economic growth.

6. Start-up India:

Recognizing the role of innovation and entrepreneurship in driving economic growth, the 'Start-up India' initiative supports and nurtures start-ups. This includes financial incentives, incubation support, and simplification of regulatory processes to encourage the emergence of a vibrant start-up ecosystem. These policy initiatives collectively form a strategic framework aimed at addressing structural challenges, promoting economic diversification, and fostering an environment conducive to investment and innovation. As India charts its course towards a \$5 trillion economy, the successful implementation of these policies will play a pivotal role in shaping the trajectory of sustainable and inclusive economic development.

B. Innovation and Technology

In the journey towards a \$5 trillion economy, the role of innovation and technology is paramount, serving as a catalyst for economic transformation and global competitiveness.

1. Technology as a Driver of Growth:

Embracing technological advancements is not merely a choice but a necessity for economic expansion. Innovation in areas such as artificial intelligence, biotechnology, and renewable energy has the potential to reshape industries, enhance productivity, and create new avenues for economic growth.

2. Start-up Ecosystem:

India's vibrant start-up ecosystem is a testament to its commitment to fostering innovation. Through initiatives like 'Start-up India,' the government provides financial incentives, mentorship programs, and streamlined regulatory processes to empower

entrepreneurs. This has resulted in the emergence of innovative solutions across various sectors, contributing to economic dynamism.

3. Digital Transformation:

The 'Digital India' campaign has been a cornerstone in India's technological evolution. With a focus on digitizing governance and enhancing digital infrastructure, the initiative has facilitated increased connectivity, improved service delivery, and laid the groundwork for a digital economy.

4. Industry-Academia Collaboration:

Bridging the gap between academia and industry is crucial for fostering innovation. Collaborative efforts between educational institutions and industries facilitate research and development, skill enhancement, and the application of cutting-edge technologies in real-world scenarios.

5. Research and Development (R&D) Investments:

Increased investments in R&D are pivotal for staying at the forefront of innovation. By allocating resources to research institutions, fostering a culture of curiosity and experimentation, and incentivizing private-sector R&D, India can accelerate its technological capabilities.

6. Digital Payments and Financial Technology (Fintech):

The promotion of digital payments and the growth of Fintech have not only enhanced financial inclusion but also streamlined transactions and boosted economic efficiency. This digitization of financial services contributes to the overall modernization of the economy.

7. Green Innovation:

Emphasizing green and sustainable technologies is integral to achieving economic growth while mitigating environmental impact. Innovations in renewable energy, eco-friendly manufacturing processes, and sustainable practices contribute to a greener and more resilient economy. Harnessing the power of innovation and technology requires a comprehensive approach. This includes creating an ecosystem that encourages research, incentivizes entrepreneurship, and embraces digitalization. By leveraging these technological advancements, India can not only achieve its economic goals but also emerge as a global leader in innovation and sustainable development.

C. Infrastructure Development

Infrastructure development stands as a linchpin in India's quest for a \$5 trillion economy, underpinning the foundation for sustained economic growth and societal well-being.

1. Transportation and Connectivity:

A robust transportation network is vital for efficient movement of goods and people. Investments in roads, railways, ports, and airports not only reduce logistics costs but also enhance connectivity, fostering regional development and facilitating the ease of doing business.

2. Urban Development and Smart Cities:

Urbanization is a hallmark of economic progress. The 'Smart Cities' initiative aims to transform urban areas into hubs of innovation and sustainability. By integrating technology, improving infrastructure, and ensuring efficient resource utilization, smart cities contribute to enhanced quality of life and economic productivity.

3. Energy Infrastructure:

A reliable and diverse energy infrastructure is imperative for powering economic activities. Investments in conventional and renewable energy sources contribute not only to energy security but also align with global efforts towards sustainability, reducing the environmental footprint of economic growth.

4. Digital Infrastructure:

The digital revolution necessitates a robust digital infrastructure. Investments in high-speed internet connectivity, data centers, and cybersecurity are essential for fostering a digital economy. This infrastructure supports e-governance, digital transactions, and the growth of the information technology sector.

5. Water and Sanitation Facilities:

Access to clean water and sanitation is fundamental for public health and productivity. Investments in water supply, sewage systems, and waste management contribute to creating healthier communities and supporting industries that rely on efficient water management.

6. Social Infrastructure:

Beyond physical structures, social infrastructure, including schools, hospitals, and affordable housing, is integral for inclusive development. Providing access to quality education and healthcare ensures that the workforce is skilled and healthy, contributing to increased productivity.

7. Rural Infrastructure Development:

Development initiatives must extend to rural areas. Investments in rural infrastructure, including irrigation, agricultural storage, and market connectivity, are crucial for enhancing agricultural productivity, reducing rural-urban migration, and fostering balanced regional development. Strategic planning and sustained investments in infrastructure development are imperative for overcoming bottlenecks, reducing operational costs, and ensuring the resilience of the economy. As India marches towards a \$5 trillion economy, a holistic approach to infrastructure development is indispensable, not only for economic growth but also for fostering a sustainable, inclusive, and resilient society.

D. Skill Development

Skill development emerges as a cornerstone in India's journey towards a \$5 trillion economy, recognizing the pivotal role of a skilled workforce in driving innovation, productivity, and economic growth. As the economy undergoes rapid transformations, aligning the skill sets of the workforce with emerging industry demands becomes imperative. The Skill India initiative, a flagship program, has been at the forefront of addressing this need. Through a multifaceted approach, Skill India focuses on enhancing employability, fostering entrepreneurship, and bridging the gap between formal education

and industry requirements. One of the key pillars of Skill India is vocational training, designed to equip individuals with industry-relevant skills across diverse sectors. By collaborating with industry partners, the initiative ensures that training programs align with the evolving needs of the job market. Additionally, emphasis is placed on providing soft skills, communication abilities, and digital literacy, augmenting the holistic development of individuals entering the workforce. Entrepreneurship development is another critical facet of Skill India, empowering individuals to create job opportunities rather than merely seeking them. Entrepreneurial skills training, coupled with access to financial support and mentorship, enables aspiring entrepreneurs to navigate the complexities of starting and sustaining businesses. This not only contributes to economic diversification but also fosters a culture of innovation and self-reliance. Furthermore, Skill India recognizes the importance of formal education in shaping a skilled workforce. Collaborations with educational institutions aim to integrate industry-relevant curricula and practical training components. This synergy ensures that graduates are not only academically proficient but also possess the practical skills demanded by the job market. The initiative is not confined to urban areas; it extends its reach to rural communities, acknowledging the significance of inclusive development. Skill development centers in rural areas focus on enhancing agricultural skills, encouraging sustainable practices, and equipping rural youth with the tools necessary for gainful employment within their communities. In essence, Skill India is a comprehensive strategy to address the dynamic demands of the modern economy. By fostering a skilled and adaptable workforce, the initiative plays a pivotal role in enhancing productivity, reducing unemployment, and propelling India towards its ambitious \$5 trillion economic vision. As the nation invests in human capital, it not only secures its economic future but also ensures that the benefits of growth are accessible to all segments of society.

Conclusions

In conclusion, India's pursuit of a \$5 trillion economy is not merely an economic ambition but a comprehensive vision for transformative growth, inclusivity, and global leadership. The multifaceted approach outlined in this research, spanning policy initiatives, innovation, infrastructure development, and skill enhancement, underscores the complexity of the path ahead. As the nation grapples with challenges such as income inequality, agricultural distress, and infrastructure gaps, it simultaneously leverages its strengths – a demographic dividend, a thriving services sector, and a commitment to policy reforms. The policy initiatives, including 'Make in India,' 'Digital India,' and the implementation of GST, exemplify the government's commitment to creating an enabling environment for economic activities. These initiatives not only attract investments but also streamline processes, fostering entrepreneurship and economic diversification. Moreover, the emphasis on innovation and technology, evident in the 'Start-up India' and 'Digital India' campaigns, positions India at the forefront of global technological advancements, contributing to its competitive edge.

Infrastructure development emerges as a critical component, with investments in transportation, energy, and digital infrastructure forming the backbone of economic progress. The vision for smart cities and rural infrastructure development reflects a commitment to balanced regional growth. Simultaneously, skill development initiatives, encapsulated in the Skill India program, address the evolving needs of the job market, ensuring that the workforce is equipped with the requisite skills for the digital age. As India

navigates the complexities of a globalized economy and confronts internal challenges, the roadmap outlined in this research paper provides a strategic guide. The collaboration between government, industry, and educational institutions becomes paramount, emphasizing the importance of collective responsibility. The success of this vision hinges not only on achieving a numerical milestone but on fostering sustainable and inclusive growth that permeates through all sections of society. In essence, the \$5 trillion economy vision is a call to action – a call for continued commitment to reforms, innovation, and a steadfast pursuit of excellence. As India stands at the crossroads of economic transformation, the journey towards a \$5 trillion economy is not just about reaching a destination; it is about shaping a destiny where economic prosperity converges with social well-being, creating a future where every citizen contributes to and partakes in the nation's success.

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INNOVATION NATION: INDIA'S ECONOMIC RENAISSANCE IN THE 21ST CENTURY

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Abstract

In the 21st century India emerges as a economic renaissance by the dynamic spirit of innovation. This delivers the key factors driven India's economic and it explores the Strategic management that have fueled its transformation. This study examines India's historical scenery. And it highlights the challenges faced by the nation and conversion shifts taken place over past decades. It focused only on innovation that emerged as the central theme. And it projects that how India has positioned itself as an innovation hub on the international arena.

Keywords: *Economic resurgence, Economic expansion, employment, service Opportunities*

Introduction

This article explores about India's journey towards management dynamics. That step into the nation global economic. This illuminates the pivotal role played by the innovations in technology advancement, entrepreneurial, research and development ecosystem. The change of conceited economy to knowledge driven force is examined and highlighting the transformative impact of innovation. Theimplications of the study is impacted for the benefit of theglobal management community towards understanding and managing the emerging global scenario.

Management in the 21st Century

Journalists face freedom from the daily constraints when it comes to academic writing for newspapers, allowing for a more extended perspective in line with the historical significance of universities such as Al-Azhar, Bologna, and Oxford. As we enter a new year, amidst numerous prognostications for the year ahead, I prefer to extend my predictions over a more extended period. This involves examining broad trends rather than specific events, though understanding these trends can often guide particular occurrences. Given that my university is planning a new management school for Silicon Valley, I've been contemplating the nature of management and how it is evolving alongside changes like firms. This holds great significance for India's development, as the ingenuity of managing organizations plays a pivotal role in harnessing material gains from our parallel ingenuity in understanding and mastering the natural world. India's managers, both domestically and in critical positions globally, have proven themselves world-class whenever given an opportunity.

While even hunter-gatherers and early farmers had to manage resources, tools, and teams, the challenges of modern management truly began with the Industrial Revolution. The factory system and assembly line necessitated close coordination between workers and machines to manufacture increasingly complex goods. This continued for nearly two centuries, leading to the dominance of large corporations in industrial economies, producing steel, automobiles, and engineering goods. Post-World War II, graduate management

education professionalized, training managers to function within these large corporate hierarchies, with the ethos of the factory system prevailing in the head office. If the initial phase of professional management focused primarily on labor and materials, the second phase witnessed the prominence of finance. The 1980s saw a surge in financial markets and instruments, making finance a central management topic. This era also witnessed industrial and retail firms venturing into finance, with Enron's financial mismanagement standing out as a negative consequence.

With materials, labor, and capital addressed, knowledge is the last remaining factor of production. Knowledge, encompassing data, information, and both embodied (skills) and disembodied (blueprints) forms will be the focus of management in the coming Century. Silicon Valley exemplifies the critical role of knowledge in management, serving as the epicenter of innovative information technology that has facilitated the creation of global value networks. This shift places distinct demands on managers compared to the hierarchical corporations of the past. Managing revolves around technology, talent, and teams in the knowledge-based economy. While factory production remains relevant, it has been routinized, outsourced, and offshored, leaving managers with the challenge of overseeing creativity and collaboration across diverse cultures, languages, and time zones. Specific areas gaining importance in a knowledge-based economy include intellectual property management, information analytics (including data mining and filtering), and the management of collaboration among highly skilled and widely dispersed individuals, often referred to as the "creative class."

In the knowledge-based economy, finance concepts and tools remain crucial, but the best managers also need a profound understanding of technology and talent. The term "human capital" management is more fitting than "human resources," emphasizing the strategic role of skilled individuals in driving wealth creation. The adaptability and adeptness of Indians, stemming from a society with linguistic and cultural diversity, make them well-suited for this evolving management landscape. Successful Indian professionals in corporate management and academia often combine a technical undergraduate background with graduate management education, aligning with the demands of the knowledge-based economy. While the U.S. maintains a global lead in graduate education, it remains to be seen whether India can develop the right kinds of graduate management education at a much larger scale. This is crucial, as these managers will be at the helm of the new global firms India must establish for sustained rapid economic growth. The innovations needed in higher education to prepare India's economy for the 21st Century require massive capacity expansion, calling for the development of a new regulatory and funding model.

Managing Our Emerging Worlds:

Globalization and innovation are transforming the modern corporation, rendering it more geographically dispersed, networked both relationally and technologically, culturally diverse, and less hierarchical. These changes signify an inflexion point like management and, consequently, management education, comparable in significance to the shifts brought about by the Industrial Revolution. In a previous column, I proposed viewing the management challenges resulting from this transformation through a lens that emphasizes a greater focus on knowledge compared to other factors of production, such as labour, capital, and resources. Another way to conceptualize the management challenges of the new Century is through four interconnected 'emerging worlds.

The Virtual World:

The virtual world, primarily shaped by Silicon Valley, represents the evolution of microprocessor-based technologies combined with storage and communication technologies. It spans information sharing, interaction, economic transactions, and parallel lives and universes. Digital technology integration into new and existing products and services has given rise to novel businesses, redefined organizational forms internally, and reshaped external relationships with customers and suppliers.

The Developing World:

Fueled in part by innovations from the virtual world, the developing world is experiencing advancements that diminish geographical distances and expedite knowledge transfer. Countries like China and India, housing a third of the world's population, are achieving unprecedented growth rates catalyzed by the outcomes of digital technologies. The promise of a more balanced world, albeit with increased challenges, necessitates reevaluating management practices that transcend the outdated models influenced by companies like G.M. and P&G.

The Green World:

The green world, under pressure since the Industrial Revolution, faces its most significant challenges due to the emergence of the developing world, especially China and India. The twin challenges involve reducing effluents and wastes and conserving various fuel sources. Balancing these goals requires intricate management, as solutions may be complementary or conflicting. Addressing environmental concerns requires technological innovations, public policy, social behavior, and sustainable business practices.

The Inner World:

Representing the drivers of human behavior, the inner world is the last frontier of knowledge. Managing creativity and collaboration among individuals is a complex and fundamental challenge across various sectors. Innovations in neuroscience, behavioral economics, evolutionary biology, and psychology offer insights into individual and social behavior. The virtual world is a tool and arena for exploring the inner world, facilitating collaborative discovery, and providing new management education and practice tools.

Practical implications of this future-oriented view of management include a need for a shift in management education. While the 1950s and 1960s emphasized systematizing education with a focus on analytical tools, the future demands a reevaluation. Interpersonal skills, often deemed "soft" skills, are challenging to measure and reward but are increasingly valued by employers. Adapting the virtual world's tools for teaching presents significant opportunities, with online games and worlds emerging as crucial mediums for management education, specifically designed to address challenges like negotiation and collaboration.

Continual concerns about understanding the prospects of the Indian economy underscore the need for development across various sectors, including information technology in rural areas, financial services expertise, and overall advancements in higher education. Developing IT-based learning tools for management education stands out as another promising avenue.

Conclusion:

India's industrial growth surged following the 1857 uprising, fueled by advancements in peace, education, and transportation. During the Crimean and American Civil Wars under British rule, the jute and cotton industries thrived. Despite gaining independence, India faced challenges such as debt, overcrowding, poverty, underdevelopment, and low agricultural output. The nation presents a unique investment opportunity with its rapid economic expansion driven by outsourcing, digitization, and a shift toward renewable energy. Projections indicate a doubling of GDP by 2031. Over the past five decades, India's economy has steadily expanded due to robust connections, a diverse economy, and fruitful trade relations. The Covid-19 pandemic accelerated remote work and enhanced affordable communication access for enterprises. In 2023–2024, India's economy, employing 64% of its 356 million youth, is anticipated to grow at its fastest rate, fueled by the transition to renewable energy. With a diverse global market, India's economy ranks second only to China's. Contributing factors to its 6.1% growth in 2022–2023 include workforce diversity and 705 ethnic groups. GDP growth is projected due to incentives, battery technology, electric vehicles, renewable energy, increased bank credit, despite reduced imports and higher private expenditure. Challenges in India's agriculture sector require focused attention on public infrastructure, global outsourcing, alternative energy policies, and rural employment. Industrialization in India rose by 4.4% in the fourth quarter of 2023, driven by increased tax revenue and credit, despite challenges in agricultural policy and intellectual-artisanal imbalances. While the economic Renaissance encourages decentralization and poverty reduction through academic success and political engagement, its correlation with poverty reduction remains unclear. The digital and energy revolutions are expected to propel India's economy towards rapid growth, with manufacturing projected to increase from 15.6% to 21% of the country's GDP by 2031. Smartphone consumption is set to rise from \$2 trillion to \$4.9 trillion, with exports reaching \$11 billion. India's anticipated medium-term growth rate of 6.8%, expected to expand by 7% annually in the fiscal year 2023, presents promising economic prospects. While the ambitious \$5 trillion growth target is slightly behind schedule, the life-mimicking paradigm gaining traction in Asia-Pacific and northern Europe aims to promote environmental sustainability and human well-being by opposing capital-intensive economies, fostering compassionate interactions, and encouraging environmental adaptation.

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NAVIGATING THE NEW NORMAL: UNRAVELING THE DYNAMICS OF INDIA'S ECONOMIC LANDSCAPE

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Abstract

Indian economy has undergone lot of changes in the domestic as well as global scenario. The GDP growth is effected by unprecedented happenings in global trade, war conflicts, sectoral fluctuations, technological advancements, pandemic surges and the like. Highfrequency economic measures depict a robust state of the economy, with resilient urban demand conditions reflected in higher growth in automobile sales, fuel consumption, and UPI transactions. Dynamic economic transactions in the national income, foreign exchange, global trade and similar indicators pressurize the Government to control the process. Recent years have witnessed major changes in terms of employment, growth, disasters and the like. This has profound impact on the economy of the nation as a whole and no area has to be left unattended in the economic front. This article unfolds certain significant fields such as GDP growth, inflation control, current account deficit, capital expenditures, fiscal policies and other allied parameters. It throws light on the prominent Government initiatives in these areas to reveal the new normal in the landscape of Indian economic growth.

Keywords: New Normal; Economic Landscape; Dynamics of India; Government initiatives

Introduction

The Indian economy has carried the momentum from FY23 into the current fiscal year. The Indian economy had grown by 7.2 per cent in FY23. Rural demand is also on the path to recovery, witnessing robust growth in two and three-wheeler sales. GST collections and the Purchasing Managers' Index for the manufacturing and services sectors continue to expand. Globally, the upswing in economic activity observed in the first quarter of 2023 has persisted into the second quarter, as evident in the expansion of the global Composite PMI. However, factors that may constrain the pace of growth include an escalation of geopolitical stress, increased volatility in global financial systems, sharp corrections in global stock markets, a significant impact of recent storms, and modest trade activity and FDI inflows due to weak global demand. If these challenges deepen and hinder growth in subsequent quarters, the external sector could challenge India's growth outlook for FY24.

The debt leverage is now following a glide path and is expected to become more pronounced as the economy continues to outperform global challenges and grow above prior rates. Given its general government debt and deficit, India's prudent fiscal approach can serve as budgetary stimulus through its impact on credit rating and the reduced cost of borrowing. Global uncertainties prompted foreign portfolio investors (FPI) to withdraw capital from EMEs, including India. However, FPI outflows from India in the first quarter of FY23 reversed to inflows from the second quarter onwards, experiencing a mild outflow in the fourth quarter due to adverse developments in the US and European banking sectors. Overall, FPI outflows narrowed in FY23, indicating increased confidence in India's economic credentials.

Various ministries in the union government have adopted innovative approaches to infrastructure development. The Ministry of Railways and the Ministry of Road Transport & Highways are working on projects to enhance road connectivity, linking various goods sheds. Additionally, many critical infrastructure gaps in sectors like coal, steel, fertilizer, ports, and food and public distribution have been identified for prompt action. To deploy the advanced 5G network, the Department of Telecom and State Governments are leveraging the National Master Plan to identify suitable street furniture for installing 5G cells. Substantial progress has also been made in social sector planning, with social sector ministries/departments being on boarded under the scheme.

To counteract the inflationary repercussions of geopolitical shocks, the Indian government implemented a series of measures, encompassing duty reductions and increased subsidies. The aim was to mitigate the impact of soaring prices on vulnerable groups and businesses, providing them with a safety net. Simultaneously, the government ensured that the augmented capital expenditure outlay remained intact, crucial for imparting an investment impetus to the economy. In FY23, fiscal prudence was maintained by rationalizing revenue expenditure, contributing to a reduction in the Union Government's fiscal deficit. This budgetary consolidation aligns the Union Government with the glide path towards achieving a fiscal deficit target of 4.5% by 2025-26.

Ongoing negotiations for trade agreements with advanced economies, the formulation of a new foreign trade policy, the digital transformation in payments and trade facilitation, trade promotion initiatives, enhanced trade credit, and the promotion of districts as export hubs collectively anticipate an expansion in India's global market share for exports. Forecasts indicate that commodity prices, particularly those related to energy commodities, are poised to remain relatively low. This bodes well for India's merchandise trade deficit, helping to keep it narrow. Although the impact of deepening recessionary tendencies on services trade and remittance growth remains uncertain, their levels are anticipated to remain generally stable. Against this backdrop, India's current account deficit is expected to sustain its narrow trajectory throughout FY24.

Global fiscal policies have undergone significant shifts, responding to the challenges of the pandemic and geopolitical events. Initially, the pandemic-induced fiscal expansion aimed at reviving economies by bolstering demand. However, as the global economy rebounded, several governments, facing budgetary constraints, began efforts towards fiscal consolidation. These consolidation endeavours, however, were short-lived, halting in response to the new challenge of escalating prices following the general conflicts around the globe. The outbreaks necessitated additional spending on welfare measures and tax rate cuts, further limiting fiscal flexibility as economies were still recovering and contending with central banks' monetary tightening measures to curb inflation.

The government employed several fiscal measures to alleviate the impact of inflationary pressures. Excise duties on petrol and diesel were continually reduced. Duty reductions were also implemented for inputs such as naphtha, propylene oxide, and polymers of vinyl chloride. Customs duties on essential chemicals like methanol, acetic acid, and heavy feedstocks for petroleum refining were reduced, and customs duty on imported cotton was waived in April 2023. In response to rising fertilizer prices, the government increased the outlay on the fertilizer subsidy. CGA data indicates that the Urea and nutrient-based fertilizer subsidies for FY23 exceeded the revised Budget 2023-24 estimates by 7% and 21%, respectively.

Government Measures on Inflation Control

India's inflation in July came to 7.44%, one of the highest in recent months, violating the Reserve Bank of India's upper level of tolerance, 6% for the first time from February of 2023, as prices of food and vegetable increased in the country. The central bank lowers the commercial banks' lending ability by increasing the CRR in an effort to contain inflation. As a result, there is less money moving from commercial banks to the general populace. In the process, it stops price increases to the extent that bank credits to the public are to blame. Using a range of monetary policy instruments, including the Reverse Repo Rate, Repo Rate, Open Market Operations, Bank Rate, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Liquidity Adjustment Facility (LAF), and Market Stabilisation Scheme, the RBI manages inflation and deflation.

Interest rate changes are the main tool used by monetary policy to manage inflation. However, fiscal policy is one way that governments can help combat inflation. To assist lower inflation, governments might raise taxes and cut spending. Managing the amount of money in the economy is one of the frequently employed strategies to reduce inflation. Prices will drop if the government reduces the amount of money available because less demand would exist. As a result, the government may choose to stop the use of specific coins and paper money. When prices grow, a given amount of money can purchase fewer goods and services. The general public's cost of living is impacted by this loss of purchasing power, which eventually causes economic growth to slow down.

Financial Moves by RBI

In FY23, the Reserve Bank of India (RBI) maintained consistent pressure on monetary tightening, initially observed in lending rates. However, as most savings avenues experienced lower rates amid the low-interest environment from 2020 to 2022, motivating individuals to shift their financial savings to stock markets, banks faced competitive pressures, compelling them to raise deposit rates. The simultaneous increase in lending and deposit rates enhances the efficacy of monetary policy. It restrains spending by raising the lending rate while curbing expenditure by attracting savings through increasing deposit rates. RBI implemented various monetary policy measures to control inflation.

The Monetary Policy Committee (MPC) eliminated the word "accommodative" from the forward guidance, marking the commencement of the monetary tightening cycle. Lending and deposit rates of Scheduled Commercial Banks (SCBs) have increased in harmony with policy rate changes, reflecting a moderation in surplus liquidity in the banking system and improved transmission of monetary policy. In FY23, the Weighted Average Domestic Term Deposit Rate (WADTDR) of SCBs on Outstanding Rupee Term Deposits increased by 113 bps compared to a 100 bps rise in the Weighted Average Lending Rate (WALR) on Outstanding Rupee Loans. This signifies that for every percentage increase in the repo rate, deposit rates have risen by 45 bps, exceeding the 40 bps increase in lending rates.

Despite the repo rate transmission of about 40-45 per cent, credit disbursement witnessed significant growth in FY23 due to sustained consumption demand and induced investment demand, driven by a positive outlook, maintaining high credit demand. This enhanced banks' profitability, whose bottom lines had already improved with the decreasing Gross Non-Performing Assets (GNPA) ratio. The Net Interest Margin, an indicator of a bank's profitability, expanded; subsequently, though remaining high, it started declining as banks were compelled to raise deposit rates swiftly to mobilize deposits for

credit creation. Other parameters of bank profitability also indicate substantial improvement, as seen in their balance sheets in FY23, partly attributed to the ongoing recovery in economic activities despite high inflation. Return on Equity (RoE) and Return on Assets (RoA) for SCBs exhibited notable increases during the year. Furthermore, overall bank credit grew by 15 per cent in FY23 annually, with non-food credit growing at 15.4 per cent. Concurrently, GNPA as a proportion of advances followed a declining trend and stood at 3.9 per cent in March 2023, primarily supported by various macroprudential policy measures, a lower slippage ratio and swift recovery of bad loans under the Insolvency and Bankruptcy Code (IBC).

Foreign Portfolio Investments Scenario

Foreign Portfolio Investments (FPI) movement in India's equity and debt markets has been volatile, primarily influenced by changes in Fed rates. An increase in Fed rates prompts FPI outflows, tightening rupee liquidity, thereby reinforcing monetary tightening. Conversely, when the Fed pauses rate increases, FPI flows back, increasing rupee liquidity and easing monetary tightening. However, the gradual increase in RBI's repo rates absorbed the tightening impact of outflowing FPI on rupee liquidity. As expected, the increase in RBI's repo rate since the onset of the pandemic is less than the repo rate hikes of the US Fed, as well as the average hikes for both advanced and emerging market economies, indicating India's ability to manage the impact of FPI outflows more effectively this time.

The impact of repo rate hikes, among other factors, on inflation in India has been notably satisfactory. Despite lower increases in policy rates, India's inflation rate remained within its target range. In contrast, the inflation rates of Emerging Market Economies (EMEs) and Advanced Economies (AEs) stayed considerably above their acceptable ranges, even with sharper policy rate hikes in these countries. This can be attributed significantly to India's calibrated fiscal stimulus during the pandemic compared to the significant budgetary expansions undertaken by other nations.

Foreign Portfolio Investment (FPI) flows are expected to become less volatile, given the Federal Reserve's indication of a prolonged pause in rate hikes. The Reserve Bank of India (RBI) has also halted the increase in the policy rate in its last two Monetary Policy Committee (MPC) meetings as retail inflation, along with core inflation, has started to decline. The monetary stance is likely to remain stable in the foreseeable future. However, potential inflationary pressures may arise on domestic food prices, and there could be a delay in the pass-through of the Wholesale Price Index (WPI) into retail output. Nevertheless, the lagged effect of monetary policy on credit demand might mitigate the emerging rekindling of inflation.

Situation of Global Trade

Monetary tightening began to depress demand and is expected to continue in subsequent quarters with anticipated further policy rate hikes to counter persistently high global inflation.

India's merchandise exports mirrored the global trend before the impact of the European war set in. Despite moderation, exports remained resilient in FY23. The volume growth of India's imports continued to be high through FY23, supporting sustained economic activity. The trade deficit, however, improved in the second half of FY23 as international commodity prices fell, lowering import costs. Merchandise exports grew by 6 per cent on an annual

basis. A detailed analysis of export data for FY23 reveals notable strides in exports of electronic items, petroleum products, optical and medical surgical instruments, agriculture and allied products, leather and leather manufactured products, machinery, and transport equipment. Emerging commodity classes witnessed substantial growth, attributed to government policy support aimed at diversifying the export basket. Additionally, India's food diplomacy increased demand for Indian agricultural commodities in food-importing countries.

The recovery in India's industrial activity in FY23 drove the increase in imports, particularly energy products like crude petroleum and coal. Despite higher energy imports in the first two quarters due to elevated energy prices, the last two quarters saw a decline in energy prices, resulting in decreased energy imports. India's robust recovery amid high energy prices is evident in non-oil, non-gold, and silver imports growing YoY by 15.4 per cent, while imports of crude oil and petroleum products grew faster at 29.1 per cent, reflecting both volume growth and rising energy costs. Consequently, India's merchandise trade deficit widened to 8.5 per cent of GDP in FY23.

In contrast to the moderation observed in merchandise exports, services exports experienced a surge in FY23. The robust performance of services exports reflects India's rapid adaptation to a contactless world through IT, allowing highly skilled professionals to provide services online globally. A complete services trade surplus and a moderating merchandise trade deficit reduced India's overall trade deficit in FY23. The services trade balance showed improvement primarily due to enhanced services exports, growing by a substantial 33.3 per cent YoY in FY23. The unbundling of services, technological advancements, and increased demand for digitally deliverable services facilitated the growth of India's services sector. This is evidenced by the proliferation of Global Capability Centres (GCC) in India, where the highly skilled workforce provides back-end support to multinational companies. Additionally, India benefited from the rising demand for digitally deliverable services, resulting in a services trade surplus of 4.2 per cent of GDP in FY23.

Condition of Current Account Deficit

The dynamics in merchandise and services trade played a pivotal role in swiftly narrowing the current account deficit (CAD) towards the end of FY23, reinforcing macroeconomic balance. Remittances emerged as a critical factor in limiting the downside to the CAD in FY23. Despite the potential slowdown in global growth, remittance growth may continue due to declining global energy prices and the sustained performance of services exports, further narrowing the CAD in FY24. The second half of FY23 witnessed a reduction in the merchandise trade deficit and a robust performance in services exports, leading to a decline in the CAD from 3.6 per cent of GDP in Q2 FY23 to 0.2 per cent in Q4 FY23. The overall CAD for FY23 stood at 2.0 per cent, higher than the previous year's 1.2 per cent, primarily influenced by elevated commodity prices in the year's first half. Substantial growth in remittances also contributed significantly to the CAD's narrowing.

A sustainable CAD is contingent on average capital inflows. In previous years, capital flows to Emerging Market Economies (EMEs) remained subdued and volatile due to rising geopolitical uncertainties and weakened global economic activity. However, India continued to experience a net Foreign Direct Investment (FDI) inflow, unlike most EMEs and Advanced Economies (AEs) facing net FDI outflows. This contrasting capital flow scenario is attributed to India's strong macroeconomic fundamentals and an investor-friendly

environment. Despite the global slowdown in investment flows to EMEs, India's net FDI inflows decreased in FY23.

Inflationary pressures and tighter monetary policies abroad impacted Foreign Direct Investment (FDI) flows to India. Gross FDI is moderated by 16% YoY in FY23. Net FDI declined by 27.4 per cent in FY23 YoY. Geopolitical considerations influenced FDI flows, with investors engaging in "friend shoring" by investing in countries geopolitically aligned with each other, resulting in a fragmentation of FDI flows globally, as indicated in the IMF's World Economic Outlook (April 2023). Thus, India must closely monitor FDI data and implement measures to facilitate FDI inflows, including addressing last-mile infrastructure issues, ensuring labour availability, and fostering significant capacity creation. This policy focus will likely demand increased attention from India in the coming months and years.

FPI became net sellers in Q1 FY23, with an outflow of US\$ 14.3 billion. However, the second and third quarters of FY23 saw an inflow of US\$ 11.2 billion, with Q4 observing a smaller flow of US\$ 1.2 billion. On an annual basis, net FPI outflows was US\$ 5.5 billion in FY23. The trend until mid-June 2023 suggests that FPIs find Indian markets attractive despite tighter global financial conditions. In FY23, the trajectory of the Indian rupee was influenced by various factors, including elevated Brent oil prices, substantial import dependence, and capital outflows resulting from tightened global financial conditions. Despite these challenges, the performance of the rupee exhibited resilience, showcasing an orderly adjustment with lower volatility than many other Emerging Market Economies (EMEs) and Advanced Economies (AEs). The rupee faced pressure during the year's initial half but rebounded later in the second half, maintaining stability within a narrow range. Factors contributing to the rupee recovery included the softening of Brent oil prices and an improvement in the current account balance.

The Indian rupee experienced a depreciation of 8.5 per cent in FY23. However, the daily volatility in INR remained at 0.3 per cent, significantly lower than other currencies of EMEs and AEs, such as the Brazilian Real (1.1 per cent), South African Rand (1.0 per cent), Japanese Yen (0.8 per cent), Euro (0.6 per cent), Chinese Yuan (0.4 per cent), and Indonesian Rupiah (0.4 per cent). The 40-currency real effective exchange rate (REER) also depreciated during the year, with the rupee recovering and appreciating by 0.7 per cent in Q4 of FY23 after declining for three preceding quarters.

Forex reserve holdings declined in the first half of FY23, primarily attributed to financing a widening Current Account Deficit (CAD) and increasing capital outflows. Subsequent developments, including narrowing CAD and Foreign Portfolio Investment (FPI) inflows, contributed to the rebuilding of reserves. FY23 concluded with India becoming the world's 5th largest forex reserve holder, with reserves sufficient to cover ten months of imports, providing a comfortable cushion against external shocks. The ongoing trend of a narrowed CAD and increased FPI inflows, facilitated by the non-aggressive stance of the Federal Reserve, is expected to enhance forex reserves further.

Potential downside risks to India's exports include the European Union's implementation of the Carbon Border Adjustment Mechanism (CBAM), requiring the reporting of carbon content in exports to the EU starting from October 1, 2023. Other uncertainties include continued concerns about the Russia-Ukraine conflict and polarization risks arising from the prevailing geopolitical situation, possibly leading to adopting trade-restrictive measures. Additionally, as highlighted by IMF research, foreign direct investment flows may be influenced more by political distance than geographical distance.

Mitigating the potential downside risks is the observed alleviation of supply chain disruptions, evidenced by the positive trajectory of globalized container trade tracked by the Kiel Trade Indicator. Additionally, the trend of moderating inflation worldwide is expected to afford policymakers some flexibility to either pause their monetary policy tightening or implement a slower pace and magnitude of tightening.

The government's consistent revenue buoyancy played a pivotal role in achieving fiscal targets. Strong revenue receipts in FY23 were facilitated by better-than-expected economic performance and robust growth in direct taxes and Goods and Services Tax (GST). Despite reducing corporate tax rates, corporate tax collections remained strong, driven by increased profits and economic activity. The GST system demonstrated stability, becoming a significant revenue source for central and state governments. Customs duty collections also showed decent growth, notwithstanding cuts in duties to counter inflation in various sectors. Non-tax revenue receipts for FY23 exceeded revised estimates, propelled by higher interest receipts and improved performance of public sector enterprises, leading to increased distribution of dividends and profits. Gross tax revenue witnessed a YoY growth of 12.7% in FY23, fuelled by robust expansion in direct taxes and GST. Direct taxes, including income and corporate tax, increased by 20% and 16%, respectively. Gross GST collections grew by 21.4%, with average monthly collections of ₹1.5 lakh crore in FY23.

Government's Capital Expenditures

On the expenditure front, geopolitical shocks increased the government's revenue expenditure requirements in FY23, primarily due to a surge in subsidy expenditure amid rising international prices of food, fertilizers, and fuel. However, anticipating an easing supply chain disruptions, the government has projected a lower subsidy expenditure for FY24. The total subsidy expenditure rose to 15.4% of revenue expenditure in FY23, surpassing the 13.9% registered in the previous year. The budget estimates project a decline in subsidy expenditure to 10.7% in FY24, driven by an anticipated decrease in international prices of food, fertilizers, and fuel.

In FY23, despite heightened subsidy requirements, the Central Government maintained a robust focus on capital expenditure (capex), accomplishing 98% of the budgeted target. The buoyancy in revenue played a crucial role in supporting capital outlay, while the rationalization of revenue expenditure safeguarded capital outlay within the stipulated fiscal deficit. Central government capex saw a YoY growth of 24.3% in FY23, surpassing the average growth of 7.8% observed in the pre-pandemic years. As a percentage of GDP, Union Government Capex reached 2.7%, constituting 21.3% of revenue expenditure in FY23, compared to 1.7% and 14.3% in FY20. In the Union Budget FY24, the capital investment outlay increased by 33%.

The Central Government continued incentivizing states for complementary policy actions to boost infrastructure investment. Grants for capital works and 50-year interest-free capex loans were extended to state governments in FY23. The government's focus on capex also spurred its departmental arms and Central Public Sector Enterprises (CPSEs) to accelerate their capital expenditure, with CPSEs achieving over 100% of their full-year revised target of Rs 6.5 lakh crore for capex in FY23. To encourage states to enhance capex, the union government provided 50-year interest-free loans to state governments under the 'Scheme for Special Assistance to States for Capital Investment.' In FY24, the allocation under the scheme has been increased to ₹1.3 lakh crore to bolster State Capex further plans.

The government's emphasis on capital expenditure has recently been crucial, particularly as the private sector exhibited risk aversion due to its challenges in the balance sheet. However, recent evidence indicates a resurgence in private sector investments, influenced partly by the substantial scaling up of government capex. Initiatives like the National Infrastructure Pipeline, Bharatmala, Sagarmala, and PM GatiShakti have facilitated private sector involvement in major infrastructure projects. Focusing on renewable energy and digitalization has opened new avenues for private sector participation. Indicators suggest a positive trend in private investments, supported by a rebound in capacity utilization in the manufacturing sector and strong demand in the domestic economy.

According to the CMIE Capex Database, new private investment proposals surged by 78% in FY23 compared to last year. Accurate sector indicators, such as capital goods production (IIP – capital goods) and the import of capital goods, witnessed robust double-digit YoY growth during FY23. As per Axis Bank Research, financial data for a consistent set of listed companies indicates broad-based private capex growth of 22% in FY23. The RBI's Order Books, Inventories, and Capacity Utilization Survey highlights an increase in capacity utilization for the manufacturing sector. This, coupled with double-digit growth in non-food bank credit in FY23, suggests a positive inclination of the private sector to embark on new investments.

Conclusion

Despite facing unprecedented global challenges in recent years, compounded by issues in the balance sheets of Indian banking and non-financial corporate sectors, macroeconomic management has been exceptional. It has significantly enhanced India's macroeconomic stability and positioned the country on a faster recovery trajectory than many others. The government's ability to keep the fiscal deficit or GDP ratio within the budgeted target will contribute to a quicker decline in the debt ratio, reinforcing its case for an improved credit rating and lower interest rates. Investment in supply-side infrastructure raises the prospect that India can sustain economic growth for longer durations than in several decades. Robust balance sheets and advancements in digital technologies may lead to improved credit decisions, allowing India's financial cycle to endure for extended periods before encountering challenges related to bad debts. Consequently, India seems well-positioned to sustain its growth more resiliently. However, this is not a time for complacency or the risk of diluting the hard-earned economic stability. Patience is crucial, as the rising tide appears to be lifting all boats, as it has begun to do so. The article has thus highlighted important areas of concern in the Indian economy, the crucial measures taken by the Government and the major changes that has occurred to create and maintain the new normal.

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AGRICULTURE'S PLACE IN INDIA'S AIM FOR A \$5 TRILLION ECONOMY

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Abstract:

Agriculture plays a crucial role in India's objective of achieving a \$5 trillion GDP. More than two-thirds of India's labor force is engaged in agriculture, a sector that makes up only 20.19% of the country's GDP but still makes a substantial contribution to its income. As one of the key sectors contributing to the achievement of the \$5 trillion economic target, this paper explores the crucial role of the agriculture sector in attaining this goal. Agriculture in India plays a pivotal role in driving development, ensuring food and nutrition security, and alleviating poverty. Proposed measures to achieve the status of a \$5 trillion economy include strengthening integrated public transportation initiatives and increasing public funding in the agriculture sector. Moreover, it is expected that careful planning and implementation of agricultural components in the Indian context will enhance GDP and support government initiatives, ultimately contributing to the achievement of the \$5 trillion economic status. The active participation of farmers and rural communities is crucial in attaining the objective of a 5 trillion dollar economy within a span of 5 years. Furthermore, there is a suggestion to implement legislation that supports the export of agricultural products in order to accelerate India's agricultural growth rate. We previously regarded our farmers as suppliers, but now we must perceive them as exporters. There are numerous opportunities for exporting various products such as food grains, vegetables, fruits, and honey. The significance of agriculture in India's journey towards achieving a \$5 trillion economy cannot be overstated.

Keywords: \$5 trillion economy, agricultural sector, GDP, Agriculture

Introduction

Agricultural work constitutes the majority of India's workforce. Agriculture is the primary occupation of approximately 70 percent of the rural population in India. Throughout history and into the present day, agriculture has played an essential part in the Indian economy. This is due to the fact that the majority of India's industries rely on agriculture as their primary source of raw materials. Agriculture is regarded as the "Back Bone" of the Indian economy due to the fact that it contributes twenty percent to the gross domestic product. A significant number of industries across the nation are currently being influenced by agriculture. Agriculture plays a significant role in the export of commodities and contributing to the generation of valuable foreign exchange. This is primarily due to the fact that agriculture is the primary source of fruits, vegetables, nuts, spices, rice, and various processed milk products, among other things. In today's world, where the population is growing at an alarming rate, agriculture faces a significant challenge in terms of providing food for this growing population. The agricultural sector has made significant efforts to address this challenge by introducing hybrids, introducing new production methods, and cultivating varieties that are both resistant to disease and capable of rapid growth. As a result of advancements in production and processing technology, India is now able to increase its exports to a number of different countries. Agriculture, which is the industry that operates continuously 24 hours a day, seven days a week, contributes some profit to the Indian economy. Agriculture in India allows for the cultivation of a wide variety of crops,

fruits, nuts, spices, and other items. This is made possible by the Indian season, which also contributes significantly to food production. The Indian economy is currently ranked as the fifth largest economy in the world, making it one of the major economies that is expanding at the fastest rate. The projections of growth for India over the medium term continue to be encouraging and optimistic. India's potential to achieve a five trillion dollar economy by the year 2025 is reflected in the fundamental strengths that the country possesses. The sale of a variety of agricultural products that are exported in order to generate foreign currency. As a result, agriculture is a significant contributor to the Indian economy.

Research Gap

The declining trend in rural female labor force participation is a significant factor hindering India's goal of achieving a \$5 trillion economy, with agriculture playing a crucial role. This disparity is noteworthy as it underscores the gender gap in labor force participation, particularly in the agricultural sector. Gaining insight into the reasons and consequences of this decrease is crucial for developing comprehensive strategies that can effectively utilize the complete capabilities of the agricultural workforce.

Objective of the Study

Investigate the impact of gender disparities in labor force participation on agricultural productivity, considering factors such as access to resources, decision-making power, and division of labor. Analyze the impact of recent agricultural reforms, such as changes in agricultural laws and policies, on the sector's contribution to the economy.

Review of Literature

Many studies would likely begin by examining the historical role of agriculture in India's economy, tracing its evolution from a predominantly agrarian economy to its current status as a major contributor to GDP and employment. Economic Reforms and Agricultural Transformation: The review would likely discuss how economic reforms, particularly those initiated in the 1990s, have impacted Indian agriculture. This could include analyses of trade liberalization, market reforms, and their effects on agricultural productivity, market access, and rural livelihoods. A significant portion of the literature would likely focus on the challenges faced by Indian agriculture, such as low productivity, land fragmentation, water scarcity, and market inefficiencies. The review would also highlight the opportunities for growth, including the potential for value addition, diversification into high-value crops, and export promotion.

Government Policies and Initiatives

Studies would likely analyze various government policies and initiatives aimed at promoting agricultural growth, improving farmers' incomes, and enhancing the sector's contribution to the economy. This could include discussions on minimum support prices, agricultural subsidies, and investments in agricultural infrastructure.

Important Aspects of Indian Agriculture

There are several important aspects of Indian agriculture are crucial in the context of India's aim for a \$5 trillion economy:

- **Productivity Enhancement:** Increasing agricultural productivity is essential for meeting the growing demand for food and other agricultural products in a populous

country like India. This includes adopting modern farming techniques, improving irrigation facilities, and promoting the use of high-yield crop varieties.

- **Diversification of Crops:** While India is known for its production of staples like rice and wheat, diversifying into high-value crops such as fruits, vegetables, and spices can significantly boost farmers' incomes and agricultural exports.
- **Market Access and Infrastructure:** Improving market access for farmers, including better transportation and storage facilities, can reduce post-harvest losses and ensure fair prices for agricultural produce, thus increasing farmers' income.
- **Sustainability and Climate Resilience:** Given the challenges posed by climate change, promoting sustainable agricultural practices and resilient farming techniques is crucial for the long-term viability of Indian agriculture.
- **Technology Adoption:** Embracing agricultural technologies such as precision farming, IoT (Internet of Things) applications, and digital platforms for market access can enhance efficiency and productivity in the sector.
- **Smallholder Farmers' Welfare:** Smallholder farmers form a significant portion of the agricultural workforce in India. Initiatives aimed at improving their access to credit, technology, and markets can have a significant impact on overall agricultural growth.
- **Water Management:** Efficient water management practices, including the adoption of drip irrigation and rainwater harvesting, are critical for sustainable agricultural growth, especially in water-stressed regions of the country.
- **Agricultural Research and Extension:** Investing in agricultural research and extension services can lead to the development of innovative farming techniques, crop varieties resistant to pests and diseases, and better dissemination of knowledge among farmers.
- **Policy Reforms:** Implementing policy reforms that address issues such as land tenure, agricultural subsidies, and market regulations can create an enabling environment for agricultural growth and investment.
- **Skill Development:** Enhancing the skills of farmers and agricultural workers through training programs can improve their productivity and contribute to overall sectoral growth.

Indian Economy Projections and Performance

India's economy was forecasted to sustain its growth trajectory, albeit with certain obstacles. Agriculture is a crucial driver of India's economy, employing a substantial portion of the population and making a significant contribution to the country's GDP. Nevertheless, its economic significance has diminished over time due to the expansion of the services and industrial sectors.

In order to attain a \$5 trillion economy, India must prioritize several factors such as augmenting agricultural productivity, enhancing infrastructure, facilitating market access for farmers, and fostering agricultural exports. The government has been enacting reforms to tackle these challenges, including the implementation of new farm laws designed to liberalize agricultural markets. Nevertheless, these reforms have encountered resistance and have been a subject of contention.

Undoubtedly, agriculture continues to be a crucial sector for India's economy, and its performance will have a substantial impact on the country's endeavors to attain its economic

objectives. However, attaining a \$5 trillion economy necessitates the implementation of extensive reforms and strategies that encompass all sectors of the economy, including agriculture.

Issues in Agriculture that Require Quick Response

Here few urgent issues in agriculture need to be addressed to ensure its contribution to India's aim for a \$5 trillion economy:

- **Water Scarcity and Irrigation:** India's agriculture is heavily reliant on monsoon rains, leading to water scarcity issues in many regions. Implementing efficient irrigation systems and water management practices is crucial for sustainable agricultural growth.
- **Climate Change Resilience:** Climate change poses significant challenges to agriculture, including unpredictable weather patterns, increased pests and diseases, and water stress. Developing climate-resilient crops and farming practices is essential for adapting to these changes.
- **Soil Health and Degradation:** Soil health is crucial for agricultural productivity, but soil degradation due to erosion, nutrient depletion, and salinity is a growing concern. Implementing soil conservation and rejuvenation measures is critical for sustainable agriculture.
- **Market Access and Price Volatility:** Farmers often face challenges in accessing markets and obtaining fair prices for their produce due to middlemen and price volatility. Strengthening market infrastructure and promoting farmer-producer organizations can address these issues.
- **Technology Adoption and Digital Divide:** While technology can improve agricultural productivity, there is a digital divide in rural areas, limiting access to information and resources. Bridging this gap and promoting digital literacy among farmers is essential.
- **Sustainable Intensification:** Balancing the need for increased agricultural production with environmental sustainability is a key challenge. Promoting sustainable intensification practices that enhance productivity while minimizing environmental impact is crucial.
- **Farmers' Income and Welfare:** Despite being a significant contributor to the economy, many farmers in India face low incomes and financial distress. Addressing issues related to income security, social security, and rural infrastructure is essential for improving farmers' welfare.
- **Land Fragmentation and Tenure Issues:** Land fragmentation and unclear land tenure systems can hinder agricultural productivity and investment. Implementing land reforms and improving land records can address these challenges.

The Indian Government Recently Proposed Economic Measures

The Indian government had proposed several economic measures to enhance agriculture's role in achieving a \$5 trillion economy. These measures aimed to address various challenges faced by the agricultural sector and promote its growth. Some of the key proposals and measures included:

- **Farm Bills:** The government had passed three controversial farm bills in September 2020 aimed at liberalizing agricultural markets. These bills sought to provide farmers

with more options to sell their produce and aimed to create a more competitive and efficient agricultural market.

- **Agricultural Infrastructure Fund:** The government had announced the creation of a Rs 1 lakh crore (approximately \$13.3 billion) Agricultural Infrastructure Fund to support the development of infrastructure in the agricultural sector. This fund aimed to improve logistics, storage, and processing facilities.
- **PM-KISAN Scheme:** The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme, which provides direct income support to farmers, was expanded. Under this scheme, eligible farmers receive a fixed income support of Rs 6,000 (approximately \$80) per year in three equal installments.
- **Agricultural Export Promotion:** The government had focused on promoting agricultural exports to increase farmers' income and boost the country's foreign exchange reserves. Initiatives aimed at streamlining export procedures and improving market access for agricultural products were emphasized.
- **Agri-Infra Fund:** The government had announced a Rs 1 lakh crore (approximately \$13.3 billion) Agriculture Infrastructure Fund to provide financial support for setting up cold chains, post-harvest management infrastructure, and other facilities to promote agri-business in the country.
- **Agricultural Reforms:** The government had emphasized the need for agricultural reforms to enhance productivity, reduce wastage, and improve farmers' income. This included measures to promote contract farming, direct marketing, and agri-business.
- **Crop Diversification:** The government had encouraged farmers to diversify into high-value crops, fruits, and vegetables to increase their income and reduce dependence on traditional crops like rice and wheat

Major Findings

The agriculture has a significant role in helping the country achieve its goal of becoming a \$5 trillion economy. Agriculture contributes around 14-16% to the Indian GDP and \$400 billion to the Indian economy, which is second largest after China. With India's dual objectives of becoming an economic superpower and doubling farmer's incomes by 2022-23, the agricultural sector needs to play a decisive role in the coming years. For this, the government is focusing on formulating a cash crop and export centric farming system.

To achieve the \$5 trillion ambitious target, the agricultural sector should contribute \$1 trillion to India's GDP by 2025. Smart agriculture is crucial to sustain our products in the international market place to achieve \$100 million in agri-export. The government recently reported that spice production had crossed 2.5 million tons and their export has risen from \$20 million to \$26 million. Aggrotech start-ups can play a significant role in this endeavor if the bottlenecks are removed within the least possible time.

The labour and agricultural reforms will help increase growth and return in the agricultural and manufacturing sectors. Increasing agricultural productivity would significantly increase the sector's overall production growth. An increase in agricultural exports would enhance the agricultural sectors' overall income.

The government has made arrangements so that farmers can sell their products at any e-market across the country through the e-NAM network. With the Pradhan Mantri Kisan Urja Suraksha evam Utthan (PM KUSUM) the farmers can become energy-producers and sell it to the grid. Promoting high-value agriculture and improving the productivity of major

crops would increase the value of agricultural output, thus making India achieve the \$5 trillion economy target before 2025.

Contributions of the Study

A thorough analysis of how agriculture fits into India's goal of becoming a \$5 trillion economy can offer important insights and direction to decision-makers, business leaders, and other stakeholders who are involved in determining the direction of Indian agriculture.

- **Policy Recommendations:** The study can provide evidence-based policy recommendations to the government on how to align agricultural policies with the goal of achieving a \$5 trillion economy. This can include suggestions for reforms, investment priorities, and strategies to boost agricultural productivity and income.
- **Identifying Challenges and Opportunities:** By analyzing the current state of Indian agriculture, the study can identify key challenges and opportunities that need to be addressed to enhance the sector's contribution to the economy. This can help policymakers prioritize interventions and investments.
- **Impact Assessment of Reforms:** If the study evaluates recent agricultural reforms or policies, it can provide an assessment of their impact on the sector's performance and their alignment with the broader economic goals of the country.
- **Economic Modeling and Projections:** Economic modeling can be used to project the potential impact of different scenarios on agricultural growth and its contribution to the \$5 trillion economy. This can help policymakers understand the trade-offs and make informed decisions.
- **Sustainability and Resilience:** The study can assess the sustainability and resilience of Indian agriculture in the context of the \$5 trillion economy goal, considering factors such as environmental impact, climate change resilience, and long-term viability.
- **Gender and Social Inclusion:** If the study includes a gender perspective, it can highlight the role of women in agriculture and propose measures to promote gender equality and social inclusion in the sector, aligning with broader development goals.
- **International Comparisons:** Comparative studies with other countries or regions can provide insights into best practices and lessons learned that can be applied to India's agricultural sector to accelerate its growth.
- **Stakeholder Engagement:** Engaging with various stakeholders, including farmers, agricultural industry representatives, and policymakers, can ensure that the study's findings and recommendations are grounded in the realities of the sector and are more likely to be adopted.

Limitations and Scope for Further Research

Agriculture's place in India's aim for a \$5 trillion economy can provide valuable insights, there are some limitations to consider. These limitations can also suggest areas for further research India's agricultural landscape is diverse, with varying agro-climatic conditions, cropping patterns, and socio-economic factors. A limitation of some studies is the inability to capture this complexity comprehensively. Further research can delve deeper into specific regions or crops to provide more nuanced insights. Evaluating the effectiveness of existing agricultural policies in contributing to the \$5 trillion economy goal is important. Future research can focus on evaluating policy outcomes and identifying areas for improvement

Future study can offer a more thorough understanding of agriculture's position in India's objectives for economic growth and help design efficient policies and strategies by examining these limits and these research areas.

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ECONOMIC MARVEL: INDIA'S JOURNEY TO THE PINNACLE OF GLOBAL PROSPERITY

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Abstract

This paper explores India's impressive economic journey, looking at its past, present, and future. India has been growing steadily, becoming the fourth-largest economy globally based on Purchasing Power Parity (PPP). The study predicts India might become the world's third-largest economy in the next forty years. It questions whether the current high GDP growth rate of over 7% is temporary or if India is heading for a lasting economic boom. The paper identifies four key factors, called "DIVIDENDS," driving India's growth: Demographic Dividend, Consumption Dividend, Knowledge Dividend, and Productivity Dividend. These, combined with the Reform Accelerator effect, contribute to India's economic success.

Key Words: *Demographic Dividend; Consumption Dividend; Knowledge Dividend; Productivity Dividend*

Introduction

Shaping the future is often described as the only way to envision it, echoing Gordon Gibbons' insight that "the winds and the tides always favour the ablest navigators." So, what does the future hold for India? Is the leadership leveraging the advantageous winds and supportive tides, symbolized by the winds of increased global integration ushering in new opportunities and the tide of a burgeoning BPO surge along with the momentum of the new ICE economy? Recognized for achieving the fastest growth among significant democracies over the last decade, India has maintained a growth rate of over 7% for four years in the 1990s, solidifying its position as the fourth-largest economy based on Purchasing Power Parity (PPP). India's past, present, and future trajectory unfolds as the tale of a slow-growing economy, initially at around 3.9% in the first 40 years of independence, transforming into the 12th largest economy in the 1990s. According to a recent Goldman Sachs report, "Over the next 50 years, Brazil, Russia, India, and China –the BRIC economies, could become a much larger force in the world economy," projecting India's potential emergence as the world's third-largest economy in the next four decades.

Even in the initial 50-year phase, gains were elusive as slow growth characterized the era, attributed to adopting a semi-socialist development model entailing excessive economic control and insufficient physical and social infrastructure. Nevertheless, significant achievements materialized, securing food security through the Green Revolution, establishing capital-intensive industries, initiating a Dairy revolution, addressing severe foreign exchange shortages, and establishing globally renowned educational centres such as the Indian Institutes of Technology (IIT), affording India a competitive edge on the global stage. In the 1990s, marked by an average growth of 5.5% and a per capita income rise of nearly 4%, the era witnessed progressive deregulation across all sectors, shaping the contemporary economic landscape. Looking ahead, questions arise about the sustainability of the current GDP growth rate, which has surpassed 7% in the current fiscal year. Is this surge a fleeting moment, or is the current enthusiasm for India enduring enough for a prolonged period? Is it destined to be an enduring Indian summer? The elevated growth

levels attained during the 1990s, culminating in the current fiscal year's unprecedented peak by historical standards, are expected to be upheld by four critical drivers referred to as "DIVIDENDS."

Demographic Dividend

Examining global demographic patterns reveals a notable trend: the median age of populations in OECD countries escalates swiftly. Despite potential gains in productivity or the implementation of more favourable immigration policies, both productivity and growth are poised to suffer unless there is sustained outsourcing of economic activities to regions where an abundant supply of skilled young human resources is available. In contrast, India is positioned to boast the highest number of individuals in the younger age group, with 700 million out of 1.1 billion people falling into this category, and this youth population is anticipated to endure until 2050. India is expected to witness an additional 47 million people in the working age group while numerous OECD countries, including France, grapple with workforce shortages. Additionally, India is on track to experience a favourable demographic bulge between 2010 and 2030. Unleashing the full potential of this opportunity necessitates fostering skills, fortifying the educational system, and implementing substantial reforms in human resource development.

Consumption Dividend

The consequential demographic profile, with 325 million people accounting for nearly 25% of the population by 2020 in the age group of 20–35, provides the advantage of a youthful working age group and a larger expanding market. Past international experiences suggest that this demographic composition will result in a higher savings rate and increased consumer spending. The national savings rate in East Asia experienced a notable surge to 30%, driven by the growth in their working-age population. India's savings rate is anticipated to follow a similar trajectory, rising from around 23%. This upward trend will also translate into a significant upswing in overall consumption. Even with a conservative 6% compounded annual growth based on PPP, the market size is projected to increase from approximately USD 1500 billion today to around USD 2700 billion by 2010 and USD 3400 billion by 2015.

Furthermore, at the projected 8% growth, the market size would be substantially higher. Another perspective reveals that the level of affluence in India is steadily increasing. Between 1995 and 2002, nearly 100 million people joined the consuming and affluent classes. Over the next five years, this growth is expected to be even more dramatic, with over 180 million people entering the consuming and wealthy classes. On average, 30–40 million people join the middle class annually, contributing significantly to spending on cell phones, televisions, scooters, motor cars, and credit goods, aligning with rising income levels. This surge in consumption is further supported by the accessibility of affordable consumer financing from the Indian banking system, with disbursements in the retail financial services market more than doubling over the last three years. The increased telephonic connectivity reaching rural India rapidly, coupled with initiatives to build dependable round-the-year rural roads, is expected to integrate rural India into the mainstream economy. Even with conservative growth assumptions, the size of the expanding market is staggering, equivalent to adding one France every 3 ½ years and one Australia every year. Therefore, the

demographic and consumption dividend is poised to synergize, emerging as two critical drivers of change and sustained growth.

Knowledge Dividend

It is widely acknowledged that India has swiftly emerged as the service hub of the world, leveraging its comparative factor advantage and the ability to ascend the value-added chain. The Indian pharmaceutical sector, notably, has garnered global acclaim for producing high-quality generic drugs and branded medicines at a fraction of the cost. Among software firms achieving Level V in the capability maturity model, 55% are Indian, showcasing the country's prowess. This is complemented by a significant cost advantage, where an Information Technology Engineer in the USA costs \$50,000 compared to a modest \$5,000 in India, and an MBA in the USA, priced at around \$80,000, is available for only \$7,500 in India. Adding to this advantage is India's upward movement in the value chain, having already established itself in transaction processing and now rapidly gaining ground in areas like Design and analysis, Research and development across various industries such as Information Technology, Pharmaceuticals, Educational services, Auto Engineering, Chemicals, and Financial Services. Moreover, India is competitive in offering services to customers visiting the country for health treatment, value-added services, or leisure tourism. Conservatively estimating, the impact of India becoming the global service centre is projected to contribute \$200 billion to the GDP and provide 40 million jobs (direct and indirect) by 2020.

India's knowledge capital has also sparked a resurgence in the manufacturing sector, evidenced by exports nearly tripling over the last decade. India has emerged as the global manufacturing destination for leading multinational corporations, particularly in auto components, pharmaceuticals, Agri-products, and more. Capitalizing on this strength and fostering a global mindset, companies in the service and manufacturing sectors have propelled themselves onto the international stage.

Productivity Dividend

Despite the high growth rates witnessed in the 1990s and the emerging growth trajectory, India's productivity remains relatively low compared to other major economies. Although there has been a significant increase in productivity over the past decade, ample room exists for rapid improvement. Even with modest capital investment, substantial gains in productivity are anticipated, driven by technological advancements and a favourable Incremental Capital Output Ratio (ICOR). This enhanced productivity, resulting from modest investments, is poised to profoundly and sustainably impact long-term growth rates. Additionally, it will substantially elevate India's share in global trade, which currently hovers just below 1%, constituting only 20% of the GDP. Given the modest levels, productivity and trade gains have considerable growth potential. These factors are expected to trigger multiplier effects on GDP growth, even with subtle changes.

Finally, there is the Reform Accelerator effect. This element is critical for realizing gains from the dividends because the gains may dissipate without the continuation of reform initiatives. The reforms can act as either an accelerator or a brake. A stable macroeconomic framework, characterized by high economic growth, a 7% growth rate in the agricultural sector, over 6% growth in the industrial sector, an 8% growth rate in the services sector, modest inflation, growing foreign exchange reserves, and a soft interest rate regime,

underscores the multiplier effect of reform initiatives across all sectors of the economy. Key macroeconomic indicators highlight the strength of the Indian economy.

Infrastructure is undergoing qualitative enhancements. The complete deregulation of the Telecom sector, marked by heightened competition among private players, a robust regulatory framework, and an ambitious program of public and private investment, is swiftly aimed at boosting tele density. This will make telephony, data transmission, and other associated value-added services available at internationally competitive costs. Telecom subscribers have surged from 9.8 million in FY 1995 to approximately 65.0 million, with nearly 2.0 million new subscribers added monthly. The subscriber base is anticipated to exceed 180.0 million by FY 2010.

An ambitious Roads program is currently in progress, including the Golden Quadrilateral of 5700 km connecting India's four major metropolitan cities (substantially completed) and a credible North-South East-West spine of 7600 km cutting across the country. Road connectivity is witnessing notable improvement with a substantial modernization and upgrading program for the existing 48,000 km National Highways and a significant rural roads initiative. A model concessionaire agreement, encouraging private investment through BOT, BOO, and various forms of financial engineering to attract private investment in operations and maintenance, provides impetus to growth and employment, along with the multiplier benefits of a more integrated and expansive common market.

Power sector reforms have overcome previous setbacks, with the new Electricity Bill of 2003 effectively deregulating generation, transmission, and distribution. An Accelerated Power Development Reform initiative catalyses investment in distribution, laying the foundation for securing significant investments to meet energy needs efficiently and affordably. Increased privatization of Port activities has significantly reduced turnaround time from 10 to 5 days. Newer Ports are being developed on corporate principles, and further reforms are pending legislative approval to convert Port Trusts into corporate entities, sustaining the upward trajectory of export growth.

Civil Aviation reform is underway, with Parliament enacting the privatization of Airports, allowing private investment to upgrade major airports and greenfield airport projects. The development of two greenfield private airports in Bangalore and Hyderabad has already been awarded to the private sector. The upcoming Civil Aviation policy is expected to deregulate the industry substantially, and the recent announcement by the Prime Minister regarding an Open Skies Policy with ASEAN countries promises significant multiplier effects through easier and speedier connectivity.

A major Railway upgrade program is reshaping India's Railway network, improving safety standards, introducing high-speed Rail connectivity in dense corridors, progressively reducing the distortionary Tariff regime by making freight movement more affordable, and rationalizing the profile of new Railway projects. This involves establishing a separate company for the Indian Railways and forming special-purpose vehicles in collaboration with the private sector to execute projects.

A shift towards total deregulation of the external trade sector and eliminating all quantitative restrictions are underway. This has led to a significant reduction in import tariffs, with a straightforward program to align with tariffs in other regions. A new initiative for a Free Trade Agreement with neighbouring countries and ASEAN neighbours aims to foster closer regional integration. Banking and Financial reforms have seen banks substantially complying with BASEL-II norms, significantly reducing non-performing assets.

Conclusion

In conclusion, India's economic journey looks promising for big growth. The advantage of having a young population, called the Demographic Dividend, is great. But to make the most of it, we need to invest in education and skills. The Consumption Dividend, fuelled by a growing middle class, means our market is getting bigger. India becoming a global service hub and growing in manufacturing brings the Knowledge Dividend, promising more jobs and economic growth. Even though there are challenges in productivity, using new technology and smart investments can help us grow more. The Reform Accelerator effect, seen in positive economic signs and better infrastructure, speeds up our growth. To sum it up, India's economic path looks good, making us a major player in the world's economy.

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INFRASTRUCTURE DEVELOPMENT AND ECONOMIC GROWTH IN INDIA

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Abstract

This paper critically reviews research on the relationship between infrastructure development and economic growth in India, a rapidly emerging economy with a burgeoning population and dynamic market potential. Historically, India's infrastructure landscape has been characterized by disparities, with vast sectors underdeveloped, particularly in rural areas. However, recent policy initiatives and foreign investments have spurred infrastructural projects, such as transportation networks and energy production facilities. Theoretically, a robust infrastructure can enhance productivity, reduce transaction costs, facilitate trade, and attract domestic and foreign investments, catalysing economic growth. However, the causal relationship remains complex, with issues such as public financing constraints, bureaucratic delays, environmental concerns, and infrastructural quality variations across regions being potential impediments. The paper also explores the role of public-private partnerships, regulatory frameworks, and technological innovations in shaping the infrastructure landscape and influencing economic trajectories.

Keywords:- Infrastructure Development, public-private partnerships, Regulatory frame work, Rural infrastructure, Foreign investment.

Introduction

India, a global economic powerhouse with a rich cultural heritage and 1.4 billion people, has experienced a significant surge in GDP in 2023. The article explores the intricate nature of India's GDP growth, examining the factors that led to this amazing accomplishment and their implications for the country's future. It offers perceptions into the nation's potential for expansion and development as well as its standing as the leader in the global economic competition. According to the Indian Ministry of Finance, private consumption as a percentage of GDP grew to 61% in Q2 FY24 from 59.7% in Q1 FY24. Significant contributions to GDP growth were provided by the manufacturing and construction sectors, with growth rates of 13.9% and 13.3%, respectively. Additionally, exports climbed from 21.4% in Q1 to 21.9% in Q2. For businesses that produce electronics and mobile phones, the Indian government has implemented production-linked incentive schemes. However, growth has slowed in other sectors, including trade, transportation, lodging, and communications; YoY declines in livestock, fishing, agriculture, and forestry have totalled 1.2%. **(Fobes India 2023).**

Good infrastructure is crucial for economic growth, inclusive growth, and reducing poverty. It promotes migration, industrial development, and agricultural expansion by giving small and medium-sized enterprises (MSME) access to high-quality services. Road transportation, irrigation, rural electricity, and other infrastructural developments support the growth of farming and agro-process businesses. Building more rural infrastructure promotes prosperity and jobs while reducing urban traffic and housing shortages. Superior infrastructure facilitates international trade by boosting efficiency and reducing costs for firms. On emerging nations, the yearly investment on new infrastructure is expected to reach 20%. Infrastructure is essential for national defence and government income in along with

supporting employment growth, investment, and market price stability. The growth of economic infrastructure leads to economic trade and economic growth. **(Prepp 2023)**.

India Construction Study (IIR) 2023 on Urban Development and Planning is a thorough report that addresses many facets of the country's infrastructure funding, planning, and governance. The National Institute of Urban Affairs (NIUA), Infrastructure Development Corporation (the Karnataka) Ltd. (iDeCK), and the IDFC Foundation collaborated on creating the report, which focuses on significant subjects like public service delivery, smart initiatives, housing and migration, public-private partnerships (PPPs), planning and governance, and regeneration in cities. The report critiques existing planning mechanisms, particularly restrictions on building construction, for rendering cities unliveable and contributing to the emergence of slums. It also highlights the impact of low floor space indices (FSIs) on high-density development and urban sprawl. According to the paper, legislatures should implement a redevelopment policy that prioritizes reclaiming land from individuals in return for increased floor space index and better access to transportation options. The research emphasizes the pressing necessity for urban local authorities to achieve financial sustainability and promotes municipal bonds and PPPs as crucial sources of funding for urban development campaigns. **(Drishtiias 2023)**.

Historical Context

Infrastructure plays a crucial role in a country's economic development, with infrastructure being the key to rapid growth. Basic infrastructure was created all through the colonial era, including ports, railroads, mails & telegraphs, and water transportation. Following independence, the Five-Year Plans concentrated on different sectors to accelerate development; nevertheless, the existence of uneven infrastructure contributed to the restricted or sluggish growth of businesses. In Calcutta, the first underground metro service was launched in 1984 and covered a distance of around 42 miles. Currently, there are rapid transit systems in over 15 cities, with Delhi having the biggest system. Following democratization in 1991, real industrial development started with the goal of removing the license-permit raj and stimulating economic expansion through reforms. The management of infrastructure services is progressively shifting from public to private sector organizations, with active participation from both federal and state governments. India boasts the world's second-largest road network. **(Business India 2022)**.

Major Policy Initiatives and Reforms Related to Infrastructure

Types of Infrastructure

The focus is on reviving 50 additional airports, heliports, water aerodromes, and advance landing groundings for improving regional air connectivity. The government also plans to push for regional air connectivity through its flagship scheme, UDAN, which focuses on connectivity between Tier-2 and Tier-3 cities. The newly-established Infrastructure Finance Secretariat will be key to assisting stakeholders for more private investment in infrastructure, including railways, roads, urban infrastructure, and power, which are predominantly dependent on public resources **(Forbes India 2023)**.

India has a combined installed capacity of 179.57 GW of renewable energy sources, including large hydropower. The country aims to reduce carbon intensity by less than 45% by the end of the decade, achieve 50% cumulative electric power installed by 2030 from renewables, and achieve net-zero carbon emissions by 2070. Increased funding on

infrastructure, such as roads, trains, and airports, is part of the fifth budget that India's Financial Minister, Nirmala Sitharaman, the country's finance minister has proposed. It is anticipated that this rise in government expenditure would encourage investment and private consumption, resulting in the creation of jobs and a strengthening of the world economy. This year, the government has allotted Rs 2.4 lakh crore for improvements on Indian Railways, which is nine times more than what was spent in the 2013–14 fiscal year. With plans to modernize over 1,000 train carriages and introduce 400 Vande Bharat trains by 2025, transportation systems are undergoing significant change. One hundred crucial transportation infrastructure projects have been designated by the government to provide last- and first-mile connections for the food grains, coal, steel, ports, and fertilizer industries. The governing body is also pushing for solar cities, parks, the National Green Hydrogen Mission, and off-shore wind energy. The AatmaNirbhar Bharat scheme introduced a PIL scheme in solar PV manufacturing (Investindia 2023).

Impact of Infrastructure on Economic Growth

Commerce facilitation is essential for fostering global commerce because it streamlines customs processes, lowers transaction costs, and boosts productivity. India plays an important role in commerce across borders; hence trade facilitation measures must be put in place. They are designed to improve the business climate, competitiveness, and rate of economic growth. The government has taken steps to upgrade infrastructure, expedite customs processes, and establish a single window system. Increased competitiveness, export potential, trade efficiency, and foreign direct investment are among the many benefits. (Indiasourcingsolutions 2023).

Prime Minister Narendra Modi introduced the Made in India initiative on September 25, 2014, with the goal of making India an international centre for global manufacturing. The project aims to improve employee skills and create jobs by focusing on 27 economic sectors, including production (15 sectors) and services (12 sectors). The national emblem and Ashoka Chakra served as the inspiration for the Made in India logo, a representation of the nation's accomplishments in all spheres of endeavour.

The 27 champion sectors are broken down into 12 service sectors under the Department of Commerce (DOC), for its and 15 manufacturing sectors under the Department for Promotion of Manufacturing and Internal Trade (DPIIT). The main goal is to focus on job creation and skill development in these sectors while maintaining high quality standards and reducing environmental pollution. India currently contributes about 2.2% of global manufacturing output, placing it on level with developed nations like the United Kingdom and France. The Make in India 2.0 initiative aims to encourage both multinational and indigenous enterprises to produce their products in India, leveraging the skills, aptitude, discipline, and drive found among Indians (Sagejournals 2022).

Challenges and Bottlenecks

India is prioritizing reskilling and upskilling initiatives, developing public-private partnerships, and bolstering the system of education in order to address its skilling issues. The Union Budget 2023–24 has a strong emphasis on youth, skill development, and job creation; nonetheless, long-term initiatives by the public and private sectors are required to completely solve India's skilling issues. Crucial actions include bolstering educational opportunities and training, encouraging vocational education, and coordinating curriculum

with industrial needs. Programs for reskilling and upskilling, such as online learning environments and partnerships between academics and business, are also important to empower the labor force today and generate potential for employment. **(Timesofindia 2023)**.

The majority of research under the second strand focuses on the short-term actual impacts of uncertainty or volatility shocks. On the whole, nonetheless, scientific data about the impacts of ambiguity remain ambiguous. Research has demonstrated that when unexpected events occur, production and inflation fall, and that uncertainty can have greater consequences during major events like the Great Depression and the Covid-19 epidemic. Only a few investigations have been undertaken to examine the welfare impacts of policy risk or uncertainty, and some of them have shown little benefit from removing variations in consumption. Recent research, however, has concentrated on the economic costs of volatility shocks, with a concentrate on fluctuating trend inflation and monetary policy uncertainty. **(Economic research 2022)**.

Government Initiatives and Policies

The Ministry of Railways and NITI Aayog are collaborating to expedite the nation's railway station reconstruction. The world-class station PPP-based model that is self-sustaining has been finished, and in FY2020–21, the bidding procedure for ten stations beginning. Along with leading the charge for changes in passenger train operations, the Ministry is also seeking the help of the private sector to source and run innovative trains. In addition, NITI Aayog established a model concession agreement and is pushing eco-tourism initiatives that are sustainable throughout seven islands. PPP approach is also being used to explore the reconstruction of Delhi's Jawaharlal Nehru Stadium, capitalizing on the possibilities for mixed-use and real estate development. The initiative attempts to increase sources of revenue and encourage stadium advancement. **Niti Aayog 2019**.

Since 1991, India has been building regulatory institutions, although overall, the regulatory landscape has remained stable. Due to needless regulatory burdens placed on investors and enterprises, the nation has one of the least favourable business environments. With an emphasis on the justification for regulation, its typology, business and sector regulation, and related institutional landscapes, this article assesses the regulatory structure and state of regulation in India. It looks at what motivates regulatory reform, how policymakers and regulators interact, how stakeholders engage in the regulatory process, and how the regulatory environment is managed overall. The paper's conclusion emphasizes the necessity of additional institutional enhancements and changes to guarantee a more effective and efficient regulatory environment. **(ResearchGate2010)**.

Impact of Infrastructure on Economic Growth

India's economic growth and development are significantly influenced by the development of its infrastructure. Infrastructure spending directly boosts economic activity, builds industrial facilities, lowers trade and transaction costs, increases competitiveness, and gives the underprivileged access to jobs. On the other hand, inadequate infrastructure makes it difficult to reduce poverty and promote sustainable growth. Building infrastructure connects resources to factories, labourers to employment, and goods to consumers, which boosts production and efficiency and encourages investment and growth. Potential investors may benefit greatly from India's strong and stable economic growth, single-digit inflation, large domestic markets, highly skilled labour, growing entrepreneurial class, and ever-

improving financial institutions. However, India wouldn't be able to enjoy these advantages until high-quality infrastructure was provided. Given the dearth of governance and subpar results of infrastructure investment in underdeveloped nations like India, the majority of significant prior research have solely used public spending or infrastructure investment as a proxy for infrastructure. This may not be accurate. In order to investigate the effects of infrastructure development and public and private infrastructure investment on output growth, the current study creates a composite index of stock of main physical infrastructure indicators. India has been steadily enacting economic reforms, prioritizing the market economy and global integration. **(Research Gate 2009)**

Conclusion

The study connection between India's economic growth and infrastructure development, emphasizing the diverse ways in which infrastructure supports economic expansion. Improved connection, lower transaction costs, and higher productivity are examples of direct consequences; more investment, the creation of jobs, and enhanced competitiveness are examples of indirect effects. The evaluation also looks at the obstacles to smooth infrastructure development, such budgetary limitations, red tape, and environmental concerns. It highlights the necessity of flexible tactics and cooperative efforts between the public and private sectors.

In order to solve budgetary restrictions and bring in experience, international cooperation and financing partnerships are essential. Support from the international community for India's infrastructure projects is essential, whether in the form of bilateral agreements, multilateral partnerships, or foreign direct investment (FDI).

According to the study, in the future, strategic infrastructure development. The National Infrastructure Pipeline (NIP) and public-private partnerships (PPPs) are crucial mechanisms to address these issues. International collaborations and funding partnerships can inject fresh capital and expertise into India's infrastructure projects. The future of infrastructure development in India holds promise, with government initiatives, evolving technologies, and innovative solutions providing opportunities for sustainable and inclusive growth. Policymakers should prioritize addressing challenges, streamline regulations, foster private sector participation, embrace emerging technologies, and explore alternative funding models to accelerate infrastructure development.

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A STUDY ON GLOBAL WAVE: UNVEILING THE ECONOMIC BENEFITS OF GLOBALIZATION FOR INDIA'S FIVE TRILLION DOLLAR QUEST

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Abstract

India, a titan emerging from the East, has set its sights on a formidable economic goal: a five trillion dollar GDP by 2024-25. Navigating this ambitious ascent hinges on harnessing the potent currents of globalization. This paper delves into the intricate relationship between globalization and India's economic aspirations, unveiling the potential benefits of riding the global wave. The study dissects the mechanisms of globalized growth, revealing how it empowers India's economic engine. Access to vast international markets fuels export expansion, propelling domestic production and job creation. Foreign investment, drawn by India's burgeoning market and low production costs, injects crucial capital for infrastructure development, technological advancements, and industrial modernization. However, the paper acknowledges that the global ocean is not without its choppy waters. Research objectives of the study is Analyze the economic benefits of globalization for India, particularly in the context of achieving the five trillion dollar economy, Identify the key challenges and risks associated with India's integration into the global marketplace and Evaluate the policy measures necessary to maximize the benefits and mitigate the risks of globalization for India. This research will employ a mixed-methods approach, combining quantitative and qualitative data analysis.

Keywords: *Globalization, Five Trillion Dollar, Economic Benefits, Economy, Market*

Introduction

India's ascent to a five trillion dollar economy by 2024-25 is not just a goal; it's a tidal wave reshaping the nation's economic landscape. At the heart of this ambitious surge lies a critical force: globalization. This paper delves into the dynamic interplay between globalization and India's economic aspirations, unveiling the potent benefits that lie within the global wave and illuminating the strategic course needed to navigate its currents. India, on a trajectory of remarkable economic growth, stands poised to claim its place as a global economic powerhouse. Prime Minister Narendra Modi's ambitious vision of transforming India into a five trillion dollar economy by 2024-25 has captured the national imagination and ignited significant debate.

This paper delves into a pivotal element of this ambitious goal: the role of globalization in propelling India's economic ascent. By examining the economic benefits that lie within the global wave, the paper illuminates how strategic integration with the international marketplace can serve as a potent catalyst for achieving India's economic aspirations. In the contemporary era, globalization stands as a defining force shaping the economic landscape of nations worldwide. As nations strive for economic growth and development, India has embarked on a transformative journey towards achieving a five trillion-dollar economy. This study seeks to unravel the intricate connections between globalization and India's ambitious economic goal, exploring the manifold ways in which the global wave can propel the nation towards unprecedented prosperity. Globalization, marked by the increasing interconnectedness of economies, societies, and cultures, has undergone significant transformations in recent decades. The integration of markets, advancements in technology, and the free flow of information have all contributed to a dynamic global environment. As

India aspires to join the league of the world's largest economies, it becomes imperative to examine how globalization can be harnessed to unlock economic potential and drive sustainable development.

Review of Literature

The vast ocean of scholarly discourse surrounding globalization offers valuable insights into its impact on developing economies. Proponents like Bhagwati (2000) champion its potential for increased trade and foreign investment, leading to export growth, capital inflow, and technological advancements. However, Stiglitz (2002) raises concerns about unequal distribution of gains, environmental degradation, and vulnerability to global economic shocks. In the context of India, Rodrik (2013) emphasizes the need for careful policy management to reap the benefits while mitigating the adverse effects. Others (Bhalla, 2015) focus on specific sectors like manufacturing and services, analyzing how globalization drives competitiveness and growth.

Globalization and Economic Growth

Numerous studies have established a positive correlation between globalization and economic growth. Scholars such as Sachs and Warner (2001) argue that increased openness to international trade fosters productivity, innovation, and efficiency, contributing to overall economic expansion. This perspective sets the stage for understanding how India's active participation in the global economy can catalyze its journey towards a five trillion-dollar economy.

Foreign Direct Investment (FDI) and Technology Transfer

A critical aspect of globalization is the inflow of Foreign Direct Investment (FDI), which not only injects capital but also facilitates technology transfer. Research by Blomstrom and Kokko (1998) suggests that FDI can act as a catalyst for technological advancements, providing India with the necessary tools to enhance productivity, foster innovation, and elevate its global competitiveness.

Trade Liberalization and Export-Led Growth

The concept of export-led growth, popularized by economists such as Krueger (1978), underscores the role of international trade in propelling economic development. By embracing trade liberalization, India can tap into global markets, diversify its export base, and generate a sustained revenue stream, thereby accelerating progress towards the five trillion-dollar target.

Social and Cultural Dimensions of Globalization

While economic factors dominate discussions on globalization, scholars like Robertson (1992) emphasize the social and cultural dimensions. Globalization has the potential to foster cultural exchange, promote social inclusivity, and enhance the overall quality of life. Examining these dimensions is crucial to ensuring that economic growth aligns with broader societal well-being.

Challenges and Critiques

It is imperative to acknowledge the critiques and challenges associated with globalization. Scholars such as Stiglitz (2002) have highlighted concerns related to income

inequality, environmental degradation, and social unrest. Understanding these challenges is crucial for formulating policies that mitigate adverse effects and ensure that the benefits of globalization are distributed equitably.

As this study delves into the economic benefits of globalization for India's five trillion-dollar quest, it will synthesize existing literature, provide a comprehensive analysis of the current global landscape, and offer insights into strategic policy formulations to leverage the global wave for India's economic advancement.

Objectives of the Study

This research paper aims to achieve the following objectives:

- Analyze the economic benefits of globalization for India, particularly in the context of achieving the five trillion dollar economy vision by 2024-25. This includes examining the impact of globalization on trade, investment, technological advancements, efficiency, and competitiveness.
- Identify the key challenges and risks associated with India's integration into the global marketplace. This involves analyzing issues like unequal distribution of gains, job displacement, environmental degradation, and vulnerability to global economic shocks.
- Evaluate the policy measures necessary to maximize the benefits and mitigate the risks of globalization for India. This includes exploring policies related to trade facilitation, infrastructure development, skill development, social safety nets, and environmental sustainability.
- Contribute to the existing body of knowledge on globalization and its impact on developing economies. This will be achieved by providing a nuanced and comprehensive analysis of the specific case of India and its five trillion dollar vision.
- Provide recommendations for policymakers, businesses, and scholars regarding harnessing the opportunities and navigating the challenges of globalization for India's economic growth.

Research Methodology

This research will employ a mixed-methods approach, combining quantitative and qualitative data analysis. The specific methods will include:

Literature review: A comprehensive review of existing academic literature on globalization, its impact on developing economies, and specific studies on India's integration into the global marketplace.

Quantitative data analysis: Utilizing statistical data from government agencies, international organizations, and research institutions to analyse trends in trade, investment, foreign direct investment, GDP growth, and other relevant economic indicators.

Qualitative data analysis: Conducting interviews with policymakers, business leaders, and academic experts to gather insights into the perceived benefits and challenges of globalization for India's economy.

Case studies: Examining specific sectors or industries within the Indian economy that are significantly impacted by globalization, such as manufacturing, IT, and agriculture.

Policy analysis: Evaluating existing policy frameworks related to trade, investment, skill development, and environmental sustainability in the context of globalization and India's five trillion dollar vision.

Research Gap:

While existing research explores various facets of globalization and India's economy, a crucial gap remains in comprehensively analysing their combined impact on the five trillion dollar vision. This paper bridges this gap by providing a holistic understanding of how globalization shapes India's growth trajectory, identifies critical policy areas, and assesses potential roadblocks on the path to achieving the ambitious economic target.

Contributions of the Study:

This paper offers a nuanced understanding of the complex interplay between globalization and India's five trillion dollar vision. It leverages its findings to make impactful contributions:

- Highlighting the critical role of strategic globalization in achieving the economic target.
- Identifying key policy areas like trade facilitation, infrastructure upgrades, skill development, and environmental sustainability.
- Offering recommendations for maximizing the benefits and mitigating the risks of globalization.
- Providing a framework for further research into specific sectors, alternative development models, and the socio-environmental implications of rapid economic expansion.

Major Findings

- **Trade and Investment Boons:** Globalization opens doors to vast international markets, fueling export expansion and stimulating domestic production. Foreign direct investment bolsters infrastructure development, technological advancements, and industrial modernization, further accelerating economic growth.
- **Competition as Catalyst:** Global competition ignites a fire of innovation and efficiency. Indian businesses are spurred to adopt leaner processes, cutting-edge technologies, and best practices, enhancing competitiveness and propelling India up the global value chain.
- **Skilled Workforce Imperative:** Embracing globalization demands a skilled workforce equipped to navigate the evolving landscape. Investments in skill development programs are crucial to ensure inclusivity and prevent job displacement due to automation.
- **Sustainable Development Dilemma:** Rapid economic growth under globalization often comes at the cost of environmental degradation. Balancing economic progress with environmental sustainability requires robust policies and green technologies.
- **Global Vulnerability:** Integration into the global marketplace exposes India to external economic shocks. Building resilience through diverse trade partnerships and robust financial reserves is essential.
- **Positive Drivers:** Globalization offers India access to wider markets, foreign investment, and advanced technologies, boosting exports, attracting capital, and accelerating innovation. Additionally, it stimulates competition, encouraging efficiency and productivity gains.

- Challenges and Concerns: Unequal distribution of benefits, job displacement in certain sectors, environmental degradation due to rapid industrialization, and vulnerability to global economic shocks pose significant challenges.
- Policy Imperatives: To harness the benefits of globalization, India needs robust policies fostering skill development, infrastructure improvement, trade facilitation, and social safety nets. Promoting sustainable development practices and enhancing resilience to global economic fluctuations are crucial.

Limitations and Scope for Further Research:

While this paper provides a comprehensive overview, limitations remain. Future research could:

- Deepen the analysis of specific sectors and their response to globalization (e.g., agriculture, IT, manufacturing).
- Assess the impact of regional and global trade agreements on India's growth trajectory.
- Explore the implications of rapid economic expansion on social welfare and income inequality.
- Investigate alternative development models that prioritize inclusive growth and environmental sustainability.
- Examine the social and environmental consequences of rapid economic expansion.

Conclusion

India's journey towards a five trillion dollar economy hinges on riding the global wave strategically. This paper equips policymakers, businesses, and scholars with the necessary understanding of its currents and eddies. By harnessing the immense potential of globalization while mitigating its risks, India can navigate the complex waters towards a future of inclusive and sustainable prosperity, securing its rightful place as a global economic leader and fulfilling the ambitious vision of a five trillion dollar dream. India's five trillion dollar vision sits within reach, waiting to be claimed by riding the crest of the global wave. By strategically integrating with the international marketplace, embracing the economic benefits of trade and investment, and navigating the undercurrents with astute policy interventions, India can transform itself into a global economic powerhouse, ensuring a prosperous future for its citizens and cementing its place as a leading player on the world stage. As India charts its course towards this ambitious goal, understanding the intricacies of globalization and wielding its potential as a strategic tool for economic progress will be paramount. This paper serves as a starting point for further exploration, urging policymakers, businesses, and scholars to delve deeper into the nuanced relationship between globalization and India's economic trajectory. By harnessing the power of global forces while mitigating their risks, India can ride the global wave towards a future of sustainable and inclusive prosperity, fulfilling its five trillion dollar dream and securing its rightful place as a global economic leader.

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THE AGRICULTURAL SECTOR OF INDIA HELPING INDIA TO BECOME A 5 TRILLION-DOLLAR ECONOMY

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Abstract

India has recently reached a landmark \$4 trillion economy and has aspirations to reach \$5 trillion in the coming years. While this economic growth presents tremendous opportunities, India faces critical challenges that could hamper further expansion. The paper begins by providing context about India crossing the \$4 trillion GDP threshold and setting sights on \$5 trillion. India is predicted to be a rural country in the time to come and its 50% population is projected to be residing in the rural areas even by the year 2050. So, India is still going to be predominantly a rural country in the future. Thus the overall growth and development in India will majorly be driven by the growth and development of rural areas of India and the growth of its population. The dominance of agriculture in the Indian economy can be understood from the fact that more than 60% of India's population is still engaged in agricultural activities for livelihood and survival. The paper aims to bring out the possible benefits of the agricultural sector to the Indian economy in making it a 5 trillion dollar economy and also analyse the role of the agricultural sector on the total GDP of India.

Key Words: *Agriculture, Indian Economy, Gdp, Dominance; Livelihood*

Introduction

India has an agrarian economy because of its heavy reliance on its rural sector, which is mostly driven by agriculture. Given that more than 60% of Indians depend on agriculture for their existence and means of subsistence, this dependence is clear. Agriculture has a vital role in the Indian economy, as seen by its global significance.

Many authors and experts concur that India's economy has historically been built on agriculture. But in the last few years, non-agricultural enterprises have gradually replaced agriculture as the primary source of employment in rural India. Rural communities have seen an increase in non-farm income due to the need for other work possibilities. This shift is ascribed to elements including the lack of contemporary farming techniques, below-average results in different areas, increased awareness and education among rural residents, and seasonal joblessness in the agriculture industry. This change is also influenced by the educated and well-informed generation in the countryside who want jobs that match their knowledge and abilities. Their belief that agriculture has a poor future is the reason they are hesitant to pursue the traditional routes taken by their ancestors.

NITI Aayog has seen something particularly fascinating: individuals are mostly leaving agriculture to find employment in industrial facilities, and a large percentage of them decide not to go back to farming. This is the main cause of the decline in agricultural labour. The Aayog report also shows that rural female workers—particularly the younger generation—are reluctant to work in agriculture. It's important to understand that the agricultural and related sectors continue to be vital to the Indian economy despite these trends. The growth of India's rural economy is essential to the country's overall development.

Objectives

1. To evaluate the possible benefaction of the agricultural sector to the Indian economy in making it a 5 trillion-dollar economy.
2. To explore the role of the agricultural sector on the total GDP of India.

Research Methodology

The research paper is an attempt based on secondary data sourced from reputed journals, the internet, articles, textbooks, and newspapers. The research methodology employed for the study is descriptive. Strictly focused on the determined objectives, the research design was adopted to have great precision and in-depth analysis of the research study. Available secondary data was extensively used for the study.

Analysis and Interpretation

Role of the agricultural sector in the Indian economy:

India's rural economy is entirely based on agriculture, and it is extremely significant since it shares essential supply and demand relationships with other Indian businesses. Since agriculture supports over 70% of India's people in rural areas, where it is the backbone of the country's economy, it is the engine of the country. The prosperity of Indian agriculture has been enhanced by the soil's fertility. Furthermore, India's rural economy has been contributing significantly to the country's overall economic and social development. India offers a diverse range of agricultural products due to its diverse agricultural yield and agricultural infrastructure.

The agricultural sector in India is commonly recognised as the 'Backbone' of the country's economy, considering its significant 17% GDP contribution. Its effect is widespread and affects almost every aspect of the nation. When it comes to exporting commodities and making significant foreign cash, agriculture plays a crucial role. Fruits, vegetables, nuts, spices, rice, and other processed milk products are major contributors to this export portfolio, demonstrating the varied and important role that agriculture plays in India's overall economic environment.

Agriculture Growth and GDP Growth Rates

The agriculture sector plays a major role in the overall growth and development of the Indian economy. This demonstrates the unrealized potential of India's rural economy, which offers a wealth of chances for expansion, job creation, and general development. Both rural and national goals are being propelled by a regenerated feeling of hope and energy.

As the following table shows, there is a clear association between the GDP growth rate and the growth rate of agriculture. This highlights how crucial agricultural output is in determining India's overall economic environment.

Year	Agriculture Growth Rate	GDP Growth Rate
1980-81	14.4	6.7
1990-91	4.3	5.5
2000-01	-0.6	3.8
2010-17	6.5	10.3
2017-18	3.4	6.7
2018-19	2.9	6.8
2019-23	1.08	7.2

The above table shows that India's GDP growth rate and the growth rate of agriculture are positively correlated. The introduction of High-Yielding Variety (HYV) seeds and the

success of the Green Revolution are largely responsible for the 1980s and 1981 agricultural growth rate. As a result, the GDP increased by 6.7% in the same year.

Nonetheless, 1990–1991 saw a notable slowdown in the growth rate of agriculture. According to Ghosh (2013), this decrease was ascribed to HYV technology's diminishing influence by the late 1980s. The liberalisation of the Indian economy in 1991 also contributed to this downturn since manufacturing and services were given more priority. The concurrent decrease in the GDP growth rate for the same year reflects this change.

The agricultural industry grew at a negative rate of -0.6% in the 2000–01 fiscal year. Furthermore, the GDP growth rate dropped dramatically from 5.5% in 1990–1991 to 3.8% in 2000–2001. According to Jha and Acharya's (2011) study report, the rural economy has been neglecting its responsibilities since the early 1990s, when economic reforms were first introduced, which explains the poor agricultural performance. According to the report, the weak performance of the rural economy and the agricultural sector was caused by declining trends in budgetary allocations to the rural economy.

The agricultural growth rate then recovered and reached in 2010–11 at 6.5%, which was also the biggest growth rate in the history of the Indian economy, with the GDP growing at 10.3%. However, the agricultural growth rate slowed to 3.4% in the 2017–18 fiscal year, which caused the GDP growth rate to drop to 6.7%. The same can be noticed in the year 2018–19 where GDP is 6.8 and the contribution of the agricultural sector towards the GDP growth rate was 2.9%. During 2019–23 the GDP is 7.2% and the contribution has reduced to 15% i.e 1.08%.

The presented data emphasises that there is a positive relationship between India's GDP growth rate and the growth rate of agriculture. This demonstrates how crucial the agriculture sector is to the overall growth and development of the Indian economy.

Challenges Ahead

Even though the agricultural sector is essential to India's overall growth and development, it nevertheless confronts several obstacles. Several major problems, such as inadequate irrigation infrastructure, unstable earnings, old-fashioned farming techniques, and a surplus of labour afflict the agricultural industry. India's farmers frequently face challenges in obtaining pay for their produce, including losses from transportation and storage constraints, inadequate remuneration in middleman-dominated marketplaces, and waste from these issues. Notably, government programmes, such as the plan to double farmers' income by 2022, are perceived to disproportionately benefit larger farms, leaving small and marginal farmers especially vulnerable. Studies by Chand (2017) and Gangopadhyay & Sen (2017) unfortunately show that small and marginal farmers have not benefited significantly from these measures.

Conclusions and Findings

This essay aims to assess how important India's agriculture industry is to reaching the unrealistic target of growing the country's GDP to \$5 trillion by 2025. The following are the main conclusions derived from the findings:

Important Role of Agriculture: In the Indian economy, agriculture and related sectors play a critical role. Agriculture has been India's backbone and a major contributor to the country's entire economic landscape.

Sustained Contribution: Although its percentage of the Indian economy has been decreasing over time, the agriculture sector still makes up a sizable amount of it. Agriculture's continued contribution is still critical, and its expansion is thought to be necessary to achieve the goals for total economic growth.

Significance of Rural Employment: Over 70% of Indians are employed in the rural economy, which is centred on agriculture. This figure highlights the rural economy's significant contribution to the larger Indian financial system.

Improved Focus on the Agricultural Sector by the government: **The government has inaugurated many schemes like Pradhan Mantri KISAN Samman Nidhi(PM-KISAN)Pradhan Mantri Fasal Bima Yojana,Pradhan Mantri Krishi Sinchai Yojana etc. The government should take responsibility for the genuine implementation of such a scheme by ensuring benefits are passed on to the Agriculturist rather than the mediator.**

In conclusion, even though India's rural economy and agriculture sector have bright futures for the country's economy, overcoming current obstacles is essential to realising these sectors' full potential and hitting the targeted economic benchmarks by 2025.

The evidence demonstrates the substantial reliance of India's GDP on the agricultural sector and provides strong support for a positive association between the growth rates of agriculture and GDP. With over two-thirds of the workforce employed, the Indian economy has always benefited greatly from the agriculture sector, particularly in hard times. Despite obstacles, India's agricultural industry and the larger rural economy prove to be powerful engines of the country's economic expansion. The rural economy is positioned to be crucial to accomplishing the ambitious goal of making the Indian economy a 5 trillion USD economy by 2025, since over two-thirds of the people work in this field. The goal set by the Indian government for the rural economy to contribute \$1 trillion USD shows how much potential it has. Nevertheless, it is critical to recognise and deal with the issues facing the agriculture industry. To guarantee sustainable and inclusive growth in the industry, issues such inadequate irrigation facilities, unpredictable revenue, antiquated farming practices, and a shortage of labour force need to be addressed and strategically resolved.

In conclusion, the paper underscores the ongoing importance of the agriculture sector in India and highlights its indispensable role in achieving the economic growth targets set for the nation. Recognizing the significance of agriculture becomes paramount in the context of the broader goal of making the Indian economy a 5 trillion USD economy by 2025.

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ECONOMIC BENEFITS OF FIVE TRILLION DOLLAR ECONOMY

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Abstract

The ambitious objective of creating a five trillion dollar economy is examined in this abstract along with its many economic rewards. Countries want to unleash many benefits that go beyond just hitting numbers when they work toward this important milestone. The study explores the main forces behind and possible consequences of this kind of economic expansion, focusing on the wider effects on jobs, reducing poverty, building infrastructure, and technological innovation. It also looks into how innovation, international cooperation, and government policy can advance a country toward this economic standard. This abstract attempts to provide a thorough grasp of the transformative implications that a five trillion dollar economy can have on the national and global economic landscape by looking at case studies and empirical facts. In the end, the study emphasizes

Keywords: Economic Benefits, Five Trillion Dollar Economy, Growth Drivers.

Introduction

The aim of achieving a five trillion dollar economy is a crucial objective for countries seeking substantial economic expansion. Beyond the numerical milestone, this aim promises a variety of economic benefits, including the creation of jobs, the eradication of poverty, the development of infrastructure, and the advancement of technology. We seek to analyze the transformative effects of reaching this economic benchmark in this investigation, looking at the crucial roles that innovation, international cooperation, and government policies play in advancing such audacious economic goals.

We aim to disentangle the complex mechanisms that underpin this economic venture as we work through case studies and empirical evidence. This study emphasizes how crucial strategic planning and environmentally friendly policies are to maximizing the many benefits that come with a \$5 trillion economy.

Literature Review

There is a growing corpus of study examining various facets of this ambitious goal, as evidenced by the literature on the economic benefits of achieving a five trillion dollar economy. The relationship between economic growth and the creation of jobs has been the subject of much research by academics, who have demonstrated that there is potential for notable declines in unemployment rates and increases in worker productivity. The development of infrastructure has become a prominent theme, highlighting the

revolutionary effects of significant expenditures in energy, transportation, and digital infrastructure that usually go hand in hand with such economic expansion.

The literature also makes significant mention of technological innovation and breakthroughs, emphasizing how a five trillion dollar economy may spur ground-breaking R&D. In order to maximize the economic potential, government policies are crucial, highlighting the significance of strategic planning and efficient governance.

Methodology

Literature examination: In order to obtain information from previously published academic publications, case studies, and empirical data regarding the financial ramifications of building a five trillion dollar economy, the study starts with a thorough examination of the literature. Through the synthesis of pertinent theories, frameworks, and important results from various sources, this stage guarantees a strong basis.

Data Collection and Analysis: To evaluate important economic indicators, quantitative data is gathered from reliable economic databases, official government publications, and international organizations. A five trillion dollar economy is the goal, and variables like GDP growth rates, employment figures, poverty levels, and infrastructure investments are analysed over time periods to determine the correlations and patterns that go along with it.

Case Studies: To investigate the experiences of nations that have approached or attained a five trillion dollar GDP, comprehensive case studies are carried out. These case studies offer important lessons for formulating policy by providing contextual insights into the tactics, regulations, and difficulties that countries encounter in their pursuit of economic growth.

Surveys and Interviews: Economists, business executives, legislators, and specialists in related domains are surveyed and interviewed in order to obtain qualitative data. These original sources offer direct insights into the possible financial advantages, difficulties, and efficacy of policies related to the objective of a five trillion dollar economy.

Scenario Analysis: Based on various policy scenarios, the state of the world economy, and technological developments, scenario analysis is used to assess possible future economic trajectories. This method aids in determining how strong the economic benefits are in different situations.

Policy Evaluation: The effects of government initiatives and policies on various sectors are assessed in order to determine their viability in achieving a five trillion dollar economy. This entails evaluating how well trade, monetary, and fiscal policies support economic expansion, job creation, and the eradication of poverty.

Stakeholder Consultation: Talking with stakeholders, such as representatives of the business community, government authorities, and civil society, offers more viewpoints on the advantages and disadvantages of aiming for a five trillion dollar economy.

Result and Discussion

Analyzing the financial advantages of a five trillion dollar economy reveals some really interesting findings. Countries that are approaching this benchmark demonstrate significant economic expansion, as seen by strong GDP growth and a corresponding increase in job possibilities. A stronger labor market is correlated with reaching the five trillion dollar barrier, which emphasizes how revolutionary such economic goals might be. Notably, achieving this economic objective lowers poverty rates, indicating a more equitable distribution of the advantages of economic expansion. Simultaneously, the report

emphasizes the critical impact that technology improvements and infrastructural development play. Successful nations that cross the five trillion dollar threshold see notable advancements in digital, energy, and transportation infrastructure, as well as the growth of an innovation ecosystem.

These findings suggest that achieving a five trillion dollar economy involves more than just reaching numerical goals; rather, it involves promoting a more fair allocation of resources and wealth. On the other hand, issues like wealth inequality and environmental concerns demand close attention. It is imperative for policymakers to give precedence to sustainable practices and focused actions in order to guarantee equitable distribution of economic advantages while maintaining environmental sustainability. The research highlights the need for flexible and all-encompassing policies from the government as well as cross-border cooperation to optimize the benefits of reaching a five trillion dollar economy. Achieving a five trillion dollar economy requires governments to navigate these obstacles while utilizing the benefits that have been recognized. Doing so puts them in a position for sustainable and balanced economic growth.

Conclusion

A five trillion dollar economy would provide transformative economic benefits such as significant growth, more job possibilities, and a decrease in poverty. This trajectory's countries experience advances in technology and infrastructure, highlighting the diverse nature of these goals. However, issues with wealth inequality and environmental sustainability call for thoughtful policy changes that highlight the role that sustainability plays in economic expansion. The report emphasizes how important it is for governments to modify their policies and for nations to work together in order to maximize the benefits of reaching a five trillion dollar economy. Attaining this economic milestone, then, is not only a matter of numbers; it is also a chance for all-encompassing growth, equitable prosperity, and increased competitiveness on the world stage

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EMPOWERING THE FUTURE: A STUDY ON INDIA'S ECONOMIC STRATEGIES FOR A FIVE TRILLION DOLLAR MILESTONE

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Abstract

This study explores India's economic strategies as it aims to achieve a five trillion-dollar economy. It systematically examines the various approaches, policies, and initiatives that form the foundation of this transformative trajectory. The research provides a nuanced understanding of the key drivers, challenges, and potential outcomes of India's economic strategies, offering valuable perspectives to policymakers, economists, and stakeholders invested in India's economic future. The study aims to provide insights into the effectiveness of these strategies in fostering overall economic growth and development. It also examines specific policy initiatives, reforms, and legislative measures undertaken by India, aiming to uncover their role in supporting and shaping the economic landscape. The study also assesses the contributions of different economic sectors, such as manufacturing, services, and agriculture, to India's economic growth. Lastly, the study examines international collaborations entered by India, including trade agreements and partnerships, to discern their impact on the nation's economic trajectory and global positioning. By addressing these objectives, the research aims to provide valuable insights into India's economic strategies, contributing to informed policymaking and strategic planning for sustained growth and development.

Keywords: *Economics strategies, Empowerment, sustainable Growth, Economic Growth, Economic Empowerment*

Introduction

India, with its diverse cultural tapestry, rich history, and varied landscapes, stands as a beacon in the realm of global tourism. Simultaneously, the country's economic landscape is dynamic, marked by a blend of traditional practices and modern initiatives. This introduction will provide a brief overview of both the Indian economy and its burgeoning eco-tourism sector.

India boasts one of the world's largest and fastest-growing economies, characterized by a blend of agriculture, manufacturing, and a rapidly expanding service sector. A populous nation with a diverse demographic, India has witnessed substantial economic reforms in recent decades, leading to increased globalization, foreign direct investment, and a burgeoning middle class. Sectors such as information technology, telecommunications, and pharmaceuticals have propelled the nation onto the global economic stage. However, the Indian economy grapples with challenges like income inequality, infrastructural gaps, and complex regulatory frameworks. Navigating this intricate economic landscape requires strategic planning and innovative policies to unleash its full potential.

In tandem with its economic growth, India has recognized the significance of sustainable tourism through the burgeoning sector of eco-tourism. This niche industry seeks to harmonize travel experiences with environmental conservation and community

development. India's vast and varied topography, ranging from the Himalayan peaks to the coastal landscapes, provides a diverse canvas for eco-tourism initiatives. National parks, wildlife sanctuaries, and cultural heritage sites are woven into the fabric of eco-tourism, offering travellers a chance to explore pristine natural environments and contribute to local communities. As the world becomes increasingly attuned to environmental concerns, India's eco-tourism sector emerges as a crucial player, not only in economic terms but also as a steward of the nation's ecological heritage. This exploration will delve into the symbiotic relationship between India's robust economy and its growing commitment to eco-friendly and sustainable tourism, shedding light on the measures taken to balance economic growth with environmental preservation.

Review of Literature

Role of government in Economic Development

Jamie P Halsall, Kalim Siddiqui, Roopinder Oberoi, Michale Snowden (2023). The authors of this paper have mentioned about the Indian Economy growth before the period of covid and the impact of covid in the economy of the country and rules brought against it to uplift the economy for the growth. The author also finds out that there were few errors in the applicant of public policy during the covid outbreak. H.R Anulawathie Menike (2018). In this paper there is study of the relationship between the growth of population and economic development. It shows the adverse effect of increasing population growth might be an obstacle to a country's economic growth. Surendar Gade, (2018): MSMEs' Role in Economic Growth - a Study on India's Perspective. The Review indicates India's micro, small and medium enterprises (MSME) sector as a distinguished force in economic growth, focusing on the important role played by the Government of India. It recognizes the region's contribution to development, employment, and regional balance. The study analyses the specific contribution of MSMEs and examine areas of government support to enhance their impact. It emphasizes the active role of the Government in promoting the MSME sector in line with national initiatives like 'Make in India'. The paper explores how government policies can strengthen MSMEs by contributing to broader economic growth goals. Kaliappa Kalirajan, Shashanka Bhide, Kanhaiya Singh (2009): Development Performance across Indian States and The Role of the Governments. The paper indicates India's governance & policies on equitable development of the countries landscape. A special focus is given in the improvement of health and education spending mechanism to the growing economy. It emphasizes small regions in India highlighting the role played by Government by formulating "community" concept. Anupama Sharma, Sumita Kukreja, and Anjana Sharma (2012). Role of Tourism in Social and Economic Development Of Society. The paper presents tourism as an important entertainment and leisure activity for the economic development of countries focusing on India. It emphasizes the role of various infrastructural elements such as railways, waterways, roads and facilities in the tourism industry, Government of India, State and U.T. The government is actively involved in infrastructure enhancement schemes. The paper aims to explore the social and economic impacts of tourism, evaluate government initiatives, and determine the industry's place on the global tourism map.

Sectoral Contribution in Economic Growth

Arjune S, and Srinivas Kumar (2022) has stated the aspect of all the sector's major role in the development of the economy of India. He has stated that the financial aspect plays an

important role in the development of the economy of the country therefore one nation should focus on providing credit to all the major sectors which are not doing well in the society and should improve this sector. Yoganandham (2024), The main objective of this paper is to study and examine the sectoral development of the Indian Economy from a macroeconomic theoretical perspective, focusing on agriculture, manufacturing, defence, energy, transportation, engineering, pharmaceuticals, textiles covering many more industries. In this paper they talk about operations moved from mixed planned economy to middle-income emergent social market economy.

Dani Rodrik & Arvind Subramanian (2004), In the paper they talk about a drastic change in The Indian Economy in the year of 1980's and what led to this drastic growth before the liberalisation of 1991 and it investigates different hypotheses about this growth- Favourable external environment, etc. They also argue that this growth was due to the attitudinal shift of the national government towards a pro-business. Sandip Solanki, Krishna Murthy, Asmita (2021): Sectoral Contribution to Economic Development in India: A Time-Series Co-Integration Analysis. This paper explains the interrelationship between India's economic growth and sectoral contribution to GDP over a decade. Using Johanson's co-integration method and Vector Auto Regression (VAR) models. The study explores dynamic relationships with a focus on the industrial and agricultural sectors. It shows the impact of the industrial sector's contribution on economic growth, while the short-term impact extends to both the industrial and service sectors on economic growth and agriculture. Khatik, Amit Kr, (2014): Role of tourism industry in economic development of India.

This paper explains the role of tourism in India's service industry and its wider impact on economic growth. It emphasizes rapid growth of industry, employment potential and foreign exchange earnings. The study aims to analyse infrastructure developments that benefit host communities and acknowledge both positive and negative impacts. It highlights tourism as India's largest and fastest growing service sector, contributing significantly to GDP, employment, and earnings. Specific sectors such as traditional crafts and nature conservation are identified as beneficiaries.

Research Gap

In all the above previous literature reviews we can study about how different industries have led to the growth of India's economy in the past decades. They are mainly concentrated on how the modernization/industrialization leading India in becoming 5 trillion Dollar. The most reviews here tell us how covid has impacted the GDP of the country, the post activities, and the initiatives by government like make in India, Subsidies and many more opportunities for startups and India leading number 2 in population also acts a major obstacle for the GDP of the Country. The main gap which we were able to recognize is that they have spoken about all the different sectors and its contribution, and with reference to the recent paper by Dr. G. Yoganand (2024), who has spoken mainly about, primary, secondary, and tertiary sectors contributing to the Indian economy. In his paper we have recognised the importance of the tourism sector and we have extended the deeper research on the rapid growing sector (Tourism). We have dedicated our research on ecotourism under the tourism sector, which is now an emphasised importance laid down by UNWTO's and has given up new standards and goals to be followed.

Research Objectives

1. To Examine the existing economic strategies implemented by the Indian government.
2. To analyse the specific policy initiatives, reforms and legislative measures undertaken by India to support economic development.
3. To assess the sectorial contribution.

Research Problems

The realization of India's ambition to become a \$5 trillion economy faces several hurdles that impede its economic growth. First and foremost, the country needs to undertake and sustain structural reforms, particularly in the realms of labour, land, and agriculture, to enhance productivity and attract increased investments. The financial sector is grappling with challenges, notably non-performing assets (NPAs), necessitating reforms and recapitalization to fortify the banking system. Despite the Goods and Services Tax (GST) being introduced to simplify taxation, initial implementation challenges and ongoing refinements have been requisite. Insufficient infrastructure development, encompassing roads, ports, and logistics, poses a bottleneck to economic efficiency. Education and skill development must be prioritized to cultivate a skilled workforce capable of meeting the demands of a rapidly evolving global economy. The bureaucratic process needs streamlining and a reduction in red tape to promote ease of doing business, while political stability is pivotal for creating a conducive environment for policymaking and implementation, thereby inspiring investor confidence. The global economic environment, marked by trade tensions and commodity price fluctuations, remains a factor influencing India's economic performance. Addressing social challenges, including income inequality, poverty, and healthcare, is essential for inclusive growth. Additionally, balancing economic growth with environmental sustainability is crucial, necessitating policies that foster green and sustainable practices. Regular updates and considerations of evolving conditions are imperative, as economic trajectories are influenced.

Sources of the Data

The present study is exploratory in nature to provide a clear guidance for empirical research. It is also descriptive where the focus is on fact finding investigation with adequate interpretation for this purpose secondary data were collected. The secondary data collected through newspaper, magazines, books, journals, conferences, proceedings, government reports and websites.

Recent Trends in Eco Tourism in India

The world ecotourism is anticipated to grow at a CAGR of 16.38 from 2023 to 2032. The ministry of Tourism states that over 6.19 million and 1.52 million foreign tourists arrived in India in 2022 and 2021 compared to 2019 with 10.93 million. India has become 22nd most visited nation and is ranked 8th in Asia. Kerala has been named in the National Geographic's Travellers magazine as one of the ten paradises of the world and 50 must see destinations of lifetime. Delhi is ranked 28th by the number of foreign tourist arrivals, Mumbai as 30th, Chennai at 43rd, Agra 45th, Jaipur 52nd and Kolkata 90th.

The key trends in Eco Tourism in India are Sustainable accommodations

The world now is aware about the conservation importance who are now looking forward for eco-friendly stays and are fascinated to stay under sustainable stay options like

treehouse, tents and sustainable eco lodges which can be constructed using renewable energy sources and have minimal effect on the surrounding environment.

Carbon offsetting:

It is one of the major aspects where travellers can contribute by investing in renewable sources of energy such as solar energy, windmill etc. Wildlife conservation is also a major aspect of ecotourism where one can contribute eco-friendly products and take part in wildlife tours.

Corporate Sustainability Initiatives:

Many Indian companies are incorporating sustainability into their business strategies. Carbon offsetting is often part of broader sustainability initiatives aimed at reducing the overall environmental impact of business operations.

Renewable Energy Projects-

India has recorded significant growth in renewable energy projects, including solar and wind power. Companies and organizations involved in these projects can use carbon offsetting to offset residual emissions.

Biodiversity Conservation:

There is a growing emphasis on ecotourism initiatives that contribute to biodiversity conservation. Protected areas, national parks, and wildlife sanctuaries are becoming focal points for travellers interested in experiencing India's diverse flora and fauna while supporting conservation efforts.

Community-Based Tourism:

Community involvement in ecotourism has gained traction. Initiatives that engage local communities in the planning and management of tourism activities are becoming more common. This trend helps distribute the benefits of tourism more equitably and fosters a sense of responsibility among residents.

Adventure Ecotourism:

Adventure-based ecotourism activities continue to be popular. Trekking, bird watching, wildlife safaris, and other nature-based adventures attract travellers seeking active and immersive experiences in natural environments.

Sustainable Accommodations:

Travelers are increasingly seeking eco-friendly and sustainable accommodations. Hotels, lodges, and resorts that implement green practices, such as energy conservation, waste reduction, and water efficiency, are gaining favour among ecotourists.

Government Measures for Eco Tourism in India- Policy Frameworks:

Governments often develop and implement policy frameworks specifically aimed at promoting sustainable and eco-friendly tourism practices. These policies may outline guidelines for the development of eco-tourism initiatives, emphasizing conservation, community involvement, and responsible tourism.

Protected Areas and National Parks:

Governments designate and manage protected areas, national parks, and wildlife sanctuaries to preserve natural habitats and biodiversity. Regulations are put in place to control visitor access, activities, and infrastructure development within these areas to minimize environmental impact.

Certification and Standards:

Governments may establish certification programs and standards for eco-friendly accommodations, tour operators, and destinations. Certification ensures that businesses adhere to specific environmental and sustainability criteria, providing confidence to eco-conscious travellers.

Financial Incentives:

Financial incentives, such as grants, subsidies, or tax benefits, may be provided to businesses and communities engaged in eco-tourism initiatives. These incentives encourage the adoption of sustainable practices and the development of eco-friendly infrastructure.

Research and Monitoring:

Governments invest in research and monitoring programs to assess the environmental impact of tourism activities. This information helps in making informed decisions about resource management, visitor carrying capacity, and the overall sustainability of eco-tourism destinations.

Community Engagement:

Engaging local communities in the planning and decision-making processes is a key aspect of government measures. This ensures that the benefits of tourism reach local populations, fosters cultural preservation, and encourages a sense of ownership and responsibility.

Education and Awareness:

Governments conduct awareness campaigns and educational programs to promote responsible tourism practices among both tourists and local communities. This includes information on waste management, wildlife conservation, and the importance of sustainable tourism.

Regulatory Frameworks:

Governments enact and enforce regulations to manage tourism activities within eco-sensitive areas. These regulations may include restrictions on construction, waste disposal, and specific guidelines for tour operators to minimize their ecological footprint.

Collaboration with NGOs and Private Sector:

Collaboration with non-governmental organizations (NGOs) and the private sector is common. Partnerships can involve joint initiatives for conservation, community development, and the establishment of sustainable tourism practices.

Reference Cases

Foreign Policies of several countries formulated and implemented to boost Eco Tourism in their territory. These policies are aimed to conserve the natural heritage and importance of places undertaken in the policy where opportunities and economic advantage in such places are being focused.

1. **Costa Rica:** It has implemented policies that prioritize conservation efforts in its national parks and protected areas. It promotes incentives for eco-friendly accommodations and tour operators, encouraging businesses to adopt sustainable practices.
2. **New Zealand:** New Zealand's foreign policy supports eco-tourism through initiatives that promote conservation and protection of its unique ecosystems. The country actively markets itself as a destination for nature lovers, highlighting its commitment to preserving the environment.
3. **Bhutan:** Bhutan's foreign policy focuses on promoting "Gross National Happiness" rather than just economic indicators. The country has a low-impact, high-value tourism approach. The government imposes a daily tourist tariff that includes sustainable development fees, contributing to the conservation of the environment.
4. **Kenya:** Kenya's foreign policies emphasize the importance of wildlife conservation and responsible tourism. The country's strategy involves community-based conservation efforts, where local communities are actively involved in the management of natural resources and benefit from eco-tourism initiatives.
5. **Switzerland:** Switzerland's foreign policy promotes sustainable tourism in its Alpine regions, emphasizing the conservation of landscapes and the responsible use of natural resources. The country encourages eco-friendly accommodations and transportation options for tourists.

Findings

In one of the papers, we can see and study on how liberalisation has brought a boost in the economy as their concentration shifted towards pro-business model.

In our paper we are majorly concentrating on the Tourism sector which is considered as one of the fastest evolving sectors. India has seen a major contribution of GDP from this sector, and it is also estimated at an annual rate of 7.8% to ₹33.8 lakh crore (US\$420 billion) by 2031 (7.2% of GDP), contributing India's major GDP. In this sector we are concentrating on ecotourism. Which is considered as the best way to invite more tourism and conserve our nature. The word ecotourism refers to appreciating observing nature, tradition, and culture. The main aspect of ecotourism is to conserve natural resources, boost the economy, create opportunities for travel and discovery, all the above aspects as talked about briefly in our paper. Upholding the importance of the tourism sector and how ecotourism can be implemented and help in boosting GDP and making it easy to reach India's economy to 5 trillion dollars. There are initiatives taken by UNWTO to conserve nature and the best way of developing and conserving nature and simultaneously attracting tourists and contributing to the economy.

Suggestions

To enhance government measures for eco-tourism in India, a multifaceted approach is recommended. First and foremost, there is a need to strengthen policy frameworks that

explicitly prioritize environmental conservation, community engagement, and responsible tourism practices. Regular reviews and updates should be undertaken to adapt these policies to evolving circumstances. Increased investment in research and monitoring programs is essential to assess the impact of tourism on natural ecosystems, guiding decision-making and conservation efforts. Financial incentives, such as grants, subsidies, or tax benefits, should be introduced to encourage businesses and communities to adopt sustainable practices. This can stimulate the growth of responsible eco-tourism initiatives across the country. Recognizing the importance of community involvement, efforts should be made to empower local populations and ensure that they derive economic benefits while preserving their cultural heritage. Implementing certification programs and standards for eco-friendly accommodations, tour operators, and destinations can further reinforce sustainable practices. Education and awareness campaigns, in collaboration with government agencies, NGOs, and the private sector, are crucial to promote responsible tourism among both tourists and local communities. Stricter enforcement of regulations governing eco-sensitive areas, along with adaptive regulatory frameworks, will help safeguard fragile ecosystems. Public-private partnerships can foster innovation and resource-sharing, while promoting tourist engagement through codes of conduct will encourage responsible behaviour. Finally, capacity-building programs for local communities, tour operators, and government agencies involved in eco-tourism will contribute to the long-term success and sustainability of these initiatives. Through these measures, the government can play a pivotal role in fostering eco-friendly tourism practices in India.

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THE PIVOTAL ROLE OF TECHNOLOGY IN INDIAN ECONOMIC GROWTH

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Abstract

This research delves into the pivotal function of generation in propelling India towards a five trillion-greenback economy, specializing in key aspects like Digital India projects, Industry 4.0 adoption, AgTech improvements, and the colourful start-up environment. Positioned on the intersection of tradition and modernity, India showcases the capacity for "technological leapfrogging," bypassing traditional degrees for modern technologies. Through a complete literature evaluate related to superb resources like Nandan Nilekani and Klaus Schwab, the take a look at explores the transformative impact of era on India's financial panorama, addressing important findings in Digital India, Industry 4.0, AgTech, and the begin-up environment. Despite achievements, demanding situations including the digital divide and cybersecurity concerns necessitate complete policies for inclusive, secure, and sustainable blessings. The studies concludes by using emphasizing the need for collaborative efforts among policymakers, enterprise stakeholders, and society to fully harness generation's capability in India's journey to a 5 trillion-greenback economy.

Introduction

In the quest to attain a five trillion-greenback financial system, India stands on the intersection of lifestyle and modernity, in which the strategic integration of generation emerges as a cornerstone for sustained economic increase. Technology, with its transformative electricity, has the ability to reshape industries, decorate productiveness, and foster innovation, thereby propelling India toward unheard of economic milestones.

India's precise position allows for a phenomenon called "technological leapfrogging," in which the kingdom can bypass traditional developmental tiers and at once embody contemporary technologies. From the speedy penetration of cellular phones to the surge in internet connectivity, India has already tested its potential to leapfrog, presenting a glimpse into the huge possibility's generation offers for financial development.

The authorities's ambitious Digital India tasks underscore a commitment to leveraging era as a catalyst for inclusive increase. Initiatives which include Aadhaar, UPI (Unified Payments Interface), and the frenzy closer to a cashless financial system show off a forward-looking method that no longer best complements efficiency but additionally fosters economic inclusion and transparency.

Industry 4.0 and Smart Manufacturing

The fourth business revolution, frequently known as Industry 4.0, brings with it the convergence of virtual technologies like synthetic intelligence, IoT (Internet of Things), and massive statistics. In the producing sector, embracing smart technology can lead to accelerated efficiency, decreased prices, and improved competitiveness on the global level.

AgTech and Precision Agriculture:

Agriculture, a vital region of the Indian financial system, is undergoing a technological revolution thru AgTech. Precision agriculture, powered via facts analytics, drones, and IoT gadgets, holds the promise of increasing yields, optimizing useful resource usage, and transforming rural livelihoods.

Start-up Ecosystem and Innovation Hubs:

India's colourful begin-up surroundings is at the forefront of technological innovation. With several innovation hubs and incubators, the United States is nurturing a culture of entrepreneurship that fosters disruptive technology, from fintech to healthiest, contributing significantly to economic diversification.

Challenges and Opportunities:

While technology provides unheard of opportunities, challenges which include the virtual divide, cybersecurity issues, and the need for talent development ought to be addressed. A comprehensive expertise of those challenges is crucial for formulating regulations that make sure the advantages of generation are inclusive and sustainable.

In these studies, we delve into the multifaceted effect of era on India's economic landscape, exploring key sectors, policy implications, and the transformative capacity that generation holds in steering the kingdom closer to the coveted five trillion-greenback economic system.

Literature Review

Authored by using Nandan Nilekani, this Harvard Business Review article explores the transformative capacity of Digital India tasks, emphasizing technology's role in connecting the nation. Nilekani discusses how these tasks impact financial growth, digital inclusion, and transparency. (Nilekani, 2017)

Written by way of Klaus Schwab of the World Economic Forum, this guide delves into Industry 4.0 and its implications on manufacturing productivity and boom. The paper discusses how technology like synthetic intelligence and IoT are reshaping the producing landscape globally. (Schwab, 2016)

Ashok Gulati and Shweta Saini discover the adoption of agricultural technology in India, that specialize in issues and concerns. The paper analyses how AgTech, along with precision agriculture and records analytics, can revolutionize farming practices and make a contribution to monetary growth. (Ashok Gulati, 2019)

Published via the Department of Industrial Policy and Promotion (DIPP), this government record offers a top level view of the Indian start-up surroundings. It info the tasks underneath the Start-up India marketing campaign, highlighting the position of technology-pushed innovation in monetary diversification. (DIPP (Department of Industrial Policy and Promotion), 2016)

M. Sankar and R. Bhuvaneshwari's study investigates the role of digital financial inclusion in India's monetary boom. The authors look at how technology inside the financial quarter make contributions to monetary development and inclusivity. (M. Sankar, 2018)

Bimal Tanna and Rakesh K. Singh's book offers insights into India's digital transformation, supplying a roadmap for building economies of scale. The booklet explores the impact of digitalization on various sectors of the economic system. (Bimal Tanna, 2020)

Subhashish Dey and Shonac Set consciousness at the effect of the Fourth Industrial Revolution on sustainable city improvement. The paper provides technological innovations and coverage suggestions for emerging cities to harness the capacity of Industry four.0 sustainably. (Subhashish Dey, 2021)

Vineet Kumar and B. S. Sahay's empirical study assesses the impact of Industry 4.0 at the Indian production region. The studies explores the adoption and implications of

advanced technologies in production for improved performance and global competitiveness. (Vineet Kumar, 2020)

Tim Sturgeon's paper explores the dynamics of technology and monetary improvement, emphasizing the function of era in neighborhood, nearby, and country wide competitiveness. It offers insights into the complex courting among technology and economic increase. (Sturgeon, 2019)

This record via NITI Aayog comprehensively outlines the policy landscape and guidelines for artificial intelligence in India. It discusses the capacity socio-economic impact and coverage interventions had to leverage AI for financial boom. (Aayog, 2018)

Research Objective

To thoroughly investigate how technology has revolutionized India's economic environment, with a particular emphasis on significant digital projects, Industry 4.0 adoption, AgTech developments, and the function of the start-up ecosystem. The objective is to pinpoint the crucial elements, obstacles, and opportunities that will influence India's economic trajectory as it moves towards becoming a \$5 trillion economy.

India's Digital Economy: A Path to Five Trillion Dollars

Digital India can assist obtain the purpose of a \$5 trillion financial system through boosting productiveness, allowing virtual monetary offerings, and producing new process possibilities. Developing a sturdy cybersecurity framework, implementing inclusive rules, bolstering information protection law, and encouraging digital literacy are just a few of the crucial policy concerns.

To sum up, Digital India is important to India's hopes for economic boom. For India's digital financial system to flourish sustainably, policymakers, enterprise stakeholders, and society as an entire should work together to deal with obstacles and capture possibilities.

Impact:

Digital India's Impact: Enhanced Connectivity: Digital infrastructure has been substantially advanced by Digital India programs, providing elevated connectivity in both city and rural regions.

Financial Inclusion: By enabling virtual bills for a larger wide variety of humans, Aadhaar and UPI were instrumental in selling economic inclusion.

Difficulties:

Digital Divide: One fundamental trouble that still exists is the unequal get admission to to virtual generation and infrastructure amongst city and rural communities.

Cybersecurity Concerns: As services grow to be more digitally related, cybersecurity dangers have grown more extreme, necessitating the implementation of sturdy defenses.

Possibilities:

Rural Empowerment: By addressing the digital hole, rural populations can get get admission to to statistics and offerings, which can unharness extensive ability in these locations.

Economic Growth: Using virtual systems for commerce and commercial enterprise can assist increase the economy, particularly for small companies.

Industry 4.0 Adoption

India has possibilities for Industry adoption in spite of barriers. Investments in talent development, authorities backing, and collaborative efforts among industry, academia, and worldwide collaborations can address issues and inspire establishments, in particular SMEs, to embrace Industry.

Business is important to building a \$5 trillion financial system because it promotes economic inclusion, activity boom, and business diversification. Resource optimization supports sustainable improvement goals, and growing worldwide competitiveness makes India a major force inside the international manufacturing scene. India's effective incorporation of Industry 4.0 era in its course toward financial prosperity is made feasible by using addressing hurdles via talent improvement, government backing, and collaboration.

Impact

Increased Efficiency and Productivity: Industry 4.0 technologies, which include IoT, AI, and automation, result in progressed performance in manufacturing procedures, lowering manufacturing costs and enhancing average productiveness.

Customization and Innovation: Adoption of clever production allows for extra customization of products, fostering innovation and assembly the various demands of purchasers.

Supply Chain Optimization: Industry facilitates real-time facts analytics and connectivity, optimizing supply chains through imparting insights into demand forecasting, inventory control, and logistics.

Challenges

Skill Gaps: The transition to Industry demands a skilled group of workers gifted in technologies consisting of statistics analytics, AI, and robotics. Skill shortages pose a sizable venture.

High Implementation Costs: Initial funding fees for acquiring and imposing Industry4.0 technologies can be high, mainly for small and medium-sized organisations (SMEs).

Resistance to Change: Existing organizational cultures and resistance to alternate can hinder the clean adoption of new technologies. Encouraging a tradition of innovation turns into crucial.

Opportunities

Skill Development Initiatives: Investing in talent development applications, instructional initiatives, and vocational training can address the talent gaps and create a group of workers prepared for Industry 4.0.

Government Support and Incentives: Governments can provide financial incentives, tax breaks, and coverage assist to encourage agencies, particularly SMEs, to adopt Industry 4.0 technologies.

Agtech Advancements

AgTech has full-size capacity, however it also has drawbacks. Widespread adoption is hampered by using low expertise in rural areas, steeply-priced preliminary investment costs, connectivity problems, and competition to exchange. Nonetheless, government applications together with NMAET, partnerships among the general public and industrial sectors, and

focused farmer education sports offer probabilities to sell adoption, especially for smallholders.

AgTech is anticipated to make a extensive contribution to the \$five trillion financial system in the future. Promoting sustainable practices ensures long-term economic impact and is consistent with worldwide goals. The growth of this enterprise supports rural economic improvement by means of producing jobs in statistics evaluation and technology. Adopting AgTech will increase worldwide competitiveness by means of diversifying, adhering to standards, and being efficient. It also generates greater sales streams and boosts GDP average. India's agriculture is changing, and AgTech is a prime element in guiding the sector toward the challenging financial goal.

Impact

Increased Agricultural Productivity: AgTech solutions consisting of precision farming, drones, and sensors make a contribution to progressed crop management, ensuing in multiplied agricultural productiveness.

Resource Optimization: Smart irrigation systems and statistics-pushed choice-making assist optimize using water, fertilizers, and insecticides, decreasing resource wastage and enhancing sustainability.

Enhanced Yield Predictions: Data analytics and predictive modeling permit farmers to count on and mitigate demanding situations, leading to greater correct yield predictions and higher risk management.

Challenges

Limited Awareness and Education: Many farmers, mainly in rural regions, may additionally lack attention and training approximately AgTech answers, hindering their adoption.

Initial Investment Costs: The upfront prices related to enforcing AgTech solutions, such as purchasing sensors or precision system, can be a barrier for small-scale farmers.

Connectivity Issues: In far flung agricultural regions, negative net connectivity may impede the seamless integration of digital technologies, restricting the effectiveness of AgTech answers.

Opportunities

Government Initiatives and Incentives: Government guide thru tasks just like the National Mission on Agricultural Extension and Technology (NMAET) and incentives for AgTech adoption can encourage farmers to embrace new technology.

Public-Private Partnerships: Collaborations among authorities, personal organisations, and NGOs can facilitate the improvement and implementation of AgTech solutions, making sure considerable adoption.

Investment in Farmer Education: Investing in farmer schooling programs to beautify virtual literacy and focus approximately AgTech benefits can stimulate adoption.

Findings and Discussion

Technological Leapfrogging and Digital India:

Findings: India's capability for technological leapfrogging, as visible inside the rapid adoption of mobile phones and internet connectivity, showcases the country's ability to include modern-day technology.

Discussion: The phenomenon of leapfrogging is a key enabler in India's quest for a five trillion-greenback economic system, allowing the nation to pass conventional developmental tiers and without delay leverage advanced technologies for financial boom.

Digital India Initiatives:

Findings: Digital India tasks, which includes Aadhaar and UPI, have extensively stepped forward connectivity, fostered monetary inclusion, and streamlined e-governance, showcasing a dedication to leveraging technology for inclusive growth.

Discussion: Despite achievements, demanding situations such as the virtual divide and cybersecurity issues highlight the need for complete rules to ensure the blessings of digital tasks are inclusive, secure, and sustainable.

Industry 4.0 and Smart Manufacturing

Findings: Industry four.0 adoption in India has caused improved performance, decreased production charges, and more desirable competitiveness thru technologies like AI and IoT.

Discussion: Challenges together with ability gaps and resistance to change underscore the importance of funding in talent development, authorities aid, and collaborative efforts to fully harness the capability of Industry four.Zero.

AgTech Advancements

Findings: AgTech improvements contribute to expanded agricultural productivity, resource optimization, and improved yield predictions through precision farming, drones, and records analytics.

Discussion: Challenges like confined consciousness, excessive initial investment prices, and connectivity troubles emphasize the want for centered farmer education, authorities incentives, and public-personal partnerships to pressure AgTech adoption.

Start-up Ecosystem and Innovation Hubs:

Findings: India's vibrant begin-up atmosphere fosters technological innovation across sectors, contributing significantly to financial diversification.

Discussion: The position of begin-usain riding innovation calls for continued guide thru incubators, coverage frameworks, and access to funding to sustain their contribution to financial increase.

Challenges and Opportunities:

Findings: Challenges including the virtual divide, cybersecurity issues, and talent development need to be addressed to make certain inclusive and sustainable technology adoption.

Discussion: Policymakers need to navigate those demanding situations with the aid of imposing comprehensive strategies that leverage possibilities which includes rural empowerment, financial growth thru virtual commerce, and international collaboration.

Conclusion

The aspiration of India to achieve a five trillion dollar economy highlights the phenomena of technological leapfrogging, with technology emerging as a transformative force. Industry 4.0 adoption, AgTech innovations, Digital India programs, and a thriving

start-up environment are important pillars. Encouraging financial inclusion and transparency, the government's support of technologies such as Aadhaar and UPI demonstrates a forward-thinking strategy. While AgTech offers higher productivity and resource optimization in agriculture, Industry 4.0 provides efficiency benefits and competitiveness to manufacturing. Some of the issues that need to be addressed strategically include the cybersecurity risks and the digital gap. India's ambition to become a \$5 trillion economy is the focus of research that focuses on start-ups, Industry 4.0, digital initiatives, and AgTech.

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DATA-DRIVEN PERSONALIZATION STRATEGIES: PROPELLING INDIA'S ECONOMIC GROWTH IN THE DIGITAL AGE

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Abstract

India's digital landscape is rapidly evolving, necessitating new strategies for businesses to thrive. Data-driven personalization is a powerful tool that leverages customer insights to create tailored experiences, such as UPI and Fast tag, driving economic growth. By leveraging data such as past purchases, browsing habits, and location, businesses can anticipate individual needs and desires, leading to curated product recommendations, laser-focused marketing campaigns, and dynamic pricing. This granular understanding fosters customer satisfaction, loyalty, and revenue. Even brick-and-mortar stores can benefit from personalization, with AI-powered chatbots offering multilingual support and loyalty programs incentivizing specific purchases. Tailored in-store displays and targeted promotions can transform the shopping experience, attracting customers. A personalized digital economy drives efficiency, reduces friction, and unlocks new value for consumers and industries. However, navigating privacy concerns, ethical data collection, and security risks is a delicate balance. Despite these challenges, data-driven personalization is a crucial engine for India's digital age growth, enabling businesses to forge deeper customer connections, unlock new revenue streams, and fuel a dynamic economy based on individual needs and aspirations.

Keywords: Revenue growth, Value creation, Ethical data collection, Risk management.

Introduction

In the era of digital transformation, data-driven personalization strategies emerge as a pivotal force shaping the worldwide digital landscape. Beyond borders, industries globally are embracing personalized approaches, revolutionizing economies and reshaping interactions across diverse sectors. From multinational retailers and healthcare providers to financial institutions, businesses leverage data-driven personalization for international impact, creating a transformative ripple effect. The societal and economic ramifications extend to global supply chains, fostering efficiency and reducing friction on a universal scale. Nevertheless, challenges such as ethical considerations and diverse regulations necessitate concerted international collaboration. As data-driven personalization becomes a universal imperative, nations collectively stand at the forefront of shaping a digital future characterized by shared prosperity and cross-sectoral collaboration. This evolution transcends local trends, propelling the global economy into a new era of interconnected and personalized digital experiences. Moreover, innovation and digital technology have important implications for stability and the broader economy.

Theoretical Background:

The theoretical foundation of this research is built upon several key concepts and frameworks that underpin the understanding of data-driven personalization strategies within the context of India's digital economy.

1. *Personalization Algorithms:* Drawing from collaborative filtering and content-based filtering models, the research explores how algorithms analyze user data to provide

personalized recommendations. Understanding these algorithms is crucial to grasping the intricacies of tailored user experiences.

2. *User-Centered Design (UCD)*: The study incorporates principles of UCD, emphasizing the importance of designing digital systems based on user preferences and behaviors. This theoretical lens provides insights into creating interfaces that resonate with the diverse user base in India.
3. *Behavioral Economics*: Grounded in behavioral economics, the study investigates how personalized suggestions influence consumer decision-making. Theoretical insights from this field contribute to understanding the psychological aspects of user choices in the digital landscape.
4. *Data Privacy and Ethics*: Theoretical frameworks surrounding data privacy, including principles from international standards like the General Data Protection Regulation (GDPR), guide the exploration of ethical considerations in data collection and usage. This ensures that the research adheres to responsible data practices.
5. *Consumer Behavior Theories*: Incorporating theories such as Technology Acceptance Model (TAM) & Unified Theory of Acceptance and Use of Technology (UTAUT), the research explores factors influencing user acceptance of data-driven personalization. Understanding these theories enhances the comprehension of user behaviors in response to personalized features.
6. *Globalization Theories*: Grounded in globalization theories, the study investigates how data-driven personalization contributes to the interconnectedness of India's digital economy with the global landscape. Theoretical perspectives provide insights into the broader implications of personalized strategies.

Indian Digital Revolution

The digital revolution is an exciting phenomenon reshaping the landscape. It's not just about booming internet connectivity and smartphone adoption, but a surge of data-driven innovation transforming everyday lives and propelling economic growth.

- a). *Exponential connectivity*: Over 560 million Indians are now online, a staggering 1000% increase since 2010. This digital surge is fueled by affordable data plans and the ubiquitous presence of smartphones, putting the power of information and connection in the palm of their hands.
- b). *E-commerce boom*: Gone are the days of brick-and-mortar dominance. Online shopping has exploded, with smartphone penetration driving a 25% annual growth in e-commerce transactions. From groceries to gadgets, Indians are embracing the convenience and variety of digital marketplaces.
- c). *Fintech revolution*: Cash is increasingly giving way to digital wallets and cashless transactions. The value of digital payments has jumped a staggering 60% in just one year, exceeding a trillion dollars. Fintech startups are innovating rapidly, making financial services more accessible and inclusive for millions.
- d). *Personalized experiences*: Data is the new gold, and businesses are leveraging it to personalize customer experiences. From tailored product recommendations to targeted marketing campaigns, companies are using data insights to build deeper connections and boost loyalty.

This digital revolution is not without its challenges. Bridging the digital divide in rural areas and ensuring data privacy and security are critical concerns. But the potential is immense. By harnessing the power of data and personalization, India can:

- i). *Boost economic growth*: Studies suggest that personalization can unlock a 6-10% revenue increase for businesses and a 5% GDP growth boost for the economy as a whole.
- ii). *Empower entrepreneurs*: Personalized platforms can connect small businesses directly with customers, bypassing traditional intermediaries and fostering inclusive growth.
- iii). *Enhance government services*: Data-driven insights can inform policy decisions for infrastructure development, skill development, and targeted social programs, leading to more efficient and effective governance.

India's digital revolution is still unfolding, a dynamic story with exciting chapters yet to be written. Your research on data-driven personalization strategies has the potential to contribute valuable insights, shaping a future where technology empowers individuals, fuels economic prosperity and creates a more connected and equitable India.

Driving Economic Growth and Development through Data-Driven Personalization Strategies

The study employs a mixed-methods approach, combining interviews, surveys and case studies to investigate the impact on business innovation, consumer behavior and socio-economic inclusivity. Key focus areas include understanding how businesses leverage personalization for competitiveness, analyzing its influence on consumer engagement and assessing its role in fostering inclusivity in economic development. Additionally, the research explores the impact of user-centric design principles and cultural considerations. The expected contributions of this research lie in providing nuanced insights into the mechanisms through which data-driven personalization drives economic growth, informing academia and industry for strategic decision-making.

Review of Literature

- i) **Raghavan (2018)**: Article: "Digital Transformation and Economic Impact" The objective is to explore the impact of digital transformation on economic growth. The research methodology likely involves analyzing data on digital adoption and economic indicators to understand the correlations and causal relationships. It may provide insights into how digital transformation influences economic development and suggest potential implications for policymakers and businesses.
- ii) **Verma, Priya (2019)**: Research Paper: "Technological Innovations in Indian Fintech". It aims to examine the role of technological innovations in fostering growth within the Indian fintech sector. The research methodology may involve case studies, surveys, or data analysis to understand the specific innovations and their impact on the fintech landscape. It might offer recommendations for policymakers and industry stakeholders based on the findings.
- iii) **Gupta, Ananya (2020)**: Article: "Blockchain Technology and Sustainable Development" It focuses on investigating the role of blockchain technology in contributing to sustainable development and economic growth. The research methodology could involve a combination of literature review, case studies, and possibly interviews with experts in the field. It may highlight the potential benefits of

blockchain for sustainable development and suggest areas for future research or implementation.

- iv) **Patil, Shubham (2017):** Research Article: "Mobile Banking and Rural Development in India". It sets out to assess the contribution of mobile banking to rural development and its implications for overall economic growth. The research methodology likely includes surveys, interviews, or data analysis to understand the impact of mobile banking on rural communities. It may provide insights into the effectiveness of mobile banking in promoting rural development and offer recommendations for policy and financial institutions.

Research Design:

Statement of the problem: The advent of digital technologies has ushered in a transformative era, reshaping various sectors and influencing economic dynamics. In the context of India, a nation experiencing rapid digital growth, understanding the nuanced challenges and opportunities becomes imperative for informed decision-making. This research aims to present and analyze the key issues like security challenges, reliability and user-friendly interfaces which play crucial roles in influencing user trust and adoption of digital transactions. Challenges related to scalability and infrastructure further complicate the seamless integration of digital payment solutions across diverse sectors. Addressing these issues is essential to realizing the full potential of digital transactions in modern financial ecosystems. In this context to what extent that digital revolution can integrate well with the Industrial eco system and also how it can contribute to Indian Economy is attempted here.

Research Objectives:

1. Evaluate the Job Creation Impact of Digital Transactions.
2. Analyze Scalability and Infrastructure Needs for Digital Transactions.
3. Investigate the Role of Data-Driven Personalization in Boosting Economic Efficiency and Reducing Friction in India's Digital Age.

Limitations:

1. Secondary data based research focusing on digital data related analysis only.
2. As it is desk research, reliability of data is one major limitation.

Major Findings and Discussion

Financial and Digital Transactions:

During last five years, various easy and convenient modes of digital payments, including Bharat Interface for Money-Unified Payments Interface (BHIM-UPI), Immediate Payment Service (IMPS), and National Electronic Toll Collection (NETC) have registered substantial growth and have transformed digital payment ecosystem by increasing person-to-person (P2P) as well as person-to-merchant (P2M) payments. BHIM UPI has emerged as the preferred payment mode of the citizens and has recorded 803.6 crore digital payment transactions with the value of ₹ 12.98 lakh crore in January 2023.

The total number of digital payment transactions undertaken during the last five financial years and the current financial year are as under:

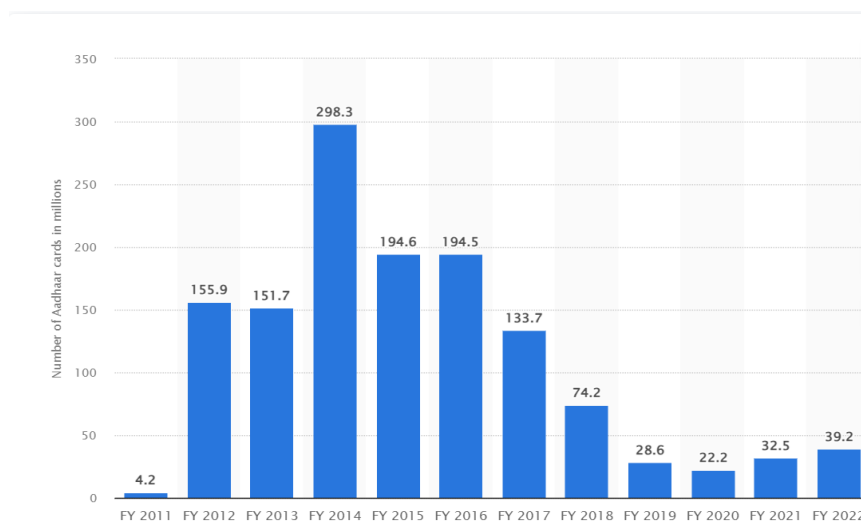
Financial Year (FY)	Total number of digital transactions (in crore) *
2017-18	2,071
2018-19	3,134
2019-20	4,572
2020-21	5,554
2021-22	8,840
2022-2023	9,192

(Source: RBI, NPCI and Banks)

*Digital payment modes considered are BHIM-UPI, IMPS, NACH, AePS, NETC, debit cards, credit cards, NEFT, RTGS, PPI and others.

Aadhar-related Statistics and Usage Data (UIDAI):

Monthly number of Aadhaar cards generated across India from financial year 2011 to 2022 (in millions). In financial year 2022, around 39.2 million Aadhaar identification cards were generated in India 1. The monthly number of Aadhaar cards generated across India from financial year 2011 to 2022



Ministry of Road Transport and Highways (MoRTH):

Daily Toll Collection through FASTag Reaches Record High of Over Rs. 193 Crore. The implementation of the FASTag system for toll collection in India has been a resounding success, with a consistent growth trajectory. On 29th April 2023, the daily toll collection through FASTag system achieved a historic milestone, reaching an all-time high collection of Rs. 193.15 crore, with 1.16 crore transactions recorded in a single day. Since FASTag was mandated by the Government in February 2021, the number of toll plazas under FASTag programme has increased from 770 to 1,228, including 339 state toll plazas. With a penetration rate of around 97 percent and over 6.9 crore FASTag issued to users, the system has significantly improved the user experience by reducing waiting times at NH Fee Plazas. The consistent and progressive adoption of the FASTag by highway users has not only enhanced the efficiency of toll operations but also led to a more precise valuation of road assets, attracting further investment in India's highway infrastructure.

In addition to its effectiveness in toll collection, FASTag has also facilitated seamless and secure contactless payment for parking fees at over 140 parking lots in 50+ cities across India.

The Government remains steadfast in its commitment to provide a seamless and hassle-free tolling experience for all road users. In this context, NHAI is actively working towards finalizing the necessary requirements for implementation of Global Navigation Satellite System (GNSS) based tolling system for allowing free-flow tolling system in India.

Open digital health ecosystems (ODEs) – Ayushman Bharat scheme:

The Indian government, through its implementation of several digital programs, has paved the way for building an effective and comprehensive digital healthcare architecture under the National Digital Health Mission (NDHM).

Ministry of Agriculture and Farmers' Welfare:

The Digital Agriculture Mission 2021–2025 was launched in September 2021 by Narendra Singh Tomar, Union Minister of Agriculture and Farmers Welfare. Five Memorandum of Understandings (MoUs) were signed to advance digital agriculture through pilot projects with Cisco, Ninjacart, Jio Platforms Limited, ITC Limited, and National Commodity and Derivatives Exchange (NCDEX) e-markets Limited (NeML). The Digital Agriculture Mission 2021–2025 aims to encourage and speed up projects based on cutting-edge technologies, including AI, blockchain, remote sensing, robots, and drones.

Over 1,000 agri-tech start-ups are based in India, and various venture capital funds, loan funds, and angel investors have long supported the sector. These start-ups have innovative ideas that assist farmers in improving farming techniques and produce.

India is also helping the farmers by providing agricultural loans that will help increase natural farming practices and significantly modernize agriculture, emphasizing agri-waste management. In addition, 11 crore farmers have received \$ 26.4 Bn through the Pradhan Mantri (PM) Kisan Samman Nidhi initiative. Additionally, the market for organic products has grown to \$ 1.5 Bn. The government is also encouraging AI to revolutionize agricultural and farming trends and giving financial support to Agri-tech firms.

Ministry of Defence (MoD):

Increased budgetary allocation: Defence R&D budget allocated for technology development soared from \$1.5 billion in 2018 to \$2.5 billion in 2023, representing a 67% increase. The Digital India Defence Cyber Resilience project witnessed a 500% budget hike over the same period.

Technological advancements: AI adoption: Over 100 AI-powered projects were initiated in areas like border surveillance, predictive maintenance, and logistics optimization.

Big data analytics: Integration of data analytics platforms for intelligence gathering and threat prediction increased by 30%.

Cybersecurity focus: Establishment of the Defence Cyber Agency led to a 40% rise in cyber threat detection and mitigation capabilities.

Domestic manufacturing drive: Launch of the "Make in India" initiative in defense led to a 25% increase in domestic procurement of defense equipment compared to 2018.

Successful development and deployment of indigenous systems like Akash air defense system and DRDO Rustom 2 UAV.

Digital transformation initiatives: Implementation of the Defense Acquisition Platform (DAP) streamlined the procurement process, reducing timelines by 20%.

Introduction of paperless workflows in key administrative functions led to a 15% improvement in efficiency.

Expansion of digital training simulations across all military branches, saving \$10 million annually compared to traditional training methods.

Challenges and future focus: Addressing cybersecurity vulnerabilities remains a top priority with the increasing reliance on digital technologies.

Bridging the skill gap in critical areas like AI, cybersecurity, and data analytics is crucial for sustained progress.

Continued investment in research and development for next-generation technologies like hypersonic and quantum computing is essential.

Data-Driven Personalization Strategies

E-commerce Boom:

- Personalized recommendations drive 35% of revenue for Flipkart (source: Flipkart internal data). Imagine 35 out of every 100 rupees earned by Flipkart comes from recommending products customers are likely to love!
- Personalization can increase conversion rates by 20% (source: McKinsey & Company report). A 20% jump in conversions translates to significantly more customers completing purchases, boosting overall sales.

Retail Revolution:

- AI-powered chatbots increase customer satisfaction by 25% (source: Capgemini study). Happy customers mean repeat business and positive word-of-mouth, leading to a 25% boost in satisfaction is no small feat!
- In-store displays with personalized recommendations can lift sales by 10-15% (source: Accenture report). Imagine walking into a store and seeing products you're likely to love right off the bat, leading to a 10-15% sales increase is definitely appealing for retailers.

Digital Economy:

- India's personalized advertising market is expected to reach \$4 billion by 2025 (source: eMarketer). That's a staggering growth and highlights the immense potential of personalization in the digital ad space.
- Data-driven marketing campaigns deliver 7x higher ROI compared to generic campaigns (source: Forrester Research). Imagine getting 7 times the return on your marketing investment by using targeted personalization, that's a game-changer for businesses.

Consumer Expectations:

- 80% of Indian consumers expect personalized experiences from brands (source: PwC study). This overwhelming demand shows that personalization is no longer a luxury, but a baseline expectation for Indian consumers.

Ethical Considerations:

- 65% of Indian consumers are concerned about data privacy (source: KPMG study). While personalization offers benefits, addressing data privacy concerns is crucial for building trust and ensuring ethical data practices.

Conclusion

In conclusion, this research has delved into critical dimensions of India's digital landscape, addressing key objectives related to the job creation impact of digital transactions, scalability and infrastructure needs, and the role of data-driven personalization in enhancing economic efficiency. The findings contribute substantially to understanding the implications and challenges of India's digital evolution, emphasizing the need for a nuanced, multi-faceted approach to policymaking and implementation in the digital age. A forward-looking strategy for India's digital future involves integrated policies that balance innovation and safeguards, investments in robust digital infrastructure, educational initiatives to empower a digitally skilled workforce, the development of an ethical framework for data-driven personalization, and public awareness campaigns to inform and engage the population. This comprehensive approach aims to foster economic growth while addressing challenges related to job creation, scalability, and the responsible use of digital technologies.

Scope for Future Study

The current study was focused on examining the transformative impact of financial and digital transactions in India. Key areas of investigation included the evolution of digital payment systems, the integration and influence of Aadhaar, the success and implications of FASTag implementation in toll collection, the development of open digital health ecosystems, the Digital Agriculture Mission's advancements, and the technological progress in the Ministry of Defence. The study aimed to provide comprehensive insights into the dynamic landscape of India's digital age, highlighting significant trends and their implications across various sectors. It explored the substantial growth of digital payment systems over the past five years, the correlation between Aadhaar issuance and its integration into various sectors, and the notable success of FASTag in enhancing toll operations. Additionally, the study delved into the impact of digital initiatives in healthcare, agriculture, and Defence, contributing valuable perspectives on the multifaceted changes brought about by India's ongoing digital transformation.

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UNLOCKING INDIA'S POTENTIAL: JOURNEY TOWARD A 5 TRILLION DOLLAR ECONOMY AND BETTER EASE OF DOING BUSINESS

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Introduction

India is one of the world's fastest growing economies, and it expected to reach high middle income status by 2047, the centenary of Indian independence.

After falling in FY20/21 due to the COVID-19 pandemic, real GDP growth recovered strongly in FY21/22, supported by accommodating fiscal and monetary policies and widespread vaccine coverage. As a result, in 2022, India emerged as one of the world's fastest growing economies, despite significant global challenges such as renewed supply chain disruptions caused by rising geopolitical tensions, synchronized tightening of global monetary policies, and inflationary pressures.

India's real GDP raised by an estimated 6.9 percent in the fiscal year 22/23. Growth was aided by strong domestic demand, solid investment activity boosted by the government's push for infrastructure investment, and buoyant private consumption, particularly among higher-income earners. The combination of domestic demand has also shifted, with government consumption lower due to fiscal consolidation.

However, there have been signals of deceleration since the third quarter of FY22/23, although the overall growth pace remaining strong. Rising borrowing prices, tightening financial conditions and persistent inflationary pressures are likely to impact on Indian economic growth in FY23/24. Real GDP growth is projected to go to 6.3 percent in FY23/24, from an estimated 6.9 percent in FY22/23.

Review of Literature

Numerous researchers have delved into the realm of journey towards India's 5 trillion dollar economy and its impact on doing business here.. Several relevant studies in this domain are summarized below.

Dr.A.Shaji George (2023) conducted an evaluation on India's Economic Growth, Challenges and Opportunities on the Path to 5 Trillion Dollars in his journal Partners Universal International Innovation. The author highlights the significance of maximizing India's growth potential while addressing critical problems that hinder further expansion. With strategic policies and targeted changes, India can sustain its strong growth beyond \$5 trillion. However, persistent economic success requires deliberate efforts to remove obstacles.

Swapnil Soni¹ and M. H. Bala Subrahmanya (2020) on India's Sectoral Growth Patterns and US\$ 5 Trillion Trajectory: An Empirical Investigation on Macroeconomic Impact of COVID-19 investigates the growth trajectory of these productive sectors aligning with US 5 trillion dollar GDP objective becomes more important at the challenging time of unprecedented COVID-19 pandemic and subsequent nation-wide lockdown in the economy.

P Natarajan and Mohammad Raza (2017) on their journal an Analytical Investigation on Ease of Doing Business in India investigates the measures which are taken by the Indian government to accentuate ease of doing business.

In conclusion, the review of relevant literature on India's 5 trillion dollar economy suggests that despite the pandemic and other challenges India faced in the recent years the projection is achievable and the easiness in doing business supports the growth.

Methodology

The methodology we used in this paper are comparative analysis using the information regarding inflation, GDP and growth rate data collected from the website of the [macrotrends.com](https://www.macrotrends.net) (Macrotrends, 2017), [moneycontrol.com](https://www.moneycontrol.com) (Moneycontrol, 2023) and [forbesindia.com](https://www.forbesindia.com) (ForbesIndia, 2023).

India's rank improved to 63 in Doing Business Page 5 Report 2020 (Published in October 2019) from 142 in Doing Business Report 2015 (Published in October 2014) As a result of continued efforts by the Government, India has improved its rank by 79 positions in the last five years [2014-19]. The below graph shows this trend.

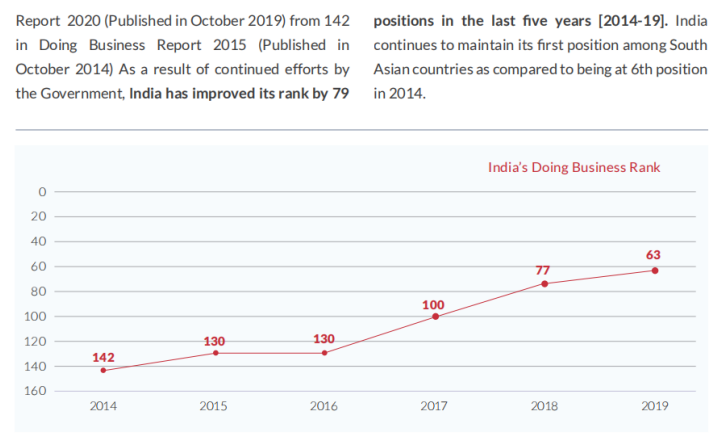


Figure 1: Ease of doing business over the past 10 years in India

From the website of Ministry of Commerce & Industry India, we can see that Andhra Pradesh top the list of states ranked based on implementation of Business Reform Action Plan for 2019 while Kerala is in the 28th position. Sikkim and Tripura occupies the penultimate and ultimate position respectively in ease of doing business.

Research Gap and Major Findings

Research gaps in India's pursuit of a 5 trillion dollar economy and improved ease of doing business are multifaceted. Firstly, there's a need for an in-depth analysis of policy implementation to bridge the gap between formulation and execution, pinpointing obstacles hindering effective policy execution. Regional disparities constitute another critical area,

demanding exploration into how economic growth and business friendliness vary across states, with a focus on understanding the underlying factors contributing to these differences. Additionally, examining the impact of infrastructure deficits, skill development initiatives, technology adoption, and the entrepreneurial ecosystem could provide valuable insights into areas requiring targeted interventions for sustained growth. Furthermore, delving into the role of global trade relations, environmental sustainability considerations, digital transformation, and the effectiveness of government-business collaboration would contribute significantly to the understanding of India's progress toward economic goals.

In summary, comprehensive research is necessary to unravel the intricate dynamics of India's economic landscape. Addressing policy implementation challenges, regional disparities, and key factors influencing business operations, alongside a focus on global trade, sustainability, and digital transformation, will contribute substantially to steering the nation towards a 5 trillion dollar economy and a more favorable business environment.

Contributions of the Study

Our study was contributed by major papers on ease of doing business and online websites like Ministry of Commerce and Industry (Department of promotion of Industry and internal trade). Our study contributes to the Macroeconomic analysis,

Development Drivers on Identifying the major sectors and industries that will drive India's economic development to the 5 trillion mark. This could include assessing the potential of the manufacturing, services, agricultural, and technology sectors. Also Investment Dynamics which investigates the impact of domestic and international investment in driving growth, including the efficacy of government policies and initiatives such as "Make in India" and "Skill India." Last but not the least; the fiscal and Monetary Policies of India on promoting business and investment while ensuring macroeconomic stability is contributed by our study.

Limitation and Scope for Further Research

The main limitation for preparing this paper was the unavailability of direct data (Primary data) and lack of recent research papers both online and offline.

While India's journey towards a 5 trillion dollar economy is promising, significant knowledge gaps remain. Further research can delve deeper into the potential of specific sectors like manufacturing, green energy, and digital technologies. Analyzing the effectiveness of government initiatives like "Make in India" and skill development programs will be crucial. Additionally, studies on infrastructure development, financial inclusion, and the impact of growth on inequality and poverty can guide policy decisions towards a more inclusive and sustainable future. Simultaneously, research on ease of doing business in India needs to explore the impact of recent reforms, identify lingering bureaucratic hurdles, and investigate the effectiveness of anti-corruption measures. Understanding the challenges faced by foreign investors and domestic entrepreneurs will be key to streamlining regulations and fostering a truly business-friendly environment. By addressing these knowledge gaps through in-depth analysis and practical recommendations, research can illuminate the path for India to achieve its ambitious economic goals while ensuring a prosperous and equitable future for its citizens.

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WOMEN'S ROLE IN DRIVING ECONOMIC GROWTH: A COMPREHENSIVE REVIEW OF THEIR PARTICIPATION IN THE \$5 TRILLION ECONOMY

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Abstract

This study explores India's goal of a \$5 trillion economy by 2027-28, emphasizing women's crucial role in tackling gender disparities. Deep-rooted discrimination affects less than 40 million women in the workforce, impacting their pay. Reducing these disparities could boost India's GDP by nearly \$1 trillion. Women entrepreneurs, comprising 14% of total entrepreneurs, face challenges like limited resources and require digital skills for success. In addition to evaluating the economic contribution of women, the research analyzes barriers and challenges in women empowerment, assesses the effectiveness of existing policies, scrutinizes socio-cultural factors, and explores success stories. The summary of findings underscores the critical role of horticulture, industry, and administration in achieving a \$5 trillion economy. It also emphasizes the importance of financial inclusion, ICT infrastructure, and addressing challenges in rural India, particularly in the agriculture sector. The paper concludes by addressing disparities between industrialized and developing countries and outlining strategies for gender diversity in leadership roles, echoing the IMF's ongoing efforts in this direction since 2013.
Keywords: \$5 trillion economy. Viksit Bharat goal. Gender disparities. Women entrepreneurs. Financial inclusion. Socio-cultural factors. Feminist leadership. Digital skills. Entry barriers. MSME industry. Inclusive policies.

Introduction

"India aims to achieve a \$5 trillion economy by 2027-28, with a breakdown of \$1 trillion from agriculture, \$3 trillion from services, and \$1 trillion from manufacturing. The National Statistical Office estimates India's GDP at ₹296.58 lakh crore in 2023-24, equivalent to around \$3.57 trillion, considering an exchange rate of ₹83 for a dollar. Notably, India received \$919 billion in FDI between 2000 and March 2023, with \$595 billion (65%) coming in the nine years from 2014. Currently the world's fifth-largest economy, India is projected to surpass Germany and Japan by 2027-28, aspiring to reach \$30 trillion by 2047 as part of the "Viksit Bharat" (developed India) goal. Achieving this goal requires overcoming a colonial mindset through collaborative efforts from the people, state, stakeholders, and the Central government..(keshri, gyanendra, 2024)(1)

In India's journey to a \$5 trillion economy, women play a crucial role as catalysts, advocating for their full and equal participation across all economic spheres. Addressing gender disparities is vital for economic growth and development, an essential step in achieving the goal of a \$5 trillion economy. (Ghani, 2023)(2)

Gender discrimination is deeply rooted in India, evident in the workforce where fewer than 40 million women work compared to over 360 million men. Even when performing equal-value jobs, women receive lower pay, leading to high poverty rates, poor health conditions, and increased vulnerability to violence. States like Rajasthan, Orissa, Bihar, UP, Haryana, and Gujarat, along with various industries, exhibit significant gender disparities with ownership shares of 6% or less for women. Some southern states like Karnataka, Tamil

Nadu, and Kerala show improvement with about 10% female ownership. Disparities are more noticeable in the service sector than in manufacturing, and rural areas face slower change due to lacking infrastructure and adherence to traditional family norms. Policymakers can foster women entrepreneurship by creating job opportunities, potentially boosting India's GDP by nearly \$1 trillion. (Dutta, 2023)(3)

Contribution Made by Women Entrepreneurs in Economic Development

- Women comprise 14% of the total entrepreneurs in India, which works out to 8 million.
- 10% of all formal enterprises are owned by women.
- About 20.37% of the MSME industry in India is made up of women led businesses, employing about 23.3% of the labour population.
- Between 13.5 and 15.7 million businesses are owned by women who also hire between 22 and 27 million individual.
- By 2030 it is predicted that 150-170 million employments will be generated by an additional over 30 million women owned companies. (abp-news-bureau, 2023 march 7)(4)

Objectives

1. To evaluate the Economic Contribution of Women to economic development.
2. To analyze the Barriers and Challenges in women empowerment.
3. To estimate the Effectiveness of Existing Policies.
4. To Analyze Socio-Cultural Factors.
5. To Explore Success Stories and Best Practices

Review of Literature

The important scholarly related papers were searched using Google scholar search engine using the keywords mentioned in the keyword section and are discussed in table-1.

Table No 1: Showing Literature Review

Sl: No	FOCUS	Authors and References
1.	Ms.R.Keerthikga& Mr. J.Sharankumarbin their Book Chapter Titled Mission Towards \$ 5 trillion Economy discussed \$ 5 Trillion Economy (GDP development) is possible with the development of 3 important areas (horticulture, industry and administration) further the sectoral GVA ¹ and GDP ² data was used in nominal form by applying various mathematical and statistical approaches to study the dynamics and growth pattern of 3 productive sectors which was later linked to the \$ 5 trillion GDP objective. This was done at an annual level and further aggregated and made more concise	(Keerthikga)(5)

¹ GVA- Gross Value Added

²GDP – Gross Domestic Product.

2.	Rudra P. Pradhana. Mak B. Arvinet al. in their article titled Sustainable economic development in India discussed that Financial sector and information and communication technology plays a vital role in the process of economic growth. as the financial and ICT ³ platform contributes to the development of digital financial systems which further opens new opportunities to close the financial gaps between the privileged and under privileged in the developing economies. The research examines the short run and long run dynamics between economic growth, financial inclusion initiatives, and ICT infrastructure development in 20 Indian states between 1991-2018. Granger- causality technique was used to show the strong temporal causality between the 3 variables. Furtherconcluded by demonstrating careful consideration of the 3 variables for sustainable development of the economy.	(Pradhan, 2021)(6)
3.	Dr. MD. Shah Nawaz Abdin & Rahul Kumar. In their paper, Rural Economy of India helping India become a \$5 trillion Economy highlighted the importance of Rural India towards economic growth & development. According to the study almost 50% of India's population is residing in the rural India even by	(ABDIN, 2020)(7)
	the year 2050. The paper 1) studies the sectoral composition of rural economy.2) analyses the role of rural economy in making India a \$5 trillion economy. 3) identifies the challenges in rural economy especially agriculture sector, by using secondary sources of data collection and employing descriptive research design to have greater precision and in-depth analysis of research study.	
4.	Anil kumarsingh&AshutoshUpadhyaya et al. in their article title Role of agriculture in making India \$5 trillion economy under corona pandemic circumstances discussed that in order to achieve the set target, all the sectors of the economy viz., agriculture, industry and service sector should perform outstanding. Especially sector as it contributes \$400 billion which stands 2nd next only to china. The paper also suggested 10 steps to \$5 trillion economy. 1. Annual &1 trillion increase in exports. 2. Tariff ⁴ Reduction, which is amongst higher	

³ ITC – Information and communication Technology

⁴Tariff refers to a tax imposed by one country on the goods and services imported from another country to influence it, raise revenues, or protect competitive advantages.

	in the world. 3. Improve National competitiveness. 4. Remove bureaucratic hurdles. 5. Rationalize currency exchange Rate to USD 6. Labour law reform.7. Land acquisition reform.8. Farming as business Reform. 9. Reduce subsidy and long term strategies to end it in time frame mode. 10. Reform in the educational system.	(UPADHYAYA, 2020)(8)
5.	Walter lealFilho& Shiv K.Tripathi et al. in the case study title using the sustainable Development goals towards a better understanding of sustainable challenges emphasized on the document "2030 Agenda for sustainable development" agreed and approved by UN general assembly. Emphasizing on the economic progress environment protection and highlighted the Need to overcome the disparities that exist between industrialized and developing countries by achieving 17 SDG ⁵ Goals. The study conducted a case study and derived from the sample of 5 countries like Spain. India. Serbia. Brazil. Kenya. And found that India as a developing country struggling to address poverty develop and striving itself towards progress.	(filho, 2019)(9)
6.	This contribution examines the recent "gender turn" in the International Monetary Fund (IMF), tracing its delayed focus on gender compared to other international institutions. Despite this, the IMF has extensively engaged with gender equity since 2013, with over 2,900 dedicated documents, videos, and podcasts. Utilizing hash tags such as #Women4Growth and #IMFGender, the IMF aligns with existing "women's empowerment" initiatives from financial and corporate sectors. This shift is facilitated by unprecedented feminist leadership post-2008 crisis, creating a distinct actor termed "femina economica." This elastic figure signifies organizational tensions and broader contradictions amid the current uncertainties in the capitalist world political economy.	(Coburn, 2019)(10)
7	Despite the persistent multitasking challenges, a literature review spanning 2011–2019 reveals that women entrepreneurs face continued barriers such as limited financial resources, marketing skills, and support services, as well as restricted access to business networks and digital markets. Gender gaps persist, and the elusive work–life balance remains a subject of discussion, emphasizing the need for further research. The literature emphasizes that successful	(Kamberidou, 2020)(11)

⁵ SDG: Sustainable Development Goals.

	entrepreneurship in the 21st century requires digital skills, innovation, and the qualities of a "distinguished entrepreneur," as coined by Carayannis and Stewart (2013). The study advocates for spotlighting successful women entrepreneurs as inspirational role models in various sectors, including startups, the Blue Economy, and the Silver Economy.	
8.	This study investigates the persistent issue of low labor force participation among working-age women in India despite economic growth and increased education. Focusing on employment transitions, it reveals a concerning trend of women not only participating less but also exiting the workforce. Using a nationally representative panel dataset, the study employs an endogenous switching model to analyze determinants, highlighting the influence of household wealth, income, caste, and religion on women's entry and exit from employment. Emphasizing the asymmetric nature of these decisions, the study underscores the significant role of a public workfare program in reducing women's exit from the labor force, based on data from the IHDS ⁶ covering 41,554 households and 215,754 individuals in 1503 villages, 971 urban neighborhood across 33 states and UTs ⁷ in India. the sample size of 41,665 women aged 25-55 were analyzed by using 2 separate linear probability models for entry & exit from employment.	(Sarkar, 2019)(12)
9.	This study investigates career entry barriers for women in male-dominated occupations within the Indian Railways. Using a literature review and semi-structured interviews, it identifies eleven crucial barriers, with 'social norms,' 'organizational policies,' and 'job description' as the most influential. The study employs interpretive structural modeling (ISM) to establish hierarchical relationships among these barriers and uses Cross-impact matrix multiplication applied to classification (MICMAC) analysis to classify barriers based on their impact. The findings contribute to understanding women's underrepresentation in male-dominated fields and offer practical implications for policymakers and practitioners to address these barriers and enhance gender diversity in the workplace.	(Sachdeva, 2022)(13)
10.	This paper explores women in leadership roles in India, identifying challenges and strategies through multiple	(Chawla, 2016)(14)

⁶ Indian Human Development Survey

⁷Union Territories.

	case studies. Employing in-depth interviews and personality tests, the study categorizes obstacles into personal, professional, organizational, and social issues. Six themes reveal strategies used by women leaders, emphasizing crucial social, behavioral, and organizational facilitators. The findings offer practical implications for gender diversity, leadership, and human resource management, addressing both barriers and facilitators in the Asian context, contributing conceptually to future research.	
11.	This study utilizes interpretive structural modeling (ISM) to identify critical barriers to women's leadership in the Indian corporate sector. Drawing from literature and expert opinions, 18 barriers are identified, with the Delphi technique used to pinpoint 13 as the most critical. Corporate policies, conscious organizational bias, and family responsibilities exhibit high driving power, while inadequate career opportunities and a lack of risk-taking ability and assertiveness show high dependence power. Unconscious organizational bias and occupational segregation are also prominent barriers. The study offers a well-defined model providing theoretical insights for researchers and suggests practical implications for inclusive leadership policies to support women's career progression in Indian corporations. This pioneering work contributes to the understanding of women's leadership barriers in the Indian context through ISM analysis.	(Kulkarni, 2023)(15)

Summary of Findings:

1. Development of horticulture, industry, and administration is crucial for achieving a \$5 trillion economy in India.
2. Financial inclusion and ICT infrastructure play vital roles in India's sustainable economic development, bridging gaps between privileged and underprivileged.
3. Rural India, with 50% of the population, is vital for a \$5 trillion economy, emphasizing the need to address challenges in the agriculture sector.
4. Achieving a \$5 trillion economy involves key steps like tariff reduction, improving competitiveness, and implementing labor law reforms, especially in the agriculture sector.
5. Overcoming disparities between industrialized and developing countries are crucial for India's economic progress in line with sustainable development goals.
6. Since 2013, the IMF's "gender turn" intertwines with market-led goals and feminist leadership, creating a distinctive "femina economica" actor. This reflects broader tensions within the organization and the global capitalist political economy..
7. Women entrepreneurs face challenges like limited resources and marketing skills, requiring digital skills and innovation for success.

8. Despite economic growth, low labor force participation among Indian women persists, with a public workfare program identified as significant for retention.
9. Career entry barriers for women in male-dominated occupations require attention to 'social norms,' 'organizational policies,' and 'job description.'
10. Women in leadership roles in India face challenges in personal, professional, and organizational aspects, necessitating comprehensive strategies for gender diversity.
11. Critical barriers to women's leadership in the Indian corporate sector, identified through interpretive structural modeling, highlight the importance of inclusive policies for career progression.

Research Gap

1. While the review provides valuable insights into various aspects of women's participation in India's economic growth towards a \$5 trillion economy, several research gaps and areas for further exploration can be identified.
2. Intersectionality of Challenges: Explore how gender challenges intersect with caste, religion, and region, providing a nuanced understanding.
3. Micro-level Analysis of Women Entrepreneurs: Examine specific challenges faced by women entrepreneurs, considering industry nuances and resource accessibility.
4. Impact of Policy Interventions: Evaluate the effectiveness of gender equality policies and suggest targeted measures for enhanced impact.
5. Longitudinal Analysis of Labor Participation: Track changes over time in women's labor force participation amid dynamic economic growth.
6. In-depth Exploration of Entry Barriers: Analyze barriers for women entering male-dominated fields, considering evolving dynamics and suggesting interventions.
7. Comparative Regional Analysis: Investigate regional variations in economic opportunities, cultural factors, and policy effectiveness for a comprehensive understanding.

Exploring these research gaps could enhance the depth and breadth of knowledge in the field, providing a more nuanced understanding of the challenges and opportunities for women in driving India's economic growth.

Conclusion

The journey to a \$5 trillion Indian economy requires comprehensive development in horticulture, industry, and administration, with women constituting 14% of entrepreneurs. Despite their vital role, gender discrimination persists in labor force participation, wages, and ownership. Challenges faced by women, including caste, religion, and regional variations, complicate gender disparities. While progress exists in some areas, significant gender gaps persist in certain states and industries.

Recommendations

1. Strengthen and adapt gender equality policies to address sector-specific challenges, ensuring dynamic and targeted interventions.
2. Conduct Intersectionality analyses, considering caste, religion, and regional variations, to inform the design of inclusive policies that tackle multifaceted gender disparities.

3. Conduct micro-level analyses of women entrepreneurs, tailoring support mechanisms to industry-specific nuances and improving resource accessibility.
4. Implement longitudinal studies to track changes in women's labor force participation, identifying trends and areas for targeted interventions amid dynamic economic growth.
5. Promote education and awareness programs challenging deep-seated gender norms, involving men as allies in advancing gender equality.
6. Provide digital skills training for women, enhancing digital literacy to leverage technology for entrepreneurship and career advancement.
7. Strengthen public workfare programs, addressing unique challenges faced by women to reduce their exit from the labor force.
8. Develop and implement inclusive leadership training programs within organizations to overcome personal, professional, and organizational barriers to women's leadership roles.
9. Collaborate on research efforts involving academia, government bodies, and NGOs to continuously monitor and assess the impact of interventions, ensuring evidence-based policymaking.

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AGRO-ECONOMY: EXAMINING THE CONTRIBUTION OF AGRICULTURE SECTOR IN INDIAN ECONOMY

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Abstract

Agriculture is the backbone of India as it plays a very major role in generating employment. India's ambitious goal of attaining a 5 trillion-dollar economy relies heavily on the transformative role of agriculture. Agriculture and economy are intertwined. In fact, agriculture is the first economic activity that humans learnt. Agri business holds tremendous potential as a driver of economic growth. Agriculture contributes around 17% to the country's GDP. India ranks second in farm outputs after China. To achieve the \$5 trillion milestone-agricultural productivity, adapting modern techniques, promoting agribusinesses, and investing in rural infrastructure are the key factors to boost the economy. Role of agriculture encompasses several vital aspects of economic, social, environmental development. Agriculture is the primary source of food production ensuring a stable and secured food supply for the society. It provides livelihoods for millions of people involved in various stages of farming, from cultivation to processing and distribution. Throughout the years, the government has implemented new schemes and policies for the development of agriculture sector. Agriculture plays a significant role in the development of improved infrastructure, education, healthcare in rural areas, contributing to overall rural development.

Keywords: Agriculture, Government, Employment, Economy

Introduction

Agriculture plays a significant role in India's ambitious vision of achieving 5 trillion-dollar economy. It serves as a backbone for rural livelihoods, contributing towards the employment, GDP, and food security. Agriculture not only focuses on GDP but also sustains a large portion of the population. The government focuses on increasing productivity, farming practices, and promoting agribusinesses to achieve a major role in Indian economy as a key driver for inclusive growth. The vision of inclusive growth includes aspects such as agriculture development, employment generation and poverty reduction. This integration of agriculture into the vision for a 5 trillion-dollar economy performs a vital role in shaping India's economic landscape. Agriculture development is an integral part of overall economic development.

Agriculture is important for the industrial development because most of the raw materials has been supplied by the agriculture sector. In wide sense agriculture includes marketing, and distribution of agriculture products. Agriculture not only provides sustenance but also serves as a source of raw materials for industries and contributes significantly to rural livelihoods. As the country strives towards a 5 trillion-dollar economy, the integration of sustainable and advanced agricultural practices leads to the overall contribution to the agriculture sector in the Indian economy.

India has implemented various schemes and policies aiming towards the development of agriculture sector in Indian economy, contributing to the overall growth of the economy. Some initiatives include Pradhan Mantri Kisan Samman Nidhi (PM-Kisan), National Agriculture Market (e-NAM), Pradhan Mantri Fasal Bima Yojana (PMFBY), Kisan Credit Card (KCC) Scheme and many more. These initiatives collectively reflect the Government's commitment towards Indian agriculture, ensuring sustainable growth, and aligning with the broader economic goals of achieving a 5 trillion-dollar economy.

Agriculture plays a essential role in the development of Indian economy in various aspects. Most internal trades of Indian economy are based on agricultural products. International trade, from India the agriculture products like tea, oilseeds, spices has been exports. Nearly about 70% Agro-products has been exported which earn foreign currency. These earnings then will be helpful to pay for the imports of machinery and raw materials. Due to these, the agriculture business transportation, communication, financial institutions sector also increased which gives employment opportunities too. To develop agriculture, investment is necessary which can increase the income in agriculture.

The Indian economy is also an Agro-economy and highly revolve around agricultural sector. Agriculture not only supports the Indian economy but also supports the industrial sector and international trade in imports and exports. Despite, the fact that the contribution of the agriculture sector to the Indian economy is reducing, it is the sector with the greatest number of people working in it around the country. By empowering farmers, fostering innovation, and creating an agribusiness ecosystem, India can unlock the immense potential of its agriculture sector for inclusive growth and prosperity striving towards to achieve the India's vision for a 5 trillion-dollar economy.

Review of Literature

To study the role of agricultural sector in the development of Indian economy:

1. **V Basil Hans (2023)** "Agriculture and Environment in India: A Complex Relationship". This paper elucidates on the concept of environmental factors on agricultural productivity and addresses about the policy implications and explore potential solutions for achieving a balance between agricultural needs and environmental sustainability. As well as authors have concluded that the future of Indian agriculture relies on a harmonious combination of sustainable practices, well-informed policymaking, and active farmer participation fostering towards the environmental integrity for future generations.
2. **Dr. Rahul Sawlikar (2022)** "Role of Agriculture in Indian Economy". The research highlights on the role of agriculture in international trade and industrial development and enhances on the various issues faced in agriculture. As well as authors have mentioned in the conclusion that agriculture growth is essential for the prosperity of country which also can control the inflation, raises agriculture wages, and brings the employment opportunities.
3. **Ce Dr Sumanta Bhattacharya (2022)** "Contribution of the Agriculture sector to the economic growth of India with both being interdependent on each other". In this article, the author has mainly focused on a few facts and figures regarding the agriculture sector. He has also explained about how this sector plays a crucial role in various industries. Along with this, how this sector has made a huge impact towards

the GDP of the country. The author concludes by saying that, the growth in agricultural sector reflects India's rising prominence in the global market.

4. **Suman Bhakri (2022)** "India's \$ 5 Trillion Economy: Vision & Mission Article". This article speaks everything that is associated with the GDP of the country and what are the major sectors that makes an unmarkable difference to the country's economic growth. Various aspects regarding the \$5 trillion economy have been articulated. To summarise this, the government has delivered in the social sector by asset building, service provisions to the poor in the form of housing, toilets, LPG connections and electricity connections but these gains are not replacement for employment which is necessary for reviving the growth in the economy.
5. **Dr. Sunil Kumar Gupta, Sakshi Gupta (2022)** "Indian Agricultural Income - A Major Portion of The Indian Economy" The research paper focuses on exploration of agriculture income and its examples, kinds of agricultural income and later analyzed on Determination of Market Value of Agricultural Produce and Agricultural Income and Tax Liability. To sum up, agriculture income is vital for food security and rural economies that extends beyond the boundaries contributing towards the livelihoods and economic stability.
6. **P.Chennakrishnan, D.Thenmozhi (2021)** "An Analysis of Agriculture Sector of Inclusive Growth in India". The research highlights on the concept of institutional and infrastructural changes that has happened regarding the agriculture transformation since independence. They have also focused on a few key policies such as land reforms, agrarian reforms etc. The findings conclude that the authors have traced out the various principles of management policies for promoting agricultural development.
7. **Eknath Mundhe (2021)** "Role of Agriculture in Indian Economy". In this, the author delves into various concepts of the agriculture sector, GDP generation to the country. Along with that, he has also focused on rural India and has mentioned that the agricultural changes in rural areas takes a longer time and does not happen at once. In conclusion the study emphasises that wholesalers are also given prime importance and these prices are used primarily to monitor the weekly price movements.
8. **Mohammed Arshad Khan (2021)** "Impact of Agriculture sector on Sustainable development of Indian Economy: An Analysis". This analysis focuses on the economic growth of the country through agriculture. The reports generated by the writer emphasized the importance of education to farmers regarding the technological changes in the agricultural changes as being flexible regarding technology is very important. To summarise this, the Agricultural development is crucial for the economic growth, rural development, and poverty alleviation of low-income developing countries. Improvements in agricultural productivity are a key driver of economic growth and poverty reduction both inside and beyond the agricultural business.
9. **E Mamatha, S Saritha, Krishna Anand, CS Reddy (2020)** "Scientific Trends and Role of Robots in the Agricultural Sector". In this study, the authors have examined on the economic aspect, positive trend, possible automated fields, and focused on vehicle monitoring system. As well as authors have concluded that, a scientific approach needs to be adopted in the agricultural and farming system which is addressed and the role of robots and its importance in this sector.

10. **Tamma Koti Reddy, Madhubanti Dutta (2018)** "Impact of Agricultural Inputs on Agricultural GDP in Indian Economy". In this research paper the authors have focused on the study towards the progress of Agricultural Sector in terms of production and productivity of Indian Economy in comparison with other economies across the world. Later, analysed on the impact of various agricultural inputs on Agricultural GDP growth rate of the Indian Economy. To conclude, there should be a need to formulate a long-term perspective plan for rural infrastructure that focuses on infrastructural projects that have the highest total impact and strongest linkages.

To analyse the role of government in agricultural development in India.

1. **Gagan Tripathi, Arpit Dhodia, Anmol Giri, Veena Rathore, Aman Verma, Anoop Shukla, and Lalit Kumar Verma(2023)**"Government Agriculture Schemes in India: A review". This research highlights on the concepts of various schemes related to agricultural sector such as Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), Pradhan Mantri Fasal Bima Yojana (PMFBY), Kisan Credit Card (KCC) and lot more. In this research paper authors have concluded that Government agriculture schemes in India have played a crucial role in transforming the agricultural sector, empowering farmers, and ensuring food security for the nation.
2. **Dr. Tanka Prasad Upadhyaya (2022)** "Role of Agriculture in Economic Development of Assam". The foundational work in the area suggests that agricultural development is to encourage the essential materials needs of the society but the same cannot be achieved at the cost of local surroundings and the culture of the people. To conclude, the author said to be found that the practical feasible options for agricultural development as these options are recognized as environmentally safe economically profitable and socially acceptable methods.
3. **Dr. Bilas S. Kale (2020)** "Role of agripreneurs for Agriculture Development". This study is proposed to find the role of agripreneurs for agriculture development. Later, analysed to understand the concept and role of entrepreneurs. The conclusive remarks of the author states that Agripreneurship development will help the Indian economy in achieving self- sustainability in food production and balanced economic growth.
4. **Surendra Singh (2020)**"Agriculture Development in India: A State Level Analysis". In this research paper authors have focused on materials and methods and its results such as Semi-log Model, CAGR of NSA, GSA, NIA, and GIA: A State-level Analysis. Later analysed on the Determinants of Agriculture Production. To summarise, a comprehensive state level analysis of agricultural development in India reveals the diverse challenges and opportunities across regions
5. **Acharya Balkrishna, Ashwani Kumar, Vedpriya Arya, Gunjan Sharma, Deepika Srivastava, Ajit Sharma, and Nazam Khan (2020)**"This paper focuses on Government initiatives and subsidies, National Food Security Mission (NFSM) and later brings about the Digitalized agriculture and its impact. As well as authors have mentioned in the conclusion that the farming methods in India are confronted with numerous obstacles, including changing climate conditions, a diverse geographical region, traditional agricultural practices, and the country's economic and political situation. These can be overcome by implementing advanced agricultural technologies.

6. **Santhosh Kumar (2020)** "Development of Indian Agriculture: A Commercial Analysis". The literature unveils the detailed concepts of various issues and investigation possibilities of Indian agriculture. Later, analysed on various Agricultural Implements and Machinery. To conclude, research reveals that the evolution of Indian agriculture presents a compelling narrative of transformation from traditional practices to a more commercially oriented sector.

Research gap

1. The research gap has been identified based on the literature review; the above literatures focused on how the Agricultural sector contributing towards the development of Indian Economy.
2. Most of the literatures on the role and governance of Agriculture towards the economic growth of the country.
3. So, through this research article we have tried to fill the gap by analyzing the recent trends in agricultural sector and Agricultural sectoral contribution into the \$5 trillion economy and government roles and policies for the same.

Research Methodology

Problem Statement

1. Inadequate infrastructure poses a significant challenge to India's ambitious goal of achieving a \$5 trillion economy.
2. Affecting the development towards a \$5 trillion economy, the uneven distribution of employment across sectors and regions poses a challenge, potentially extending social and economic imbalances that could hinder growth and the overall productivity essential for achieving the economic milestone.
3. The varied challenges in the Agricultural sector, comprising issues of low productivity, income disparities among the farmers, and the increasing impacts of climate change, collectively indicate a threat to India's journey towards a \$5 trillion economy.
4. Changes in climate patterns, soil quality and water availability due to environmental degradation can affect crop yields, posing risks to food security.
5. The existing global trade tensions, marked by trade disputes indicate a intimidate challenge to India's exports, directly impacting key sectors and evoking a potential threat to the nation's ambitious goal of attaining a \$5 trillion economy.

Research objective

1. To study the role of agricultural sector in the development of Indian economy
2. To analyse the role of government in agricultural development in India.
3. To study different challenges faced by agriculture sector in India.

Scope of the Study

1. The research paper helps you to understand how the Agricultural sector plays a crucial role in the development of Indian economy.
2. The research paper provides the information about various schemes and initiatives established by the government.

3. The study gives you an overview about the challenges faced by the Agricultural sector in India.

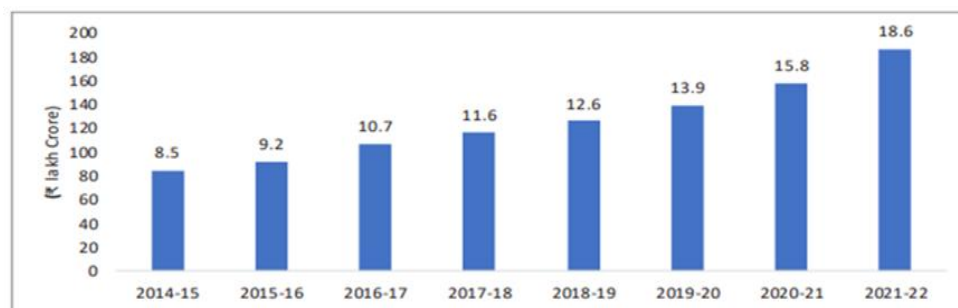
Sources of data



What are the recent trends in Indian Agricultural Sector?

India's agriculture sector has been witnessing growth with an average annual growth rate of 4.6 percent over the last six years.

According to the Economic Survey 2022-23, this development has empowered the agriculture and allied activities sector to make substantial contributions to the overall growth, development, and food security of the country.



Source: Based on data from DAFW and Agricultural Statistics at a Glance 2021.

Along with the agricultural growth and development, we have various recent trends in Indian Agricultural Sector fostering towards the betterment in Indian Economy which include,

1. Technological Integration

In this point it encompasses about the various technologies that are used in agricultural sector such as Drones, precision farming and smart irrigation systems that are used effectively in the field of agriculture to increase productivity.

2. Government Initiatives

The Government is actively indulged in providing various schemes, initiatives, and schemes to the farmers to enhance and foster towards the infrastructure and ensure food security.

E.g.: Pradhan Mantri Kisan Samman Nidhi (PM-Kisan), National Agriculture Market (e-NAM).

3. Farm Mechanization

The main aim is to increase mechanization and the use of modern farming equipment for streamline operations and expansion and to reduce the manual labour in the agricultural sector.

4. Renewable Energy

Renewable energy like Solar-powered pumps, Solar-powered heating system and other renewable energy solutions, aiming to diminish dependence on fossil fuels and foster the implementation of sustainable practices.

Government Policies and Facilities Towards Agricultural Sector

1. The State Government introduced 'Agricultural Produce Market Committee (APMC)' in India during the 1950's to the 1960's which acts as a mediator between farmers and buyers. The purpose of introducing this committee to safeguard the farmers from the exploitation by the retailers, govern Agricultural markets, prevent monopoly and to remove middlemen cartel.

The APMC came into existence with three important attributes,

- Only licensed buyers
- Produced crops can be sold only at APMC
- Minimum Support Price (MSP)

At present there are 2477 principal regulated markets and 4843 sub-market yards. Total 13 states are having APMC in India and Nagpur is the biggest Agricultural produce market committee in India.

2. Ministry of Rural development implemented 'Mahila Kisan Sashaktikaran Pariyojana (MKSP)' in 2011, to empower women by strengthening their participation in Agriculture and sustainable livelihood opportunities to them.
3. The 'Pradhan Mantri Fasal Bima Yojana (PMFBY)' scheme was launched in 2016, to provide crop insurance and financial support during the crop failure due to natural disasters.
4. The 'Pradhan Mantri Fasal Bima Yojana (PMFBY)' scheme was launched in 2016, to provide crop insurance and financial support during the crop failure due to natural disasters.
5. The 'Paramparagat Krishi Vikas Yojana (PKVY)' initiated by the government of India to adopt organic farming by providing financial assistance and technical support.
6. The 3 Farm Bills introduced by the Government of India in 2020.
 - Farmer's Produce Trade and Commerce (Promotion and Facilitation) Bill.
 - Farmer's (Empowerment and Protection) Agreement on Price Assurance and Farm Services Bill.
 - Essential Commodities (Amendment) Bill.

The Farm Bills introduced with the objectives included Market Access, Contract Farming and Essential Commodities to bring reforms in Agricultural sector. Although the Government repealed 3 Farm Bills in 2021 by facing opposition, protests from the farmers due to having the fear that the system will end the MSP.

Findings of the Study

1. The study highlights the essential job of agriculture in moulding India's monetary scene. With more than 40% of the labour force participating in agribusiness, its commitment to work is significant, however, its portion in Gross domestic product is around 15%. Government drives like Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), Public Horticulture Market (e-NAM), and Pradhan Mantri Fasal Bima Yojana (PMFBY) assume a pivotal part in changing the area.
2. Challenges in the rural area, including low efficiency, pay variations among farmers, and environmental change influences, present dangers to India's journey towards a \$5 trillion economy. Furthermore, inadequate infrastructures, uneven distribution of workload, poses a great challenge in the Indian economy.
3. The review stresses the requirement for supportable practices, innovative progressions, and powerful strategies to tackle the difficulties

Conclusion

Agriculture forms the backbone of the Indian economy. The agriculture sector plays a essential role in the Indian economy, serving as a significant contributor to both GDP and employment. To confront the imbalance in labor productivity within the agriculture, promoting linkages between agriculture, related activities and the broader economy is crucial. Another important aspect is contract farming which will be secured to farmers, if there is a contact farming and not followed by any regulations, it results to the exploitation of the farmers.

Implementing advanced farming techniques is crucial for promoting the efficiency in the agro-economy which encourages optimum utilization of resources and productivity development. Following, sustainable practices and continued efforts in improved infrastructure are essential to enhance the overall efficiency in agro-economy for inclusive economic future in India to order to achieve the India's \$5 dollar economy.

Suggestions

1. Nearly 37.5% of farmers are non-adopters of technology in agriculture which can lead to the reduction of efficiency and productivity of farming. Therefore, there is a requirement to bring awareness among the farmers to efficient use of technology such as precision agriculture and digital agriculture etc., which can increase the quantity and quality of agricultural products.
2. The policies and initiatives implemented by the Government of India may not fully be beneficial and not ruin the country because certain points need to be addressed to make sure that the policies are beneficial and the focus should be on where the changes in the policies need to be addressed. The 'Pradhan Mantri Fasal Bima Yojana (PMFBY) is the right step that is required to be continued. Various initiatives taken by the Government are needed to handle the risks in the livestock sector.

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EMPOWERING PROGRESS: A STUDY ON WOMEN'S KEY ROLE IN INDIA'S ASCENT TO A \$5 TRILLION ECONOMY

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Abstract

India's economic ascent is marked by a notable trajectory, aiming to achieve the significant milestone of becoming a \$5 trillion economy. Fuelled by a youthful demographic, economic diversification, and swift urban growth, this aspiring goal has captivated the attention of both Indian populace and the global community. Presently, India holds the position as the world's fifth-largest economy, showcasing a nominal GDP of approximately \$3.6 trillion. Despite recent ups and downs, its economic growth reminds one of the fastest among major global economies. The journey towards a \$5 trillion economy is not just about numbers; it's about people, it represents India's dream to be among the world's biggest economies and firmly establish itself as a global economic power house. At the core of this journey are millions of Indian women, ready to contribute their talents, dreams, and unwavering spirit to build a brighter future for themselves and their nation. Empowering women goes beyond fairness, it's about unlocking the full potential of India's human capital. Investing in the education and skills of women while creating an enabling environment, India can turn its \$5 trillion dream into a reality that benefits all its citizens. This study aims to comprehensively evaluate the influence of education and skill development on women's economic empowerment, with an ultimate goal of empowering Indian women through a strategic plan. Additionally, it delves into the impactful contributions of women entrepreneurs and business leaders in driving economic growth, aiming to unlock their full potential for comprehensive socio-economic advancement.

Keywords: Empowerment, Women Entrepreneurs, Indian Economy, Economic Development, Self-help groups.

Introduction

A \$5 trillion economy refers to a nation's Gross Domestic Product (GDP) reaching the \$5 trillion mark. Achieving this milestone signifies substantial economic growth, often a target for developing economies. It embraces implementing strong economic policies, nurturing innovation, and promoting ingenuity to drive a country's overall financial strength. India has outlined an aspiring objective to reach a \$5 trillion economy, demanding efforts encompassing various sectors such as services, agriculture, and manufacturing. The pursuit of this aspiring objective entails tackling obstacles such as improving skill enhancement, infrastructural development, and fostering a valuable business environment.

Women entrepreneurs and leaders are the untapped engine fuelling economic growth. With every job created, community empowered, and new products launched, female leaders drive economic progress from the very beginning. Their diverse perspective leads to better decision-making. By weaving different angle into the fabric of their businesses, women leaders promote active communities by creating an ethical cycle of prosperity and well-being. Bridging the leadership gap unleashes the vast untapped potential of women,

propelling economies forward. Their success has paved the way for a more inclusive and prosperous future where everyone thrives.

Women, stuffed with talent and ambition, stand at the doorway, waiting for the key to unlock their doors; that key is education and skill development. Education and skills furnish women to blossom into innovators and catalysts, injecting vitality and flexibility into the economy. A tidal wave of female entrepreneurs, skilled professionals, and leaders is shattering glass ceilings across every field weaving a future where opportunity bloom for all. Let's break down the barriers to education and skill development, provide women with the resources they need, and watch the \$5 trillion economy go up to new heights, powered by the collective might of women.

India's economic symmetry lacks its full power without the harmonies of women's participation. Unleashing their talents and contributions is key to composing a truly magnificent harmony of shared success. To unlock the backward potential, here is proposed a multi-pronged approach: prioritize girls' education, provide women with future-proof skills, enact gender-neutral policies, promote inclusive workplaces, secure access to capital, empower rural women through land ownership and livelihood opportunities, showcase inspiring role models, and create an environment where women succeed. Beyond the limits and policies, this is a revolution of spirit. When women's wings open, they lift not just themselves but the entire nation. Let's not just build structures but empower the weavers, and observe India's flash with brilliance that transcends statistics.

In embracing women's active involvement, India's journey to a \$5 trillion economy reflects a story of empowerment and advancement. Harnessing the potential of women through skills, inclusive policies, and education propels the nation towards an affluent, innovative, and cohesive future, surpassing conventional economic frameworks.

Review of Literature

1. The Impact of Education and Skill Development on Women's Economic Empowerment:

- **Sneha Tripathi, Namrata Pania(2023),**“Women Empowerment: An Elegy on Women Power in India”. In this research paper the authors have focused on the concept of redefining empowerment, plight of women in India, woman and the Indian Constitution, economic, social, political, familial empowerment of women in India. As well as authors have mentioned in the conclusion that whether a woman is married or unmarried, financially independent or dependent, her role in the patriarchal family dynamics does not change and she still remains powerless. Defeating the norm based.
- **Dr. Nishi Sharma, Mr. Aman Sharma, Dr. Deepali Jain(2023),**“An Empirical study on Status of Women Empowerment in India”. The author of this paper investigates on the concept of identifying four factors mainly economic education, gender, reversal, and freedom that are helping to achieve women's empowerment in society. It is emphasized in the conclusion that, Women's empowerment materializes with increased opportunities, more access to resources, strengthened ability to exercise control, ensuring availability of choices, improvement of conditions, and overall positive change in the mindset of the entire society at the global level.
- **Dr. Nishi Sharma, Mr. Aman Sharma, Dr. Deepali Jain(2023),**“An Empirical study on Status of Women Empowerment in India”. The author of this paper investigates

on the concept of identifying four factors mainly economic education, gender, reversal, and freedom that are helping to achieve women's empowerment in society. It is emphasized in the conclusion that, Women's empowerment materializes with increased opportunities, more access to resources, strengthened ability to exercise control, ensuring availability of choices, improvement of conditions, and overall positive change in the mindset of the entire society at the global level.

- **Dr B. Devamaindan, Ms Vidhya Arumugam(2023)**, "Way-Forward for Rural Women in Tamil Nadu to tap into the Trillion-Dollar Opportunity". The main concentration of the research is on the concept of ways to tap into trillion-dollar opportunity, strategies Tamil Nadu rural women should adopt to achieve trillion-dollar digital opportunity, 5g in agriculture. The conclusive remarks of the author states that, it's important to note that implementing these technologies requires specific technical knowledge and skills, so rural women may need to acquire the necessary knowledge and skills through training and education programs.
- **Dr. S. Jamuna(2023)**, "Financial Inclusion for women empowerment". This paper revolves around the exploration of the concept of the factors affecting the level of financial inclusion for women, measure the extent of financial inclusion to the literacy level, examine women's perception about financial inclusiveness. The concluding section of the text asserts, Education in all aspect is the only way forward for the government to successfully include the female folk into the financial or any other upliftment programme.
- **Padmalaya Mahapatra, Bibhuti Bhusan Nayak(2023)**, "Challenges and Strategies for Women Empowerment in India: Facts and Realities". The crux of this research paper lies in the concept of need for women empowerment, global gender gap, women education in India after Independence, The final thoughts by the author stress that women need to take a stand on decisions that are hurtful to women, families and stemming from decisions made by government need to be challenged.
- **M. Aakina Barveen(2022)**, "Role of Micro finance in Women Empowerment in India". The research paper centers around the Role of micro finance in women empowerment, economic empowerment, decision making, health and education. The final remarks by the author affirm that micro finance can contribute to solving the problems of inadequate housing and urban services as an integral part of poverty alleviation programmes among women. A promising solution is to provide multipurpose loan or composite credit for income generation, housing improvement and consumption support.

2. The Role of Women Entrepreneurs and Business Leaders in Driving Economic Growth:

- **Tavneet K Reen, Dr. Manpreet Kour(2023)**, "Women Entrepreneurship and their role in developing Indian Economy". The focal point of this study is the exploration of the concept of the roles of women entrepreneurs in Indian Economy, the challenges faced by women entrepreneurs, the measures needed to improve the state of women entrepreneurship. As summarized in the conclusion that the women are well-versed in all motivating strategies, which they use on their family members virtually everyday. All that is required to inspire women to start business is guidance in the proper direction and removal of any barriers to success.

- **Dr.Smrat(2023)**, "Role of Indian Women in Entrepreneurship & growth of Indian Economy". The primary subject matter of this research paper is the concept of role of women entrepreneurship in Indian economy, to identify the factors responsible for hindrance for women entrepreneurship, to make an evolution of people's thought and opinions about women entrepreneurship in India. It is made clear in the conclusion that the world women have been able to overcome the hurdle of society's perception of considering them to the confined to the four walls of the house or viewing them as weak entrepreneurs caught up in limited business area such as papad making, paintings, handicrafts, etc.
- **Animesh Kumar (2022)**, "Political Participation of Women in India: Constitutional Analysis". In this research paper the authors have focused on the current trend in the women participation in India's politics and also Constitution regard with Women's political sharing space and problems they are facing. As well as the authors concluded with the one-third seat reservation was boon, but India didn't take note of what it was saying and hasn't yet passed a pro-women law at the federal and state levels.
- **Ranjithab(2016)**, "Women Empowerment Through Self-help Groups". The key point of interest in this paper is the concept of the effects of socio-economic factors on success of ventures of women entrepreneurs and SHGs, to enquire in to the impact of success of venture on women's empowerment in terms of status and economic independence, to suggest various measures for development of women entrepreneurs in the rural areas. It is brought to the forefront in the conclusion that women's active participation in economic activities was very much limited to the lack of adequate approach by the NGOs. Though the women have formed groups they have poor decision making capacity for their self- development.
- **Mun Mun Ghosh, Arindam Ghosh (2014)**, "Analysis of Women Participation in Indian Agriculture". In this research paper we can see the objectives focused by authors is to study the growth trend of agricultural worker from 1961-2001and categorize the states on their identical behaviour of participation in agriculture.as well as the authors concluded with the facts that women participation in agriculture is increasing with time and women are now acknowledge with the status of "Agricultural worker".
- **Gurpreet Singh, Neha Singh (2013)**, "Role of women workers in the Indian Economy" this research article shows the main objective are the role of Women in Indian Economy both in rural as well as urban sector. The authors have concluded that women are working in India contributes to the economy and now they are not less in any thing when compared to male Section.

Research Gap:

- The identified research gap arises from the literature reviewed above, which specifically focuses on the role of women's empowerment and their participation in economic growth.
- Most of the literature on the key role of women in India's ascent focuses on women entrepreneurs and business leaders driving economic growth.
- In this research article, we have attempted to address the gap by analyzing the awareness of bridging the gender gap in the country, which contributes to the overall

improvement of the country's GDP. The case of Karnataka serves as a compelling example, even though Karnataka has the highest education literacy and technological development, there is a lack of development in women empowerment.

Research Methodology:

Statement of the Problem-

- The gap between a \$5 trillion economy and the reality of struggling farmers, burdened by inadequate infrastructure, outdated practices, low-tech adoption, climate change, weak supply chains, inadequate government support and poor cold storage facilities lead to significant post-harvest losses, estimated at ₹ 1 lakh crore annually. These infrastructure shortcomings create inefficiencies, discourage investments and hold back agricultural value chain development.
- India's \$5 trillion dream needs an advanced manufacturing engine. At present, it's a struggling sector, where exports are weak, imports are high, and the current low share in GDP (17%) hinders growth and job opportunities, limiting progress towards the \$5 trillion goal.
- While India's service sector is booming, it's contribution to a \$ 5 trillion economy faces hurdles.
- Women's participation can be a powerful driver of achieving a \$5 trillion economy. But it's not the sole reason. However, challenges remain as gender wage gap and discrimination, male dominance, unequal opportunities, restricted access to education, unfavourable social norms and cultural prejudices. India's current female labour force participation rates is around 20%, significantly below the global average of 49%. Closing this gap could add \$700 billion to India's GDP by 2025.

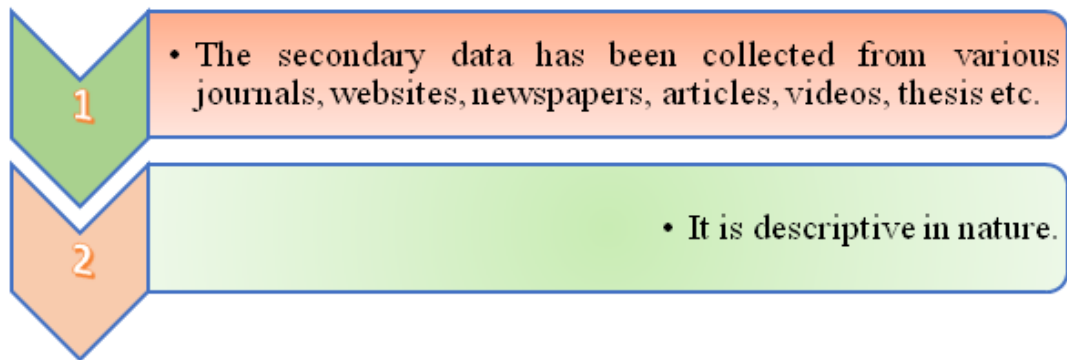
Research Objectives:

- To study the role of women participation in economic growth.
- To evaluate the role of women entrepreneurs and business leaders in driving the economic growth.
- To assess the impact of education and skill development on women's economic empowerment.
- To unlock India's economic strength by utilizing women's full potential strategically.

Scope of the Study:

- This study will help you to understand the overall impact of women's participation on India's national economic growth by analyzing data on workforce participation, business ventures, and gender equality metrics.
- This study will help you to understand the role of women entrepreneurs and business leaders on India's overall economic growth, track national data on revenue generation, GDP contribution, job creation, and poverty reduction linked to women-led businesses.
- This study will help you to understand the regional comparisons, identify disparities and best practices, and engage with policymakers, educators, industry leaders, and women's organizations for diverse perspectives.

Sources of Data



Recent Trends in Women Empowerment in India's \$5 Trillion Economy

As India strives to achieve a \$5 trillion economy, various elements and factors come into play to drive and sustain this significant economic growth, Self Help Groups (SHGs) stand out as crucial contributors, actively shaping and supporting the nation's substantial economic goals. Government sponsored schemes, such as the National rural Livelihood Mission (NRLM), empower SHGs by providing financial support, training, and market linkages. Under programs such as the Deendayal Antyodaya Yojana, Self-Help Groups (SHGs) obtain support for enhancing skills, establishing micro-enterprises, and gaining access to credit facilities.

In India, we observe several encouraging trends in women's empowerment, providing insight into a future where women will have greater influence and active participation across various dimensions of society.

Increase in Education Attainment

Female education is on the rise, with a notable 13% increase in girls attending school observed between 2015-2016 and 2019-2021. This positive trend underscores a growing commitment to providing educational opportunities for girls, where a rising number of girls are actively engaging in STEM (Science, Technology, Engineering, Mathematics) fields and assuming leadership positions. The impact of initiatives such as the Beti Bachao Beti Padhao campaign is evident in the growing awareness surrounding the significance of educating girls. Technology and internet access are empowering women by offering opportunities for education, communication, and economic progress. The Digital India initiative by the government is addressing the digital gap and promoting empowerment among women in rural areas.

Increasing Political Presence:

The implementation of a 33% reservation for women in local government significantly boosts women participation in politics. This growing political representation highlights the prioritization of women-centric issues, fostering a more inclusive policymaking process with diverse gender perspectives.

Enhanced Involvement in the Economy:

Women's participation in the workforce is expanding, encompassing both formal and informal sectors and women's entrepreneurship is on the rise, fuelled by governmental

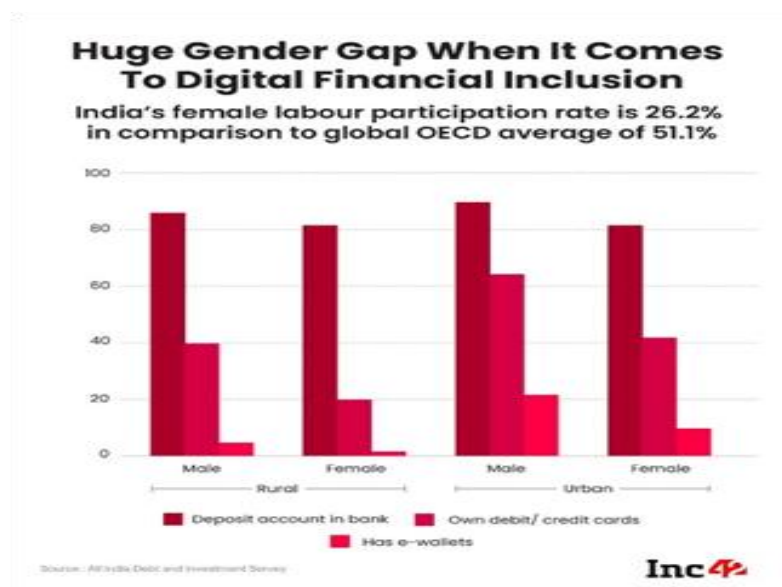
programs like Stand-Up India that crucially facilitates economic participation, financial support and mentorship. Skill development programs empower women, enhancing their employment opportunities and promoting economic self-sufficiency.

Challenging Societal Norms and Conventions:

Challenging societal norms, menstrual hygiene, ongoing discussions on gender equality, and sexual harassment foster an inclusive environment for women in India. Platforms like #MeToo and #TheMatinée empower women to address abuse, contributing to legal and societal advancements. Nevertheless, challenges persist, encompassing gender bias, unequal healthcare access, child marriage, domestic violence, and safety concerns in public spaces, confronting these challenges require initiatives in education, awareness campaigns, effective law enforcement, and united collective efforts. Aligning these initiatives with favourable trends can drive India towards a future where women thrive, unlocking their complete potential and contributing equitably to national progress.

In India, the central government has undertaken several initiatives to empower women, facilitating positive change and inclusivity:

Beti Bachao Beti Padhao, which addresses the child sex ratio and promotes girls' education. Mahila Shakti Yojana encourages micro-entrepreneurship through skill training. One Stop Centre (Sakhi) offers comprehensive support for women affected by violence. Swadhar Greh provides shelter and vocational training for women in difficult circumstances. State-specific initiatives like Stree Shakti, Mission Shakti, and Mukhyamantri Kanya Suraksha Yojana focus on empowering women through various means.



Role of Women Empowerment in India's \$5 Trillion Economy

Women play a pivotal role in reaching a \$5 trillion economy. Their engagement encourages innovation and productivity by providing a range of viewpoints, essential for comprehensive decision making. Empowering women not only broadens the workforce but also improves its caliber, positively influencing GDP growth. Beyond economic gains, women's active participation uplifts living standards, initiating a positive chain reaction for future generations.

In sustainable development, women are crucial for resource management, ensuring balanced growth. Addressing gender inequalities is both essential for the economy and morally necessary for societal well-being.

Acknowledging and harnessing women's potential is crucial for both economic growth and societal progress, especially in the context of India's aim for a \$5 trillion economy.

Research Findings

- Educating women isn't just about achieving a \$5 trillion economy; it's about building a more equitable and prosperous future for everyone. By investing in women's education, we invest in the future of our communities, our nations, and the world.
- Self Help Groups (SHGs) uplift low income Indians, especially women, with microloans and education, promoting entrepreneurship, agriculture, and skills, fuelling inclusive, sustainable growth on the path to India's \$5 trillion economy.
- The government has implemented a range of initiatives to tackle women's issues, including notable schemes such as Stand Up India, Beti Bachao Beti Padhao, Sukanya Samridhi Yojana, Mahila e-Haat, Ujjwala Yojana, Pradhana Mantri Mudhra Yojana, and the National Mission for Empowerment of Women.
- To achieve India's \$5 trillion aspiration, it is crucial to prioritize job creation for women. Encouraging sectors such as healthcare, technology, and micro-entrepreneurship can promote economic growth.

Conclusions and Suggestions

- To conclude, realising India's \$5 trillion economy objective relies on empowering women through educational initiatives, skill enhancement, and the adoption of equitable policies. Self Help Groups and Government programs are crucial, recognising the diverse impact of women's empowerment is essential for holistic economic growth and societal advancement, reflecting India's journey to sustainable development.
- The research findings suggest that while numerous schemes and government policies exist in India to empower women, there is a lack of sufficient awareness among women about the importance of these initiatives.

To increase awareness of government initiatives for women's empowerment, implement diverse strategies such as empowering rural communities through local media, street arts, and engaging community events. Elevate the voices of women and showcase their success stories prominently in urban landscapes. Leverage the power of mobile technology and foster strategic partnership to maximise outreach and enhance impact.

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GLOBALIZATION DYNAMICS AND INDIA'S FIVE TRILLION DOLLAR ECONOMY VISION: A COMPREHENSIVE STUDY

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Abstract

India's pursuit of a \$5 trillion economy intertwines with the intricate dance of globalization, presenting a tapestry of opportunities and challenges. This research paper delves into the dynamic variations of India's economic journey, recognizing its rich history and the vision to transform it into a major economic player. Globalization emerges as a double-edged sword, unlocking export markets and fostering growth in sectors like IT, yet also bringing challenges like income inequality and environmental concerns. The paper explores India's strategic approach, aiming to triple exports, attract foreign investment through streamlined regulations, and promote self-reliance in critical sectors via initiatives like "Make in India." Bridging the digital divide and addressing social concerns are integral components of this strategy. Despite challenges like geopolitical tensions, the paper underscores the immense opportunities presented by India's young population and entrepreneurial spirit. It advocates for a balanced approach that harnesses globalization's benefits while mitigating its risks, emphasizing responsible and inclusive growth. In essence, the delicate dance towards a \$5 trillion economy involves leveraging globalization for economic growth while safeguarding against potential pitfalls, ensuring success extends beyond economic metrics to encompass social progress and environmental well-being. This research aims to scrutinize the impact of globalization on India's economic growth, evaluate strategic measures for attaining a \$5 trillion economy, and assess challenges and opportunities in this pursuit. By delving into these objectives, the study seeks to provide a comprehensive understanding of India's complex economic landscape and aspirations.

Keywords: Globalization Dynamics, \$5 Trillion Economy Vision, Foreign Investment Attraction, Foreign Investment Attraction, Trade Liberalization, Foreign Direct Investment (FDI), Technology Innovation, Skill Development, Make in India, Standup India.

Introduction

Globalization refers to the integration of the country's economy and culture with the global world. In the 1990s, economic reforms opened markets, fostering international trade. This pervasive phenomenon shows the interconnectedness and interdependence of various regions across the world. India aimed to achieve a \$5 trillion economy by 2024-25 under Prime Minister Narendra Modi's leadership. However, challenges such as the COVID-19 pandemic, income inequality, geopolitical tensions, and environmental sustainability issues stopped the realization of this goal. Finance Minister Nirmala Sitharaman has officially revised the target to 2027-28, a change supported by members of the Economic Advisory Council to the Prime Minister in public statements. In the intricate network of global economic dynamics, India emerges as a key role, intricately weaving its aspirations into the \$5 trillion economy. As the world witnesses the relentless march of globalization, India's economic journey becomes a captivating narrative marked by both promise and risks. This

research embarks on a nuanced exploration of the multifaceted relationship between India's pursuit of a \$5 trillion economy and the global forces of interconnectedness.

The vision to transform India into a major economic player involves navigating the web of globalization—a phenomenon that acts as both as tool for growth and as source of complex challenges. As India positions itself on the global stage, the paper aims to unravel the dynamic variations that underscore this economic journey. Globalization, often described as a double-edged sword, opens avenues for export markets and brings growth in sectors such as Information Technology (IT). Simultaneously, it introduces challenges, including income inequality and environmental concerns that demand careful consideration. Against this backdrop, the research scrutinizes India's strategic approach, strategically aiming to triple exports, attract foreign investment through organized regulations, and foster self-reliance in critical sectors through initiatives like "Make in India, Standup India, and PMEGP (prime minister's employment generation program)."

Bridging the digital divide and addressing social concerns stand as integral components of India's economic strategy, recognizing the importance of inclusivity and sustainability. The research shows the despite geopolitical tensions, India's young population and entrepreneurial spirit present more opportunities for economic advancement. It advocates for a balanced approach, emphasizing responsible and inclusive growth that leverages the benefits of globalization while mitigating potential risks.

India towards a \$5 trillion economy goes beyond economic metrics, extending its reach to encompass social progress and environmental well-being. This research aims to scrutinize the impact of globalization on India's economic growth, evaluate strategic measures for achieving a \$5 trillion economy, and assess the countless challenges and opportunities embedded in this ambitious pursuit. By delving into these objectives, the study seeks to provide a comprehensive understanding of India's complex economic network and its aspirations, shedding light on the intricate interplay between globalization and the nation's journey toward a strong economic future.

Review Literature

To scrutinize the impact of globalization on India's economic growth

1. **Arvind Panagariya, Abhirup Mukherjee, and Dipa Mukherjee(2023)** **"Globalization and India's Economic Growth: Opportunities and Challenges"** This paper analyzes the historical relationship between globalization and India's economic growth, highlighting opportunities like increased trade and investment but also acknowledging challenges like income inequality and environmental degradation.
2. **Arvind Panagariya and Aarti Grover (2023)** **"Leveraging Globalization for India's \$5 Trillion Economy: A Strategic Roadmap"** This paper argues that globalization can be a key driver of India's economic growth, highlighting areas like trade liberalization, foreign direct investment, and technological innovation.
3. **"India's Rise in the Global Value Chains: Opportunities and Challenges" by World Bank (2022):** This report analyzes India's position in global value chains (GVCs) and identifies potential opportunities for integration, particularly in sectors like manufacturing and services.
4. **Rajnish Tiwari, Alok Kumar, and Sunil Kapoor (2022)** **"The Impact of Globalization on India's Manufacturing Sector: A Case Study of the Automobile Industry"** This

research explores the specific impact of globalization on the Indian automobile industry, examining its influence on technology transfer, foreign direct investment, and competitive pressure.

5. **Seema Jayachandran and Timothy Nunan (2021)** "Globalization and Inequality in India: A Spatial Analysis" This study examines the uneven distribution of benefits from globalization within India, analyzing how different regions and social groups have been affected by trade liberalization and foreign investment.

To Evaluate Strategic Measures for Attaining a \$5 Trillion Economy

1. **Anant Agarwal, Amit Prakash, and Aparna Sawhney (2023)** "Digital Infrastructure and India's \$5 Trillion Economy: A Roadmap for Accelerated Growth" This paper emphasizes the crucial role of digital infrastructure in India's economic ascent, outlining strategies for leveraging digital technologies to improve governance, education, healthcare, and entrepreneurship.
2. **McKinsey Global Institute (2022)** "Digital Transformation and India's \$5 Trillion Economy: A Catalyst for Growth" Digital Transformation and India's \$5 Trillion Economy: A Catalyst for Growth.
3. **Amit Bhandari, Rajat Kathuria, and Poonam Gupta (2020)** "Leveraging Digitalization for India's \$5 Trillion Economy: Opportunities and Challenges" This World Bank report explores the potential of digital technologies to propel India's economic growth towards its \$5 trillion goal. It identifies key areas like e-commerce, digital governance, and skill development as crucial for leveraging digitalization.

To Assess Challenges and Opportunities in this Pursuit

1. **Manish Sisodia, Praveen K. Jha, and Manish Kumar (2023)** "Skill Development and the \$5 Trillion Economy: Challenges and Opportunities for India" This research focuses on the critical need for skill development in India's workforce to meet the demands of a \$5 trillion economy and compete effectively in the globalized market.
2. **Rakesh Mohan, Ashok Sahay, and M. Ayhan Kose (2019)** "Globalization and India's Economic Growth: Challenges and Opportunities" This paper analyzes the impact of globalization on India's economic growth, highlighting both its benefits and challenges. It emphasizes the need for structural reforms and improved competitiveness to leverage globalization for sustained growth.

Research Gap

1. The existing literature provides valuable insights into the relationship between globalization and India's pursuit of a \$5 trillion economy, there is a noticeable gap in understanding how strategies related to globalization can help India to achieve its economic goal.
2. Most of the literatures are focused on the impact of globalization on India's economic growth.
3. Through this article we have tried to fill the gap in strategic measures for achieving a \$5 trillion economy.

Problem Statement

1. **India faces significant challenges in achieving a \$5 trillion economy, primarily due to inadequate transportation, logistics, and energy networks. These bottlenecks impede the efficient flow of goods and services, escalating costs and hindering productivity.** According to a World Bank report, India ranks 68th in the Logistics Performance Index, reflecting the urgent need for infrastructure improvements to fuel economic growth and attain the ambitious \$5 trillion goal.
2. **India faces hurdles in achieving a \$5 trillion economy due to weak public finances, escalating bad loans in banks, and constrained credit access for small businesses.** These challenges impede economic growth. As of 2022-23 India's public debt-to-GDP ratio stands at around 81%, and non-performing assets as per 2023 in banks reached 6.7%. These factors underscore the urgency for comprehensive economic reforms to overcome impediments and realize the ambitious economic target.
3. **India's pursuit of a 5 trillion dollar economy faces challenges in manufacturing due to a skill gap, dependence on imports for technology and raw materials, and intricate labor laws.** These hurdles delay competitive growth in the sector, impacting the overall economic target. In 2023, India's GDP was approximately 3.73 trillion dollars, underscoring the significance of overcoming these obstacles for aspiring economic expansion.
4. **India faces significant hurdles in achieving a 5 trillion dollar economy, due to low agricultural productivity, inadequate cold storage infrastructure, and limited access to credit.** These challenges hinder the sector's growth, impacting overall economic prospects. With agriculture contributing substantially to India's GDP, addressing these issues is crucial for unlocking the nation's full economic potential to reach the ambitious 5 trillion dollar target.
5. **India faces the challenge of achieving a \$5 trillion economy while battling with pressing environmental issues like climate change, water scarcity, and air pollution.** Balancing economic growth with sustainable development practices is crucial for the nation's future. This requires innovative policies and investments in eco-friendly technologies to address environmental concerns and foster long-term economic resilience.

Research Objectives

This research aims to scrutinize the impact of globalization on India's economic growth, evaluate strategic measures for attaining a \$5 trillion economy, and assess challenges and opportunities in this pursuit. By delving into these objectives, the study seeks to provide a comprehensive understanding of India's complex economic landscape and aspirations.

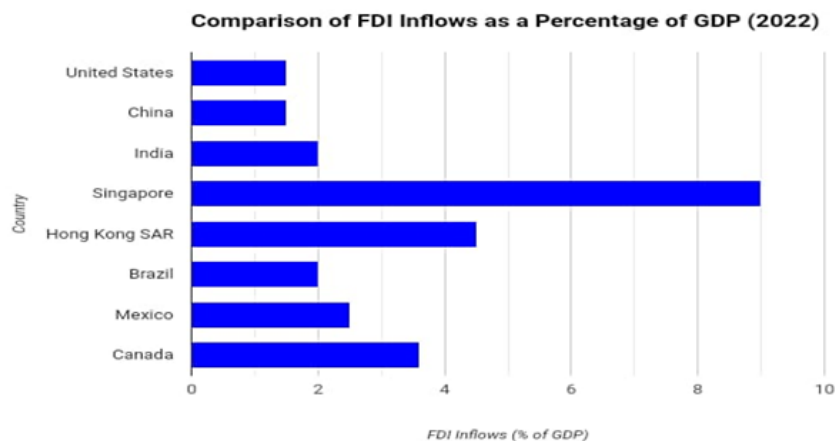
Scope of the Study

- This study will help you to understand the global dynamism.
- This study will help you to understand India's \$5 Trillion Economy Vision and impact of Globalization on Economic Growth
- This study will help you to understand India's strategic measures in attracting foreign investment, tripling exports, and promoting self-reliance in critical sectors,

with a specific focus on initiatives like "Make in India, Standup India, and PMEGP (prime minister's employment generation program)."

Sources of Data

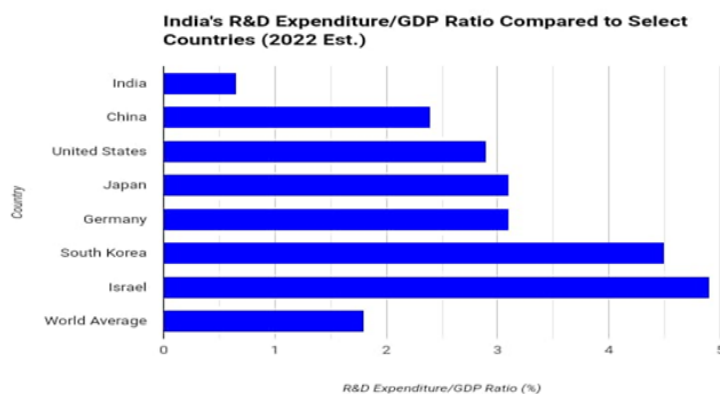
The secondary data has been collected from various websites, journals, articles, books, newspapers, videos, thesis etc. It is descriptive in nature.

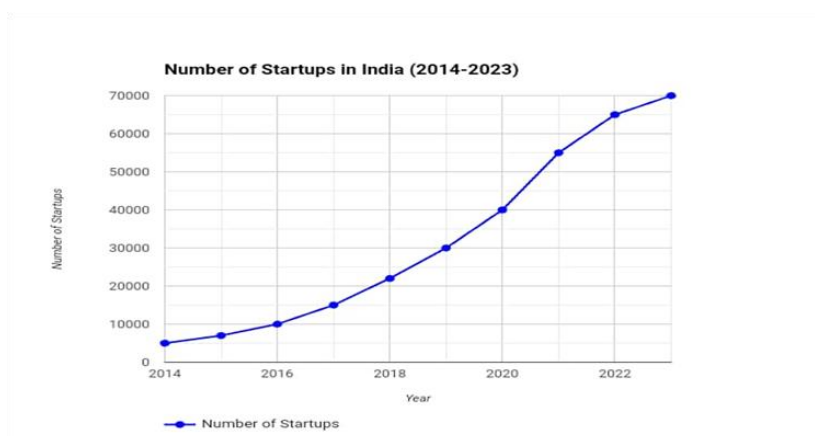


Strategic Roadmap for Globalization

1. **Trade liberalization:** Trade liberalization stands as a keystone for India's global economic integration. The reduction of trade barriers and tariffs can significantly boost export competitiveness. Notable examples include China and Singapore, whose economies flourished following successful trade liberalization initiatives. India, by adopting similar measures, can tap into new markets, thereby expanding its global economic footprint.
2. **Foreign Direct Investment (FDI):** Attracting Foreign Direct Investment (FDI) emerges as a cornerstone for economic growth. FDI inflows have the potential to transform key sectors like technology, manufacturing, and infrastructure. A case in point is the positive impact of FDI in Singapore's technological landscape. To follow this success, India must implement targeted policy reforms and regulatory measures to allure foreign investors, bringing economic development.
3. **Technology Innovation:** Advancements in information technology, artificial intelligence, and digital infrastructure propel nations to global leadership. For instance, Silicon Valley's evolution into a global tech hub showcases the economic benefits of a technology-driven approach. By fostering innovation, India can position itself as a global technology leader, driving economic growth, job creation, and increased productivity.
4. **Skill Development and Education:** Education and skill development are pivotal in preparing the workforce for the demands of a globalized economy. Countries like South Korea have achieved remarkable economic growth by prioritizing education. India must invest in initiatives and policies aimed at enhancing the skills of its workforce, aligning them with the needs of emerging industries. Emulating successful models will ensure a competent workforce, further propelling economic growth.

5. **'Make in India' Initiative:** The 'Make in India' initiative, launched in September 2014, stands as a linchpin in India's strategic roadmap for achieving a \$5 trillion economy. This initiative not only aims to boost domestic manufacturing but also positions India as a global manufacturing hub. By fostering ease of doing business and encouraging foreign investment, 'Make in India' catalyzes innovation and economic growth. Real-world examples showcase its impact, though challenges exist, warranting ongoing improvements to ensure sustained success in India's ambitious economic expansion.
6. **Standup India:** Standup India launched in 2016 by the government, It provide financial aid and training to individuals. This program aims to empower and support aspiring entrepreneurs by providing them with the necessary resources to establish and nurture their businesses, contributing to economic growth and self-sufficiency.
7. **Investment in Research and Development (R&D):** Allocating substantial resources to foster innovation across sectors propels economic growth. By mirroring the R&D-focused strategies of economically robust nations, India can cultivate technological advancements and breakthroughs, essential elements in achieving the ambitious \$5 trillion milestone.
8. **Entrepreneurship and Startup Culture:** Encouraging entrepreneurship and cultivating a startup culture contributes to economic dynamism. Policies promoting ease of doing business, coupled with financial support and mentorship programs, empower young entrepreneurs. The Global Entrepreneurship Monitor reports a positive correlation between a vibrant startup ecosystem and economic growth.
9. **Education Reform for Innovation:** Improving the education system to emphasize creativity, critical thinking, and practical skills is essential for nurturing an innovative mindset. Finland's successful education reforms serve as a blueprint for aligning education with the needs of the modern economy. The World Economic Forum's Global Competitiveness Report highlights the role of education in fostering innovation and competitiveness.





Addressing Challenges and Ensuring Inclusivity in India's Pursuit of a \$5 Trillion Economy

- 1. Mitigating Income Inequality:** India's economic landscape has witnessed substantial growth, yet income inequality remains a pressing concern. According to the World Inequality Database, the top 1% in India holds more than 20% of the national income. To address this, policy interventions must be based on concrete evidence. The success of progressive taxation systems in countries like Denmark, where the Gini coefficient is 0.28, serves as an instructive model. Furthermore, social welfare programs, such as Brazil's Bolsa Familia (a conditional cash transfer system), have proven effective in reducing poverty and fostering a more equitable society.
- 2. Environmental Sustainability:** Economic expansion often comes at the cost of environmental degradation. India's carbon emissions have surged in tandem with economic growth, contributing to global environmental challenges. However, adopting sustainable practices can align economic goals with environmental responsibility. Germany's emphasis on renewable energy and stringent environmental policies has led to a substantial reduction in carbon emissions without compromising economic growth.
- 3. Geopolitical Tensions:** India's integration into the global economy brings geopolitical challenges, requiring a nuanced approach. China's Belt and Road Initiative, for example, has stirred geopolitical tensions globally. India can mitigate such risks by diversifying economic partnerships. Japan's approach of establishing trade relations with a multitude of countries demonstrates how this strategy can reduce dependence on a single partner, enhancing economic stability.
- 4. Social Progress and Community Development:** Local communities must be integral to economic growth. In India, the Pradhan Mantri Awas Yojana has made strides in ensuring housing for all. However, a comprehensive approach is necessary. Costa Rica's emphasis on social infrastructure, including strong healthcare and sanitation programs, has contributed to social progress alongside economic development.

How India faced challenges during the COVID-19 pandemic without reaching the \$5 trillion economy goal:

- 1. Economic Contraction:** The pandemic triggered a significant economic contraction, with GDP growth slowing down considerably. This contraction hindered the progress India was making towards achieving the \$5 trillion economy target.

2. **Disruption in Global Supply Chains:** Global supply chain disruptions due to lockdowns and restrictions had a profound impact on manufacturing and exports, critical components for India's economic expansion to a \$5 trillion level.
3. **Labour Market Disruptions:** Lockdowns and restrictions led to disruptions in the labour market, resulting in job losses and reduced income for many individuals. This, in turn, affected the purchasing power of the population, impacting economic growth.
4. **Decreased Foreign Direct Investment (FDI):** As per the predictions, there was a notable reduction in foreign direct investment (FDI), impacting the essential flow of capital required to reach the \$5 trillion economy goal.

Findings

1. India has taken useful strategic measures for achieving a \$5 trillion dollar economy, such as trade liberalization, attracting foreign investments, fostering technological innovation, and initiatives like "Make in India and Standup India."
2. India faces some challenges in achieving a \$5 trillion dollar economy, such as income inequality, environmental stability, geopolitical tensions, and social progress and community development.
3. India faced many challenges during the COVID-19 pandemic, such as disruptions in the labour market, a decline in foreign direct investment (FDI), and interruptions in the supply chain.

Conclusion

India's journey to a \$5 trillion economy is mixed with the opportunities and challenges posed by globalization. While strategic measures like trade liberalization and 'Make in India' showcase promise, challenges such as income inequality and environmental concerns must be addressed. The COVID-19 pandemic added extra hurdles, underscoring the importance of strong policies for India to attain economic growth. By overcoming these challenges, As Nirmala Sitharaman said, India can achieve the \$5 trillion economy target by the financial year 2027-28. The research findings suggest that India has implemented several strategic measures such as trade liberalization, the Make in India scheme, investments in technology innovation, research and development, Standup India, and PMEGP (prime minister's employment generation program). However, there is a lack of awareness among the general public regarding how to avail themselves of the benefits from these initiatives. It is crucial for India to generate awareness so that the public can effectively utilize the government schemes, ultimately contributing to the goal of reaching a \$5 trillion economy.

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VIRTUAL EMPLOYEE MANAGEMENT- A DIGITAL SYMPHONY IN ACHIEVING INDIA'S 5 TRILLION ECONOMY

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Abstract

India's ambitious vision of achieving a \$5 trillion economy depends on various transformative factors. One such potential disruptor is virtual employee management (VEM), its impact can be visible in talent acquisition, operational efficiency and workforce dynamics. In the pursuit of propelling India towards its ambitious 5 trillion dollar economy milestone, the significance of virtual employee management emerges as a digital symphony in orchestrating unmatched production and efficiency. This study explores the complex relationship that exists between workforce dynamics and advanced technology, with the goal of determining how the successful integration of virtual employee management systems can serve as foundation for economic success. The objective is to identify the possible points of potential synergies in the landscape of virtual employee management, from early integration of basic software solutions to the more advanced and sophisticated platforms employing artificial intelligence and machine learning to achieve a more efficient, flexible, and ultimately prosperous economic future for organization in India. This study is an extensive review of existing literature on virtual employee management, technology adoption in businesses, and their impact on economic growth. The study finds that VEM breaks geographical barriers, unlock vast talent pool across our country and beyond, skill gaps get fulfilled, opportunities on every home computers, no burden of physical office spaces, finds flexibility, diversity and inclusion aspects gets enriched, more agile and effortless adaptation to changes. This study aims to understand how technology and economic aspirations takes a harmonious progression in optimizing workforce productivity and resource allocation.

Keywords: Virtual Employee; Employee Management; 5 Trillion Economy; Resource Allocation;

Introduction

As India sets its sights on the monumental milestone of a 5 trillion-dollar economy, the orchestration of virtual employee management emerges as a pivotal force, conducting a transformative melody that resonates through the corridors of businesses, industries, and economic landscapes. In this study, we navigate through the complexities and intricacies of virtual employee management, dissecting its multifaceted role in shaping the very essence of workforce dynamics. The symphony begins with an exploration of the evolution of virtual employee management, tracing its journey from rudimentary software solutions to the sophisticated integration of artificial intelligence and machine learning. As we delve into the technological aspects, we uncover the symphonic potential of data analytics and automation, each note playing a vital role in optimizing workforce productivity and resource allocation. Yet, this symphony extends beyond the realm of algorithms and analytics. It delves into the heartbeat of organizations, understanding the dynamics of a virtual workforce and the crucial interplay between technology and employee engagement. As we navigate the landscape of remote work and diverse professional arenas, we aim to compose strategies that resonate with the nuances of India's varied workforce.

Research by eminent scholars highlights the positive correlation between effective virtual employee management and economic growth. This study, therefore, becomes a score sheet, documenting the potential of orchestrating growth through digital means as a catalyst for propelling India into a 5 trillion-dollar economy. So, let the curtains rise, and the music commence as we embark on this intellectual journey of harmonizing growth—a journey where virtual employee management becomes the conductor, guiding India towards a future where economic triumph is not just a goal but a symphony composed with precision and foresight. Virtual employee management can significantly contribute to the goal of India achieving \$5 trillion economy. Following are the key areas where virtual employee management impacts the workforce dynamics,

Enhanced Productivity

Virtual employee management systems streamline workflow and task assignments, reducing inefficiencies. This leads to improved productivity, allowing businesses to accomplish more with existing resources.

Cost Savings

Remote work facilitated by virtual employee management can lead to cost savings for both employers and employees. Reduced office space requirements, lower utility costs, and decreased commute expenses contribute to overall economic efficiency.

Talent Access and Retention

Virtual employee management enables access to a broader talent pool by overcoming geographical constraints. Organizations can attract and retain skilled professionals, fostering innovation and competitiveness on a global scale.

Agile Business Operations

Virtual employee management systems support agile business operations, allowing organizations to adapt quickly to changing market conditions. This flexibility is crucial for staying competitive in dynamic economic landscapes.

Technology Adoption

The implementation of virtual employee management necessitates the integration of advanced technologies, fostering a culture of innovation. This, in turn, contributes to the development of a technologically advanced and resilient economy.

Employee Engagement and Well-being

Virtual employee management emphasizes work-life balance, promoting employee well-being. Engaged and satisfied employees are more productive, contributing positively to organizational success and, by extension, the overall economy.

Diverse Economic Participation

Virtual work allows individuals from diverse backgrounds and regions to participate in the economy, fostering inclusivity. This contributes to a more evenly distributed economic growth across the country.

Data-Driven Decision Making

Virtual employee management systems generate valuable data on workforce performance and organizational processes. This data can be leveraged for informed decision-making, enhancing strategic planning and resource allocation.

Entrepreneurship and Innovation

Virtual work empowers entrepreneurs and startups, providing them with the flexibility to establish and grow businesses without the constraints of physical locations. This fosters a culture of entrepreneurship and innovation.

Global Market Access

Virtual employee management enables businesses to operate on a global scale, accessing international markets. This expanded reach contributes to increased trade opportunities and economic growth.

The adoption of virtual employee management practices aligns with the contemporary trends in the global workforce and can serve as a catalyst for India's economic aspirations, contributing to the realization of a 5 trillion-dollar economy.

Objectives of the Study

- To comprehensively assess the multifaceted influence of VEM practices in terms of employee productivity, engagement, motivation, and well-being.
- Identify and analyze the significant shifts in virtual employee management practices adopted.
- Investigate the emerging challenges and opportunities associated with managing virtual teams.

Scope of the Study

The COVID-19 pandemic catalyzed a massive shift towards virtual work, particularly in IT companies. While virtual work offers benefits like flexibility and talent scalability, the sudden transition also exposed various challenges in managing employees effectively. This research aims to comprehensively analyze the influence of VEM on virtual employee management practices in organizations, identifying both its impact and potential for optimization.

Gaps and Future Research

- Further research is needed to understand the long-term impacts of VEM on virtual team dynamics and organizational culture.
- The effectiveness of different leadership styles and performance management practices in specific virtual work contexts requires further investigation.
- The ethical implications of technology use in virtual work, including data privacy and surveillance concerns, deserve close attention in future research.

Review of Literature

Chaudhary, V., Mohanty, S et al (2022) has found that top-level executives should maintain regular touch with staff, expand virtual training, and urge employees to get

regular mental health screenings. This will result in increased staff retention and productivity.

DeLone & McLean, (2022): The pandemic has accelerated the adoption of new technologies to facilitate virtual work, such as video conferencing tools, project management platforms, and collaboration software. Studies explore the role of technology in supporting virtual teams and identifying potential challenges

Agarwal et al., (2021): the study was able to find that artificial intelligence helps and enhance and improve the human resource functions in an organization and it is helpful in the engagement of the employees and motivating them, which further helps and transformation of the behavior of the employees and develop their trust for a particular organization that for the impacts smooth efficiency an organization. Artificial intelligence helps the organization find employees to keep a track of the business while the pandemic is going on and cope with the unexpected situation.

Frost, M., & Duan, S. X. (2020) says that the entire existence of global virtual teams (GVTs) is predicated on the presence of digital media that connects team members across geographical boundaries. The use of proper technology is critical for the successful operation of GVTs, as it reduces the risk of misunderstanding and misinterpretation among team members, allowing team members to be cognitively and emotionally motivated to perform and increase efficiency.

Mukherjee et al. (2012): The shift from a production-based to a service-based economy with the help of technological development has opened up the possibility for workers with intellectual tasks to work from other locations than a physical workplace.

Learned (2011) believes that virtual leadership is the process of social influence using advanced information technology to effect change in the attitude, feelings, ideas, behaviors, and performance of individuals and groups.

Caulat (2010) defines hypothetical leadership as the phenomenon of intentional influence by one person from the members of the organization in the organizational environment where the interaction occurs mostly through computers and phone calls.

Laura Velten et al (2017) have reported that Cultural diversity is linked to an employee's motivation since teamwork and atmosphere, which also includes cultural diversity, are the most motivating factors.

Vandana Madhavkumar (2017) commented that organization in order to enhance their performance by employing more women employees need to focus on a work environment with a culture that is supportive of women.

Elizabeth Foma (2014) identified that a diverse workplace increases productivity, increases creativity and improves problem solving.

Ceren Ozgen et al (2013) have mentioned that the benefits of cultural diversity include trade facilitation through networks, trust and institutional knowledge and also knowledge spillovers from ideas and practices.

Barbara Mazur (2010) has found that Diversity management benefits associates by creating a fair and safe environment where everyone has access to the same opportunities and challenges.

Milliken and Martins (1996) differentiated diversity between observable attributes (age, gender and race) and underlying attributes (education, functional background and tenure).

Xiao and Duan (2014) stated that employee engagement was a conceptualization including five dimensions: initiative, loyalty, effectiveness, identity and commitment.

Xu et al. (2013) divided employee engagement into four dimensions: organizational identity, work attitude, mental state, responsibility, effectiveness.

Soane et al. (2012) developed a model of employee engagement that has three requirements: a work-role focus, activation and positive affect.

Bakker (2011) summed the engagement as a positive, highly awakened emotional state with two features: energy, and involvement.

Gonzalez-Roma et al. (2010) stated that cynicism and dedication are two ends of "identity" dimension, while emotional exhaustion and vigor are not supported as two ends of the "energy" dimension.

Macey and Schneider (2008) suggested to regard employee engagement as a wide-ranging term which contains different types of engagement (traits engagement. Psychological state engagement, behavioral engagement), and each one needs different conceptualizations, such as proactive personality (traits engagement), involvement (psychological state engagement) and organizational citizenship behavior (behavioral engagement).

Cha (2007) defined employee engagement as the employee's active involvement in work and the state of full physiology, cognition, and emotion that accompanies the work engagement, including three dimensions: work engagement, organizational recognition, and sense of work value.

Saks (2006) defined employee engagement as a "different and unique concept" which is composed of knowledge, emotion and behavior.

Xie (2006) pointed out that employee engagement is employee' dedication to a profession, including hard work, dedicated to the company, loyal to the boss, and self-confidence.

Welling and Concelman (2005) stated that engagement is a mixture of commitment, loyalty, productivity, and ownership.

Zeng and Han (2005) referred to employee engagement as having a long-lasting, positive emotional and motivational state of awakening their work, ready to devote themselves to work at any time, and are accompanied by pleasant, proud, and encouraging experiences during work.

May et al. (2004) stated that employee engagement included not only cognition, but also the flexible application of emotions and behaviors.

Schaufeli and Bakker (2004) stated that vigor and dedication are direct opposites of exhaustion and cynicism, respectively.

Schaudfeli et al. (2002) defined engagement as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption, and a more persistent and pervasive affective-cognitive state that is not focused on any specific object, event, individual, or behavior.

Harter et al. (2002) defined employee engagement as the individual's involvement and satisfaction with as well as enthusiasm for work. **Maslach et al. (2001)** stated that engagement is an energy, participation, and effectiveness, corresponding with three features of burnout: exhaustion, cynicism and reduces professional efficacy, and engagement and burnout are two ends of a continuum.

Research Methodology

The methodology employed for this conceptual paper involves a thorough exploration and assessment of existing literature on the utilization of VEM in organizational settings for enhancing employee engagement within virtual teams. The research methodology encompasses a meticulous web search, scrutinizing articles, research papers, empirical studies, and case studies. A comprehensive review is conducted using reputable online databases, including Web of Science, Scopus, Science Direct, and Google Scholar. The advanced search is specifically focused on keywords such as Virtual Employee Management, Technology Adoption, Employee Engagement, and Managing Virtual Teams. The references included are solely derived from articles published in high-impact journals, ensuring the credibility of the sources.

It is essential to note that the limitations of this paper may arise from the constraint of relying on a limited number of articles retrieved from databases. Additionally, the discussion on the applicability of Artificial Intelligence in organizations for employee engagement extends beyond virtual teams and considers the broader context of employee expectations within organizational settings. The selected articles, forming the basis for the development of the conceptual framework, are restricted to a curated collection of 24 publications spanning from 2013 to the present year, 2022.

Conclusion

The COVID-19 pandemic has irrevocably altered the trajectory of virtual work in entire working ecosystem. While challenges remain, this crisis has also presented an opportunity for innovative adaptations and a reassessment of traditional work practices. By embracing the lessons learned and continuing to evolve, organizations can build upon the foundation of virtual work to create a future that is not only resilient but also fosters employee well-being, collaboration, and productivity in a digitally connected world.

Overall, the study revealed that VEM is a multifaceted enabler of economic progress. This literature review sets the stage for further exploration, underscoring the importance of understanding and leveraging virtual employee management strategies in the pursuit of India's 5 trillion-dollar economy. While challenges remain, the experience presented an opportunity for organizations to adapt, innovate, and develop effective strategies for managing talent in a virtual work environment.

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PRECISION AGRICULTURE: CATALYST FOR INDIA'S ECONOMIC GROWTH TO \$5 TRILLION

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Abstract

The study examines the role of precision agriculture in India's economic growth, focusing on its potential to address agricultural challenges and enhance productivity. It emphasizes the need for comprehensive solutions, such as data management and advanced practices, to optimize resource use, reduce costs, and improve agricultural sustainability. The economic impacts of precision agriculture include increased productivity, job creation, and environmental sustainability. However, challenges in widespread implementation, such as high initial investments and limited awareness, are addressed. The research uses a comprehensive review of secondary data sources, including academic journals, government reports, and reputable publications, to provide a thorough understanding of precision agriculture's impact on the agricultural sector. The findings suggest that precision agriculture can address challenges like small landholdings, resource constraints, and climate variability, and contribute to India's \$5 trillion economy by 2027-28. Policy recommendations for widespread adoption include strategies to address initial high investments, limited awareness, technical training, collaboration, financial support, and technological advancements.

Introduction

Precision farming, also known as precision agriculture, is a modern approach that uses information technology to ensure crops and soil receive the right nutrients for optimal health and productivity. In India, it is gaining popularity due to its benefits, particularly in nutrient-use efficiency (NUE) and water-use efficiency (WUE). The Indian government has established 22 Precision Farming Development Centres (PFDCs) to develop and disseminate regionally differentiated technologies, such as Micro Irrigation and hi-tech agriculture. The significance of precision farming lies in its potential to enhance agricultural productivity, prevent soil degradation, reduce excessive chemical usage, and improve water resource utilization. Additionally, precision farming technologies like mobile apps, automation, and sensors can assist farmers in making timely decisions and becoming climate resilient.

Agriculture is a crucial part of the Indian economy, with Sikkim being the first state to achieve 100% organic farming. India ranks 2nd globally in agriculture production, with 9th and 5th places in services and industry respectively. Over the past 15 years, agricultural production has grown by 12%, from 87 USD bn to 459 USD bn.

India aims to become a \$5 trillion economy by 2027-28, a significant increase from the \$3.57 trillion in 2023-24. The strategy includes macro-level growth, digital economy, fintech, technology-enabled development, energy transition, climate action, and investment. Precision agriculture, an approach using information technology, is crucial for this goal. It ensures crops and soil receive the right nutrients for optimal health and productivity, minimizing waste. Precision farming can reduce production costs, increase productivity, and improve resource utilization. It also contributes to the digital economy through mobile apps, automation, and sensors, assisting farmers in decision-making and climate resilience. This aligns with India's focus on technology-enabled development and resource utilization.

The Current Challenges in Indian Agriculture

Indian farmers face several challenges that affect their productivity and livelihood. These include small landholdings, resource constraints, climate variability, and the impact of

climate change. Small landholdings, with an average farm size of less than two hectares, make it difficult to achieve economies of scale and implement large-scale agricultural practices. This leads to high production costs and low productivity. Resource constraints include poor extension, lack of link with the supply chain, low availability of institutional credit, low investment in agriculture, and low technology. Other constraints include high input costs, lack of marketing facilities, exploitation by middlemen, scarcity and high labor costs, and monsoon fluctuations affecting production levels. Climate variability significantly impacts agriculture in India, with changes in rainfall and evapotranspiration affecting expected yields for most crops. Extreme weather events, such as droughts and floods, exacerbate risks associated with food production and farm income. Comprehensive and sustainable solutions are needed to ensure the viability of agriculture in India and improve the livelihood of farmers.

The Overview of Precision Agriculture

Precision Agriculture is a farming management strategy that focuses on observing, measuring, and responding to temporal and spatial variability to improve agricultural production sustainability. It is used in both crop and livestock production and aims to optimize returns on inputs while preserving resources. Key components of precision agriculture include data management and analytics, technology, and management. Data is collected from various sources like soil sensors, weather stations, and satellite imagery, which are then transformed into valuable insights. Technology includes GPS systems, sensors, drones, and advanced software platforms for data collection and application. Management involves using advanced software and tools to manage agricultural operations, optimize resource use, and minimize waste. This approach allows farmers to make real-time decisions tailored to their specific needs, resulting in a more precise and sustainable agriculture approach.

How Precision Agriculture Solve the Challenges of Farmers in Agriculture

Precision agriculture can help Indian farmers by maximizing yields by using precise amounts of inputs, such as fertilizer and water, and reducing input use and associated costs. This approach can help farmers manage cultivation more efficiently, reducing costs and resource constraints. Precision farming technologies, such as satellite positioning systems and sensors, can enhance agricultural productivity, prevent soil degradation, and help farmers become climate resilient. Digital advisory services and weather-related forecasts can also help farmers make timely decisions and become more environmentally friendly. However, the widespread adoption of precision farming in developing countries like India can be challenging due to its high skill and cost. To achieve maximum efficiency, support from local government bodies, role models, and extension workers is crucial. This includes raising awareness among farmers, reducing perceived risk, and providing financial support for the subsidiary. By implementing these technologies, India can improve its agricultural development and socio-economic status.

Technological Interventions in Precision Agriculture

Sensors are essential in soil health monitoring in Indian agriculture for several reasons. They enable real-time data collection, allowing for efficient analysis and processing. Sensor-based soil analysis offers advantages over conventional laboratory methods, such as lower

costs, increased efficiency, and timely results. Soil proximal sensing technologies, such as hand-held sensors and soil spectroscopy, help in monitoring biotic and abiotic stress and developing crop health indexes for spatiotemporal crop growth monitoring.

Soil moisture sensors are crucial for precision agriculture, helping farmers ensure optimal water levels in their soil. They accurately measure soil moisture, reducing resource wastage and ensuring optimal water levels. Decision Support Systems (DSS), such as ICAR Geoportal, provide real-time solutions using sensor data to make informed decisions about farming practices.

Various types of sensors are used in agriculture for smart agriculture, including optical, electrochemical, mechanical, dielectric, location, electronic, and airflow sensors. In summary, sensors in Indian agriculture improve agricultural productivity and sustainability by providing real-time, high-resolution data about soil and crop health.

GPS technology is a vital tool in India's precision farming sector. It aids in farm planning and field mapping, enabling farmers to monitor crop conditions using orbiting satellites. GPS technology also aids in soil sampling, providing insights into soil health and nutrient content, which aids in informed fertilizer application and irrigation decisions. GPS technology also aids in tractor guidance, reducing overlaps and skips, and saving time and resources. It also assists in variable rate applications, automating the precise application of pesticides and fertilizers based on data collected from sensors, maps, and GPS. Lastly, GPS technology aids in yield mapping, collecting georeferenced data on crop yield and characteristics, such as moisture content and grain quality, to analyze the effectiveness of farm management practices and make necessary adjustments. Thus, GPS technology is a vital component of India's precision farming, enabling farmers to make data-driven decisions and manage their farms more efficiently.

Drones are revolutionizing Indian agriculture by providing real-time crop monitoring and pest control. They can detect and prevent pest infestations, diseases, and crop damage, improving harvest quality and quantity. Data collected by drones helps regulate crop health, treatment, scouting, irrigation, and soil analysis, boosting crop yields and minimizing time and expenses. Drones are also effective in pest control, reducing overuse of pesticides and insecticides. They can detect pest attacks and provide accurate data, allowing targeted application of pesticides, and reducing environmental impact. Real-time remote monitoring is possible through advanced camera systems on agricultural drones. The drone industry in India is projected to contribute \$50 billion to manufacturing potential by 2030, generating over 500,000 jobs. In summary, drones are transforming Indian agriculture by enabling more efficient and sustainable farming practices.

Data Analytics and Decision Support Systems

Data analytics is revolutionizing precision agriculture, particularly in India, by providing actionable insights that improve agricultural practices. By analyzing weather patterns, soil conditions, and crop yields, farmers can make informed decisions about planting, growing, and harvesting crops. This data can improve crop yields, reduce waste, and increase efficiency. Data analytics also optimizes operations, reduces time and resources needed, and improves resource management. AI-based projects can provide farmers with information on seed depth, location, soil density, and nutrient levels, thereby increasing yields. Decision Support Systems (DSS) are essential tools in agriculture, helping farmers make informed decisions, solve complex issues, and enhance operational efficiency.

Economic Impact of Precision Agriculture

Precision agriculture in India has the potential to significantly improve the productivity, profitability, and sustainability of farming practices. By using precise amounts of inputs, such as fertilizer and water, it manages cultivation more efficiently, reducing input use and associated costs. This leads to reduced production costs, making farming more economically viable. Precision farming technologies also allow for site-specific management, resulting in more crop yield and quality without polluting the environment. This leads to sustainable agriculture and development.

Adopting technology and data-driven approaches can unlock the untapped potential of farmlands, ensuring food security, increased farmer income, and environmental sustainability. The adoption of precision farming technologies could also lead to job creation in areas such as data analysis, drone operation, and technology maintenance.

The government of India has established 22 Precision Farming Development Centres (PFDCs) across the country to develop and disseminate regionally differentiated Precision Farming technologies, such as Micro Irrigation and hi-tech agriculture, to improve the socio-economic conditions of farmers and end users. In summary, precision agriculture in India has the potential to transform the country's agricultural sector, leading to increased productivity, reduced costs, improved resource utilization, and significant economic benefits.

Precision agriculture is a technology that uses information technology to ensure the optimal health and productivity of crops and soil, leading to higher crop yields and economic growth. It also aims to reduce resource use by managing and distributing resources site-specifically, maximizing long-term cost-benefit, and preventing waste. This results in significant savings for farmers and makes farming more economically viable.

Efficiency gains from reduced resource use can lead to cost savings, reinvested into the business for further growth. This transition to a more resource-efficient economy contributes to long-term environmental objectives and creates jobs.

Innovation and growth in precision agriculture are driven by technological breakthroughs in artificial intelligence, robotics, the Internet of Things, Big Data, 3D printing, nanotechnology, and biotechnology. These innovations can lead to significant economic growth.

Job creation in precision farming technologies could also occur in areas such as data analysis, drone operation, and technology maintenance. In summary, increased productivity and reduced resource use in precision agriculture are key drivers of economic growth, resulting in higher output, efficiency gains, wage increases, increased business profitability, and innovation-driven growth.

Government Initiatives and Policies in Precision Agriculture

The Indian government has launched several initiatives to support precision agriculture, including the E-NAM Portal, which connects existing APMC mandis to create a unified national market for agricultural commodities. The Paramparagat Krishi Vikas Yojana (PKVY) promotes organic farming and soil health improvement, while the Pradhan Mantri Fasal Bima Yojana (PMFBY) provides crop insurance to millions of farmers. The Micro Irrigation Fund (MIF) is set up with NABARD to help states mobilize resources for micro irrigation coverage. The AgriStack digital ecosystem uses technologies like Big Data and AI to improve agricultural operations efficiency. The government provides a 100% subsidy to

Farm Machinery Training and Testing Institutes, ICAR Institutes, Krishi Vigyan Kendras, and State Agriculture Universities to promote drone use in agriculture. The Tamil Nadu Precision Farming Project (TNPFP) offers yield advantages averaging from 30 percent to 200 percent for different crops using irrigation cum-fertigation systems. These initiatives aim to promote modern technologies in agriculture, improve farming practices, and enhance productivity and profitability in the agricultural sector.

To promote precision agriculture in India, policy recommendations include increasing awareness and training through training programs, providing financial support through subsidies or low-interest loans for farmers to purchase precision farming equipment, investing in research and development to adapt technologies to local conditions, developing infrastructure like reliable internet connectivity in rural areas, encouraging public-private partnerships to drive innovation, establishing more Precision Farming Development Centers (PFDCs) across the country, developing data management policies for privacy and security, and establishing a regulatory framework for drone use in agriculture. These recommendations aim to overcome initial cost barriers and promote the adoption of precision agriculture in India. By implementing these strategies, India can overcome the initial cost barrier and foster a more sustainable and efficient agricultural sector.

Challenges and Barriers of Precision Agriculture

Precision agriculture in India faces several challenges, including high initial investment, lack of awareness and technical training among small-scale farmers, a digital divide due to high levels of illiteracy, small landholdings, a unique pattern of land holdings, and socio-economic conditions. The high initial investment can be a barrier for many farmers, while a lack of awareness and technical training can hinder the adoption of these technologies. The digital divide also hinders the adoption of modern technology in farming methods, especially in rural areas where reliable internet access is lacking. The small size of landholdings also limits the economic gains from precision farming technology. The adoption of precision farming in India is still in its nascent stage, and the social and economic conditions of farmers can impact their ability to adopt these technologies. Addressing these challenges is crucial for the successful implementation of precision agriculture in India.

The Possible Solutions to Overcome the Challenges in Precision Agriculture In India

To overcome the challenges in adopting precision agriculture in India, several solutions can be implemented. These include providing financial support through loans and subsidies, promoting education and training through collaboration with agricultural universities, research institutions, and extension services, developing infrastructure like reliable internet connectivity in rural areas, pooling farmlands under contract farming to tap into the benefits of precision farming, encouraging public-private partnerships to drive innovation, implementing policy changes that promote precision agriculture, and leveraging technological advancements like AI and cost-effective satellite tech to address challenges such as high implementation costs, data interpretation difficulties, and tech complexity. These solutions aim to overcome the initial cost barrier and promote the adoption of precision agriculture in India. By implementing these solutions, India can overcome the challenges associated with the adoption of precision agriculture and contribute to a more sustainable and efficient agricultural system.

Conclusion

Precision agriculture is a key driver of India's economic growth, to reach a \$5 trillion economy by 2027-28. This modern farming approach, utilizing technology like GPS, sensors, drones, and data analytics, improves nutrient-use efficiency, and water-use efficiency, and reduces environmental impact. However, challenges like high initial investments and limited awareness among small-scale farmers need to be addressed. Policy recommendations include increasing awareness, providing financial support, investing in research and development, and fostering public-private partnerships. With strategic policies, India can harness the full potential of precision agriculture for sustainable growth and global competitiveness.

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AN EXPLORATORY ANALYSIS OF THE ROLE OF ARTIFICIAL INTELLIGENCE IN SATELLITE AND SPACE TRAVEL MARKETING AND ITS INFLUENCE ON INDIAN ECONOMIC GROWTH

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Abstract

In order to better understand how artificial intelligence (AI) affects space marketing dynamics and advances national economic progress, this research examines the nexus between AI and space marketing. The study explores the symbiotic relationship between artificial intelligence (AI), space exploration, and economic development in a period of technological advancement, with the goal of providing industry and academics with nuanced insights. The study uses an exploratory investigation to identify the many aspects of artificial intelligence's application in space marketing. Through literature study and debate, it highlights major trends, difficulties, and possibilities. In order to provide a full understanding of the various issues related to space marketing, the study also uses word clouds and keyword modeling in conjunction with text clustering. The study comes to the revolutionary conclusion that AI's incorporation into space exploration has the ability to spur economic expansion. The report emphasizes that in order to maintain momentum in the quickly changing space business, ethical considerations, legal clarity, and strategic collaborations are essential. The results are intended to serve as a roadmap for strategic planning, policy development, and decision-making in the context of space-related economic activities.

Keywords: *Artificial Intelligence, Space Marketing, Space Exploration, Space Economy, Robotics, Automation, Indian Space Industry, Space Startups, Ethical Considerations, Economic Growth.*

Introduction

Within the ever-changing field of modern technology, the incorporation of Artificial Intelligence (AI) into several industries has become a game-changer, bringing with it previously unheard-of levels of efficiency and creative ways to solve problems. The use of AI in space marketing is a frontier that has enormous potential to influence the course of a country's economy as we look beyond Earth and into the huge field of space exploration. The correlation between space exploration and economic growth has gained prominence due to the substantial investments made in space-related projects by both public and private sectors. Within this framework, our study aims to explore the unexplored domain of how artificial intelligence (AI), a rapidly developing area unto itself, affects the dynamics of space

marketing and, in turn, the economic development of countries. This exploratory investigation aims to identify important drivers, obstacles, and possibilities by attempting to unpack the complex aspects of AI's position in space marketing. By doing this, our research hopes to provide insightful analysis of the mutually beneficial interaction between artificial intelligence (AI), space marketing, and national economic growth to both academics and industry. As we begin our research, we will be looking at more than just the technology side of things; we will also be looking at the larger socio-economic picture. This research intends to pave the path for informed decision-making, policy development, and strategic planning in the changing landscape of space-related economic undertakings by bridging the gap between cutting-edge technology and its practical impact.

Literature Review

Space Exploration

Space exploration comprises different aspects such as the Space Exploration Initiative (SEI) planned by President Bush, which includes components like Space Station Freedom, a Permanent Lunar Base, and a Manned Mission to Mars (Nasa, 2019). The employment of robots in space exploration, such as autonomous intelligent systems and teleoperated conventional robot systems, is another area of emphasis for the SEI (Jon, D., Erickson., 1992). 'Space: Discovery and Exploration' is a book written by J. Martin, Collins, Sylvia K. Kraemer, and others that attempts to shed light on American space history and how it intersects with commerce, politics, government, and science. NASA's space exploration program takes into account the advantages and disadvantages of space exploration while planning for manned trips to Mars, lunar bases, and moon visits (Margaret, M., Bryant, 1968). Space exploration has also contributed to the expansion of the English language, with new terminology and vocabulary being generated in the area of space science (Rachel, A., Carter, 2012).

Space Travel Marketing

The market for space travel is expanding and has a lot of room to grow both profitably and develop. Space tourism is currently seen as a commercial industry with expensive package deals for travelers, having developed over time (O.M., Vovchanska, Liliya, Ivanova, 2022). According to Oleksii and Mykhalchenko (2022), the primary characteristics of the space tourism industry are the division of the market according on customer solvency and motivating motives like extreme experiences or scientific research. The industry's goals are to lower expenses and provide accessibility to space travel for a larger group of people (Fábio, Luciano, Violin.,Vitor, Barbato, Honorato., 2018). Presently, space tourism is regarded as "commercial," albeit with certain restrictions (Ken, Davidian.,2021). Price reductions and the development of space tourism into a lucrative tourism industry are anticipated as a result of the arrival of additional operators and rising customer demand (Corina, Larisa, Bunghez, 2015). The growth of space tourism is thought to present a special chance that will boost the economy and encourage the creation of new businesses and technological advancements.

Space Travel and Economy

The space tourism sector is expanding quickly and becoming more competitive; a number of businesses are providing space travel experiences to affluent people who are prepared to pay hefty prices (Parrella et al., 2022). As a result, e-commerce and data

analytics research in the space industry have entered a new frontier (Özlem, Küçük, 2022). The space economy is also having an impact on several industrial sectors, sustainable practices, and business and management (Yang, Lei, Yue, Guo., Xiaotong, Li., Zhe, Jing., 2022). Finding profitable market niches is essential in the Russian space market, where the commercialization of space operations is a prominent trend that is observed worldwide (Daniele et al., 2022). The space sector as well as larger society stand to gain from the space economy's ability to generate employment, economic growth, and multiplier effects (Irina et al., 2022). With a focus on maximizing the benefits of space for society and utilizing investments from the private capital market, the Italian model is leading the way in Europe when it comes to space economy and financial ventures.

World Space and Satellite Industry

The global satellite and space industry is changing and growing at a rapid rate. The Russian space market is changing as a result of a notable trend toward the commercialization of space operations (Irina et al., 2022). The satellite industry is expanding beyond traditional sectors, with an emphasis on commercialization of low Earth orbit (LEO) and lunar activities (Carissa et al., 2022). According to L., F., and Perondi (2023), the industry is moving from a growth phase to a maturity stage. With digital processing at the heart of satellite applications, the space industry has evolved into one that is software-defined (Joseph, N. Pelton, 2019). The industry has seen significant changes as a result of the tiny satellite revolution, sometimes referred to as "Space 2.0" or "NewSpace," which has been fueled by new technology, reduced costs, and creative business strategies (Joseph, N. Pelton, 2020). The sector is active overall due to constant advancements in production, technology, launch services, and business procedures.

Artificial Intelligence in Space Marketing

Artificial intelligence (AI) is being integrated into the space sector to revolutionize old methods and deliver useful insights to space researchers (Springboard, 2023). Artificial intelligence (AI) can automatically evaluate and categorize unprocessed satellite photos into useful formats, streamlining the trading and marketing process. Furthermore, AI can handle raw hyperspectral photos onboard satellites, facilitating the scalability of AI solutions and a faster conveyance of important information. AI can also be applied to offer autonomous routing in satellite constellations, optimizing communication latency and data interchange volume. Before AI is widely used in the space sector, nevertheless, its present interpretability, repeatability, dependability, and adaptability constraints must be addressed. The usage of field-programmable gate arrays (FPGAs) and AI accelerators, like tensor processing units (TPUs) or vision processing units (VPUs), is being investigated as a way to speed up the development of AI for space missions.

Artificial intelligence (AI) has advanced significantly from its early uses in space exploration to become a vital tool in recent years. The article highlights seven astonishing ways in which AI is actively contributing to our understanding of the universe. Technology has become indispensable, from robotics enabling autonomous navigation on celestial bodies to AI-driven algorithms altering satellite operations. AI is also used in data analysis, offering precise and effective ways to evaluate large volumes of information from space missions, which helps to identify possible discoveries or hazards. In addition, the technique is used for mapping stars and galaxies, planetary geology, and rocket landing procedures.

AI-enabled predictive maintenance improves space mission dependability and safety even further. Future space exploration offers improved capabilities as AI develops, from interplanetary travel to asteroid mining, thanks to the integration of AI across several missions (Springboard, 2023).

Space exploration is being revolutionized by artificial intelligence and machine learning, which make it possible for spacecraft to navigate autonomously, analyze enormous volumes of data quickly, and anticipate equipment breakdowns in real time. New discoveries such as the first image of a black hole have been made possible by these technology. Using AI to help astronauts minimize their workload, optimize spaceship and satellite functions to cut costs, automate mission control and monitoring systems, and streamline data transmission processes are some important ways that space travel is becoming more inexpensive. Major obstacles still need to be overcome, nevertheless, in order to ensure that AI is used in a transparent and moral manner, handle possible job displacement concerns, and stop cybersecurity risks to key space technologies and data (Sameer, 2023).

Artificial Intelligence (AI) in space exploration is a revolutionary change that will revolutionize how humanity explores space. With AI acting as a reliable ally in deciphering the mysteries of the cosmos, this coalition of robotics, machine learning, and sophisticated computing pushes us beyond prior frontiers. Artificial Intelligence (AI) is revolutionizing our understanding of the universe by discovering patterns and revealing previously obscure cosmic events by processing astronomical data with previously unheard-of speed and accuracy. Since AI provides us with intelligent systems that can handle enormous volumes of data, adapt to changing environments, and make snap judgments, it becomes increasingly important to integrate AI into space operations. The historical timeline, which spans from the Deep Space 1 mission in 1959 to the present and expectations for the future, emphasizes key turning points in the application of AI in space exploration. The impact of artificial intelligence (AI) can be seen in robotic probes, satellite systems, space telescopes, spacecraft autonomy, mission planning, and the hunt for extraterrestrial life. AI has made it possible for humanity to explore far-off planets and comprehend the universe with previously unheard-of efficiency. The piece ends with a look ahead, highlighting the significant implications of artificial intelligence (AI) for space exploration and urging more study and travel in order to motivate the following generation of scientists and explorers.

Robotics and Automation in Space Marketing

The satellite and space travel industries rely heavily on automation and robotics. They have been employed in space missions, infrastructure installation for space exploration, and satellite routine operation automation. Automation and robotics have been used in space missions to successfully explore space and planetary bodies while reducing the risk to human life (Leonardo, Beltrán-Rodríguez, 2023). Additionally, automation has reduced costs, reduced errors, and improved satellite operations efficiency. It allows the same team of operators to handle many satellites, decreases human participation, and facilitates efficient execution of planned operations (Edward, Tunstel, 2009). Automation technology advances have made it possible for satellites to be serviced autonomously. This includes Orbital Replacement Units (ORUs) being transferred and client satellites being autonomously captured and berthed (Mary, Lind., David, C. Klein, 2014). Overall, automation and robots have changed the satellite and space travel sector, making it more efficient, cost-effective,

and capable of performing ambitious space missions (Marinalva et.al, 2014) (Andrew et.al, 2018) .

Space Marketing and Indian Economy

The establishment of commercial entities alongside states is one of the major developments in India's space and satellite industry (Ivan, V., Danilin., Ellina, P., Shavlay, 2022). India has recently accelerated its growth in the commercial space industry as part of a catch-up effort (Tom, Segert, Sanjay, Attara., 2019). There is a tendency towards the mass fabrication of small satellites, with a joint venture between Berlin Space Technologies and Azista Industries developing a plant in India for this purpose (Narayan, Prasad, Nagendra, 2016). In terms of upstream endeavors like space transportation and satellite development as well as downstream uses like satellite communication services and the use of geospatial data, India has also witnessed industry participation in its national space program (MurthiKuppam, Ramaiyer, Sridhara., RaoMukund, Kadursrinivas, 2016). Opportunities for private sector investments and the growth of high-tech manufacturing capabilities have been made possible by the deregulation of space activities in India (Hemant, M., Jain, Yashesh, P., Rana, 2020). The establishment of space technology-based incubators by ISRO is also fostering innovation and startups in the space sector .

Research Methodology

Exploratory Research: An essential component of the research was interviewing specialists in artificial intelligence, space exploration, and space marketing in-depth. The incorporation of AI in space marketing was made possible by this experimental technique, which provided qualitative findings. Finding the important forces, obstacles, and openings in this new subject was the main goal in order to provide readers a basic grasp of the intricate dynamics at work.

Scopus Article Review: The literature evaluation was based on a comprehensive analysis of academic publications from the Scopus database. Gaining understanding of the technological developments, historical background, and socioeconomic effects of artificial intelligence in space marketing was the goal. A methodical strategy was employed in the selection of publications to ensure that only those that made a meaningful contribution to the research objectives were included.

Keyword versus Topic Modeling: To identify reoccurring themes in space marketing, the study employed topic and keyword modeling. By examining the frequency and importance of keywords related with AI and space marketing, the research hoped to expose underlying tendencies. The application of topic modeling techniques such as Latent Dirichlet Allocation (LDA) allowed for a richer understanding of the theme environment.

Word Clouds: To show the predominance of particular terms in the dataset visually, word clouds were created. This method of visualizing information brought attention to important ideas and themes found in the literature. Through the identification of the most commonly recurring words, the word clouds provided a brief overview of the key themes related to artificial intelligence in space marketing.

Text Clustering: Text clustering was employed to categorize and organize content into distinct clusters based on thematic similarities. Using clustering algorithms like K-means, the research aimed to group related articles, keywords, and concepts. This approach

facilitated a clearer understanding of the diverse aspects encompassed by AI in space marketing.

Article Summarization for Startup Database Preparation: The process of extracting important information from publications pertinent to space entrepreneurs required the use of summarization tools. Concise summaries containing crucial information, such as company names, founders, activities, and significant contributions to the space industry, were produced through the use of extractive summarizing techniques. This procedure helped to build an extensive database that provides insight into the Indian space startup scene.

Discussion

Private investment in the Indian space industry has increased dramatically, exceeding ₹1,000 crores since April. This suggests that space businesses have a promising future. The Union Minister's remarks highlight the country's goal of developing into a \$100 billion space economy by 2040, given that the industry is currently valued at \$8 billion. This audacious goal underscores the sector's potential by being in line with global perceptions. The space startup scene is growing at an impressive rate; from single digit numbers in 2014 to 1,080 at this point, it is rather impressive. One advantageous legislation that has aided in this expansion and increased investor interest in the sector is the Indian Space legislation 2023. A significant \$36 million investment from a well-known international company into a space startup located in Bengaluru marked a turning point following the government's privatization program in April. The recent launch of Chandrayaan-3, the estimated \$1 trillion worth of the global space business by 2040, and the growing potential of space tourism are some of the drivers driving the expansion. Key businesses such as SatSure, Bellatrix, Dhruva, and Skyroot dominate the market and portray themselves as the engines propelling India forward, much like the major players in other international marketplaces. Regulation clarity, luring foreign investments, offering incentives, supporting startup support networks, promoting strategic alliances, building strong research and development facilities, and emphasizing talent development are all crucial suggestions for maintaining this momentum. Together, these components help to create an atmosphere that is favorable to India's aspirations to become a significant player in the international space industry.

Indian Space Startups

Table 1: List of Indian space startups

Sl. No	Name of the Company	Year of Inception	Headquarters	Founders	Major Business Activities in India
1	Aadyah Aerospace	2016	Bengaluru	Shaju Stephen	Aeronautics, space, and defense engineering; AI integration
2	Agnikul	2017	Chennai	Srinath Ravichandran, Moin SPM, SR Chakravarthy	3D-printed rocket development; Launchpad and mission control center
3	Astrogate Labs	2017	Bengaluru	AdityaKedlaya, Nitish Singh	High-speed communication for small satellites; Optical communication

4	Bellatrix Aerospace	2015	Bengaluru	Rohan M Ganapathy, YashasKaranam	In-space propulsion systems; Rocket propulsion technologies
5	Blue Sky Analytics	2018	N/A	AbhilashaPurwar, KshitijPurwar	Geospatial data intelligence; AI-powered environmental datasets
6	Dhruva Space	2012	Hyderabad	Sanjay Nekkanti	Integrated solutions for space-based applications; Satellite deployment systems
7	Digantara	2018	Bengaluru	Anirudh Sharma, Rahul Rawat, Tanveer Ahmed	Sustainable space environment; Space debris detection
8	Eon Space Labs	2022	N/A	PunitBadeka, Manoj Kumar Gaddam, Sanjay Kumar	Optical payloads for satellites, UAVs, and Drones; Miniaturized imagery payload
9	GalaxEye Space	2020	Chennai	DenilChawda, KishanThakkar, Pranit Mehta, Rakshit Bhatt, SatyanarayananChakravarthi, Suyash Singh	Multi-sensor imagery via satellites; All-weather imaging
10	InspeCity	2022	Mumbai	Professor ArindrajitChowdhury, DrTausif Sheikh	Satellite servicing; Satellite life-enhancing and deorbiting services
11	Kawa Space	2019	Mumbai	BalaMenon, Kris Nair	Critical earth observation infrastructure; Satellite imagery accessibility
12	Newspace Research & Technologies	2017	Delhi NCR, Bengaluru	Sameer Joshi	Next-generation aerospace technology; High-Altitude Pseudo Satellite (HAPS)
13	Omnipresent Robot Technologies	2010	N/A	AakashSinha, JyotiSinha	Robotics, electronic sensing, intelligent electronics; Drones for agriculture, defense, and environment
14	Pixxel	2019	Bengaluru	Awais Ahmed, KshitijKhandelwal	Hyperspectral imaging satellite constellation; AI-powered insights

15	Satellize	2018	N/A	Mahesh Murthy, AshharFarhan	Customized nanosatellites; High- frequency radio transmission
16	SatSure	2017	Bengaluru	PrateepBasu, Rashmit Singh Sukhmani, AbhishekRaju	Decision intelligence using satellite data; SaaS product for on- demand credit
17	Skyroot	2018	Hyderabad	Pawan Kumar Chandana, Naga BharathDaka	Space launch vehicles; Vikram series of rockets
18	Vasundhara Geo Technologies	2017	N/A	AdityaTekale	Data mining; Acquisition and analysis of data from satellites

(Source: Research data)

Topic versus keyword Modeling:

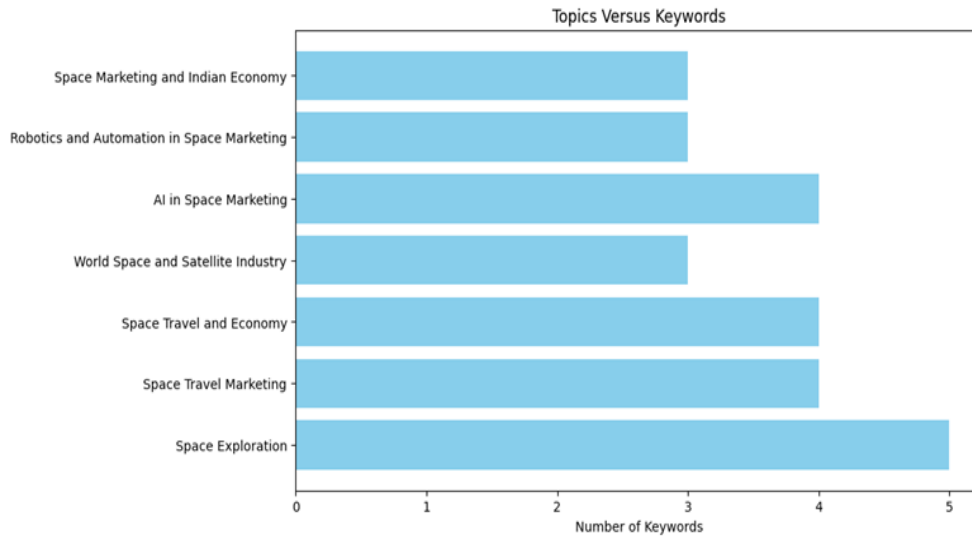


Fig 1: Topic versus keyword modeling
(Source: Research data)

"Space marketing and Indian economy" is the most popular topic, with three related search phrases and the highest search frequency. This subject is likely to draw companies looking to use technology and space exploration to develop cutting-edge goods and services. Next up is "Robotics and automation in space marketing," which has two search terms associated with it. This topic is relevant to businesses that want to use robotic and automated systems to reduce the cost of space exploration and improve public accessibility. Some of the other subjects covered in the picture are "AI in space marketing," "Space travel and community," "Space exploration," and "Space travel and economy." All of these themes center on using space for marketing purposes, which offers firms that want to interact with a new audience some very interesting opportunities. It is crucial to emphasize that the number of search phrases linked to a certain subject does not necessarily imply its importance. Some subjects may be more important than others, even though they are popular. "Space travel

and community," for example, has fewer search terms, but it might be considered more important than "Space marketing and human economy" because it emphasizes the implications of space exploration for people rather than the economic factors covered in the latter topic.

Word Clouding of Keywords

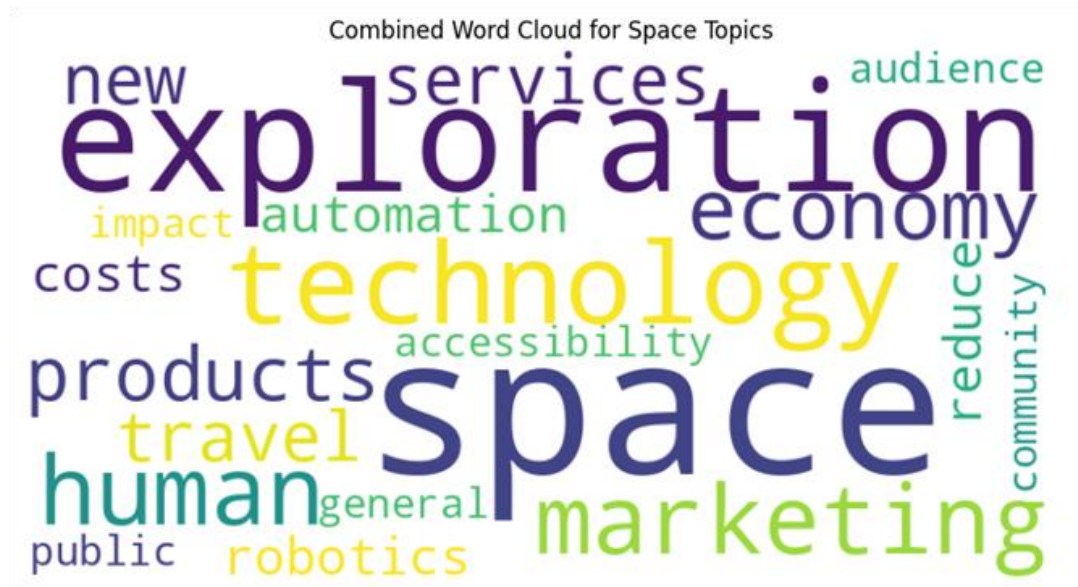


Fig 2: Combined word cloud for space topics
(Source: Research data)

The graphic highlights the theme emphasis on "services," "products," "economy," and "marketing" while conveying a complex narrative about the commercialization of space. This focal point denotes a focused investigation of the ways in which companies might profit financially from space ventures; they include space tourism, asteroid mining, and the creation of cutting-edge technologies with practical uses on Earth. At the same time, the importance placed on words like "robotics," "automation," and "technology" in the picture highlights the growing influence of technical developments on the direction of space travel. This trajectory includes planned uses including building infrastructure on the moon and mining asteroids with robots. Furthermore, the prominent use of phrases like "public" and "impact" implies an understanding of the necessity of winning over the public to space exploration. This need may result from a shared understanding of the intrinsic value of space exploration to human progress or from the realization that the general public stands to gain from the technological advancements coming from space research. However, amidst the promises and accomplishments, the graphic also alludes to the continuous challenges inherent in space exploration, as evidenced by the prominence of terms such as "costs" and "access." These difficulties highlight the difficulty of fully achieving the commercial potential of space exploration and include the enormous financial burden of rocket launches as well as the difficult logistical and physiological difficulties of prolonged habitation and work in space.

Text Clustering:

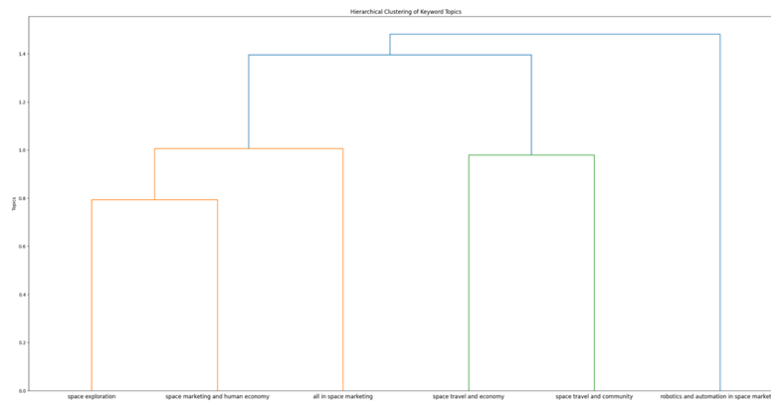


Fig 3: Hierarchical text clustering of keywords
(Source: Research data)

Cluster 0: This cluster is the largest and contains keywords related to space exploration in general, such as "space," "exploration," "planets," "stars," and "galaxies."

Cluster 1: This cluster is the second largest and contains keywords related to space tourism, such as "space travel," "tourism," "hotels," "rockets," and "adventures."

Cluster 2: This cluster contains keywords related to the economic benefits of space exploration, such as "economy," "business," "markets," "resources," and "investments."

Cluster 3: This cluster contains keywords related to the use of satellites for communication and technology, such as "satellites," "communication," "internet," "technology," and "data."

Cluster 4: This cluster contains keywords related to the environmental impact of space exploration, such as "environment," "pollution," "sustainability," "clean energy," and "conservation."

Cluster 5: This cluster contains keywords related to the ethical considerations of space exploration, such as "ethics," "law," "regulation," "safety," and "militarization."

The graphic depicts the wide range of possible subjects in satellite and space travel marketing, covering a variety of issues like tourism, space exploration, and the various ways that space travel affects the environment and economy. It appears that the space exploration cluster is the most prevalent, highlighting its centrality to the discussion of satellite and space flight marketing. This predominance is consistent with the theme of the increasing commercialization of space, as seen by the several clusters related to space tourism and the financial gains that come from space exploration. The graphic story points to a growing tendency toward the commercial exploitation of space-related endeavors. Notably, the existence of a unique cluster discussing ethical issues in the context of space exploration highlights the necessity for marketers to be ethically conscious, highlighting the ethical aspects that go hand in hand with the growing commercial space industry. This highlights how important it is for marketers to manage and deal with ethical issues as a core component of their plans in the ever-evolving sector of marketing for satellite and space travel.

Conclusions

Managerial Implications:

The highlighted subjects, such "Space marketing and Indian economy" and "Robotics and automation in space marketing," can be used by companies in the space marketing industry for strategic planning. This entails creating cutting-edge goods and services while automating processes to maximize savings. Effective market segmentation is made possible by an understanding of the image's variety of interests, which helps businesses to focus their marketing efforts on particular subjects like space tourism or the financial advantages of space exploration. Furthermore, given the importance of public support in space exploration, companies should focus on transparent communication strategies, engaging the public and addressing ethical considerations to build a positive image. Investors can also utilize these insights to make informed decisions, identifying trends in emerging topics to capitalize on growing sectors.

Theoretical Implications:

By examining the symbiotic relationship between artificial intelligence (AI), space marketing, and national economic growth, the study advances economic theories. It is possible to create theoretical frameworks that explain how technological developments affect economic trends. Within the context of marketing theories, the results highlight how crucial it is to comprehend client interests across a range of space-related subjects. This can result in the creation of fresh marketing strategies that are adapted to the particular traits of the space sector. Furthermore, investigating ethical issues in space marketing lays the groundwork for creating ethical frameworks unique to the sector and incorporating moral values into sustainable marketing tactics.

Research Implications:

The study fosters multidisciplinary research, asking scientists to bridge the gap between technology, marketing, and socio-economic repercussions. Subsequent investigations may examine the convergence of artificial intelligence, space exploration, and public opinion. Conducting longitudinal research can provide a deeper insight of changing trends in space marketing, observing changes in keyword clusters over time to identify dynamic alterations in industry objectives. International strategies and policy proposals can be informed by comparative studies conducted by various countries and space agencies. These studies can provide insights into regional variances in space marketing trends.

Future Scope:

As space marketing becomes more commercialized, future studies can aid in the creation of regulations that support moral and sustainable business practices. An opportunity to learn more about consumer preferences, habits, and market dynamics is presented by the increasing interest in space tourism. Improved interpretability, dependability, and flexibility may be achieved by research on cutting-edge uses of AI in space marketing, resolving existing issues, and putting forward creative ideas. Comprehensive research on the environmental and social effects of space marketing will also be essential as space operations increase, as they will provide an understanding of the ecological footprint and societal consequences for responsible industry expansion.

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ROLE OF WOMEN IN INDIA'S FIVE TRILLION-DOLLAR ECONOMY VISION

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Abstract

The Upcoming Business Today's Most Powerful Women in Business Awards will delve into these critical topics. The awards honour outstanding women leaders, setting new benchmarks and inspiring others to assume more substantial roles in the economic sphere. The event will feature prominent business leaders & entrepreneurs, offering insights to women's role in steering the \$5 trillion dream. Discussing the current state of women's participation, challenges, opportunities, and supportive policies, her perspective will illuminate the path ahead. However the awards will shows how much talent do women have in entrepreneurship by innovating solutions for developing their skills in business. In today's Era, Women Participation welfare should be increased, which can boost the GDP ratios in the Indian economy. By empowering half of the potential workplace, tangible economic benefits unfold beyond horizon of gender equality. Female Ownership shares of shares of the enterprises in the services sector barely reach 10% in the states with the highest female ownership rates, like Kerala, Tamil Nadu and Andhra Pradesh. Female Ownership shares remains much lower in states like Rajasthan, Bihar, Orissa, Uttar Pradesh, at 6% or less. The Indian welfare currently consists of less than 40 million women in comparison to over 360 million men and women are paid less even when they perform equal – value jobs as men.

Keywords: Women, Business Leaders, \$5 trillion, Female Ownership, etc.

Introduction

As the world crosses from Covid Pandemic the world started moving to develop the public and private sector to improve the country's GDP Economy. By the same time India's ambition is to reach 5 trillion economies at the year of 2025, demand the way of collaborative sector. The world is looking India in a hope vision. This is happened because between the duration of 2014 to 2023 India has improved their position from 11th Position to 5th Position in the largest economy in the world. The vision of the India set a goal to become an advanced economy by the year 2047. For that one of the major sectors is to make the women to take participation in India's five trillion Economies to make our country to achieve the goal to make it earlier.

India's 5 Trillion Economies:

As per the plan established in 2018 for 5 trillion economies in 2025 released by Ministry of Commerce and Industries of 2018 set a clear vision to produce a target is set to have 1 trillion for agricultural and other activities, 1 trillion for manufacturing and 3 trillion for service industry. As per the analysis of National Statistical Office (NSO) last month, India has earned a budget of 296.58 lakh crores in the current prices of 2023-24 current prices. Taking 83 dollars as exchange rates, Indian economy would around 3.57 trillion in the year of 2023 – 24. India has reached 5th position of economy which is followed after US, China, Japan and Germany and it is targeted to reach the third position to surpass Japan and Germany on the year of 2027-28. According to Vikshit Bharat (DevelopIndia) Sitaram said "India will reach at the target of 30 trillion dollar in terms of economy on the year of 2047."

Former RBI Governor Raghuram Rajan mentioned that it is nearly impossible for India to make a achievement of 5 trillion economy in the year of 2025 have sparked a debate in social media, this is because "India has the growth of nearly 3.5 trillion economy in the current year to make it 5 trillion economy, India has to grow up to the resource of nearly 12 to 15 percent of growth in each sector over the next two years"

Definition of Women's Involvement by Experts or Economist:

India stands at the crossroads of a transformative era, its sights set on the ambitious goal of becoming a \$5-trillion economy. In this monumental journey, women have emerged as the driving force, which are poised to act as catalysts propelling the nation towards economic glory. The concept of "Womenomics" takes centre stage, advocating for the full and equal participation of women across all economic spheres. By 2025, India is projected to become the world's third-largest economy, surpassing Germany and Japan. This monumental journey requires a concerted effort from every sector, with women emerging pivotal in the march towards a \$5-trillion economy. India's ambition to become a \$5-trillion economy by 2025 demands a collaborative effort from every sector, with women positioned as key catalysts. Women aren't just consumers; they are integral contributors across industries—from agriculture to technology—creating value, generating wealth, and driving growth.

Women Participation in India's Five Trillion Dollar Economy Vision:

For India to reach the 5 trillion is the gender disparities within the economic domain plays a major role in economic development. For Example In 50% of the hundred countries studies the gender gap is moving in the biggest gain happening in Turkey, South Korea and Slovakia; and Four Countries namely Vietnam, Mexico, Indonesia and Philippines have a huge business norm, More women than men launched start-ups in the year 2016. Despite the economic advances India plays a minor role in gender disparities in the world. The key ambition of India has to achieve 5 trillion economies in the year 2025 for achieving that women have to positioning as a key catalyst. It is mentioned that women's are not only consumers they are also plays a role of integral contributors from agriculture to the technology. They are used to create value, generating wealth and to the driving growth of the economy. The Indian workforce currently consist of 40 million women consist of 360 million men and women are paid less as compared to men even though if they worked equal to men. So Women have higher number of poverty, worst health conditions and elevated risk of violence. Gender disparities are rampant in industries while some states like Kerala, Tamil Nadu, and Karnataka are showing development in Gender equalities while some states in India have disparities like Haryana, Uttar Pradesh, Bihar and Gujarat. Female ownership rates are increased at 10% in the states like Kerala, Tamil Nadu and Andhra Pradesh and the states having 6% or lesser in the states like Rajasthan, Uttar Pradesh, Bihar and Orissa. There is huge potential electricity and transport that affects women more than men and women face a huge constraints in the geographic mobility imposed by social concerns and social norms. Female connections in a labour market and input and output market will create a huge impact to create more number of women entrepreneurs. Empowering half of the workforce will creates an awareness of creating significant advantages of creating the gender equality in the workforce. Unlocking the gender equalities will creates a huge improvement on more dynamic economy and economic growth.

Functions: There are 5 major functions for achieving the goal of 5 trillion economies in the year 2025 they are:

- More women in workforce is key to India becoming a \$5 trillion economy.
- India's gender balance in the economic domain is among the lowest in the world.
- Reducing gender disparities has emerged as a key driver for inclusive economic growth over the last century.
- The increased role of women in economic growth takes many forms: increased participation in the labour force, diminished discrimination and wage gaps, as well as practices that bolster women's advancement into leadership and managerial roles.
- By empowering half of the potential workforce, tangible economic benefits unfold beyond the horizon of gender equality.

Obstacles to Women's Involvement in 5 Trillion Economies:

The main problem of women involvement in 5 trillion economies is to start the business. Women entrepreneurs encounter various challenges like lack of finance, networks and markets as well as social and cultural biases that might limit their success. They do, however, contribute distinct viewpoints, fresh ideas, and various methods to entrepreneurship, which can lead to success and growth. In many studies it is vibrantly visible that the female firm ownership is at 18%, compared to the global average of 34% (2021). Access to money and digital access continue to be major impediments; for example, the gender gap in account ownership at formal financial institutions is 11%. In South Asia, women are 18 percentage points less likely to own a cell phone than men and that is visible in Sri Lanka as well. Moreover, women in the region are 36% less likely than men to utilize mobile internet and women in the region are 11% less likely than men to hold a financial account.

Specifically, we see commonalities within the region for challenges related to women entrepreneurs, including:

1. **Gender Biasness:** Women entrepreneurs often face gender-based discrimination when it comes to accessing funding, networking opportunities, and other resources.
2. **Limited Access to Funding:** Women entrepreneurs are less likely to receive funding than their male counterparts, and when they do, it is often in smaller amounts.
3. **Lack of Role Models:** There are fewer women entrepreneurs in leadership positions, which can make it difficult for aspiring female entrepreneurs to find role models and mentors.
4. **Work-Life Balance:** Balancing work and family responsibilities can be particularly challenging for women entrepreneurs who may face societal expectations about their caregiving roles.
5. **Limited Access to Networks:** Women entrepreneurs often have limited access to professional networks, which can hinder their ability to find customers, partners, and mentors.
6. **Stereotypes And Biases:** Women entrepreneurs may face stereotyping and biases that assume they are less competent or ambitious than their male counterparts.
7. **Limited Access to Information And Resources:** Women entrepreneurs may have limited access to information, resources, and training programs that could help them succeed.

8. **Cultural And Social Barriers:** In some cultures, and societies, there may be social and cultural barriers that discourage women from starting or running businesses.

Understanding India's Women Entrepreneurs:

India's Rural Women Entrepreneurs face unique challenges, with more than 45% starting businesses because they need the money. MSMEs run by women are different from male-owned enterprises and are more vulnerable to economic shocks. They grapple with challenges that include juggling household responsibilities, limited skills, restricted network access, and funding constraints. Female-owned businesses have an annual turnover of only 59% compared to male-owned ones. Safety and mobility concerns hinder women entrepreneurs from accessing markets. In many cases, male family members exert control over business decisions. These challenges, coupled with societal norms, stifle women's entrepreneurial aspirations. The pandemic's impact and the need for rapid digitization have exacerbated these difficulties.

Opportunities of Women Involvement:

Even though women are not able to start the big firms they have option to start a small firm like MSME (i.e. Micro Small and Medium Entrepreneurs) with the support of the government schemes. The Problem of limitation of the gender disparities is because of lack of awareness of government schemes. Many government schemes in India support entrepreneurship and meet the six ecosystem needs. Most strongly emphasize access to finance and skilling. Approximately 45% of central schemes prioritize access to finance, while 27% support training and skilling. However, areas such as market linkages and mentoring need more attention. Only 3% of state and 4% of central schemes offer mentoring or networking as their main support area. While 71% of central and 96% of state schemes directly support entrepreneurs or businesses, a mere 7% of central and state schemes exclusively serve female beneficiaries. Additionally, many programs require offline applications, with 46% of central schemes and 73% of state schemes mandating offline enrolment or application submission at designated offices.

Why India need Micro Small Medium Enterprises (MSME)?

MSMEs need ongoing support throughout the critical stages of their entrepreneurship journey to ensure they survive, thrive, and become resilient despite adversities. The support spans six fundamental ecosystem-based needs to promote women's entrepreneurship:

- **Entrepreneurship Promotion**, which includes self-employment promotion, seminars and workshops, and business accelerators and incubators
- **Business Support Services**, which include technical upgrades, quality assurance certification, business management tools, and subsidies
- **Market Linkages**, which include exhibitions and fairs, public procurement provision from MSMEs, market infrastructure, and branding services
- **Access To Finance**, which includes loans, aids, credit guarantees, seed money, and working capital
- **Training And Skilling**, which include exposure visits, technical and soft skill training, stipends, financial assistance to training institutions, and computer training and certification

- **Mentoring And Networking**, which include guidance and mentorship with incubators and accelerators, technology centres, promotion of technological innovation, and networking with industry experts

However, schemes integrated into the entrepreneurial lifecycle alone may not be sufficient. Governments should ensure convenient last-mile access to all support programs and offer digital and physical assistance. A “Phygital” Model that combines physical and digital engagement would work best for low- and middle-income households, aided by a village-level frontline force to facilitate enrolment and provide last-mile access. Mentorship can take MSMEs a long way ahead if it evolves as a sector. Yet, only some schemes and private sector initiatives offer mentoring support to women. Governments and the private sector should invest in comprehensive mentoring across all ecosystem needs, early-stage incubation, and acceleration support. The expansion of women-focused incubators and accelerators to serve enterprises in both formal and informal sectors could be the first step toward progress. Together, these strategies can enhance women’s entrepreneurial roles in India to foster economic growth, gender equality, and sustainable development.

Conclusion

Women Entrepreneurs face unique challenges that can make it difficult for them to succeed in the business world. Despite progress in recent years, gender bias and persist in a variety of ways, ranging from access to financing and resources to cultural expectations and stereotypes. However, Women Entrepreneurs have also shown remarkable resilience and creativity, finding ways to overcome these obstacles and build successful businesses. By recognizing and addressing the challenges faced by women entrepreneurs, we can create a more inclusive and equitable business environment that benefits everyone. By supporting women entrepreneurs, we can unlock their potential and contribute to a more prosperous and vibrant economy for all.

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UNLEASHING INDIA'S POTENTIAL: WHERE EDUCATION, ENTREPRENEURSHIP, AND TECHNOLOGY MEET FOR A \$5 TRILLION ECONOMY

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Abstract

Indian economy being one of the fastest growing economies is making its move towards achieving its target of 5 trillion economy. The economic growth is projected to be 7.3% in the current fiscal year, higher than 7.2% in 2022-23. As of December 2023, India stands at \$ 3.73 trillion, which is good considering the time we lost due to the COVID-19 pandemic. India has had a great sign of economic recovery post the pandemic, yet the pandemic has had an impact on its \$5 trillion economic journey. In an attempt to understand the other potential areas, India can focus on to achieve its 5 trillion benchmarks. The study has its focus on how India's young population can be a driving force for innovation, entrepreneurship, and economic growth. In this way, India can develop a workforce fit for the 21st century and analyze digitization boosting to grow various industries and increase technology inclusivity. With a median age of 28, India's population is among the youngest in the world. The demographic dividend offers the nation's economic growth a substantial opportunity. To fully realize this potential, though, India must make sure that its youth possess the skills needed for the occupations of the future.

Keywords: \$5 Trillion Economy, Indian Economy, Entrepreneurship, Innovation, Digitization, Fintech.

Introduction

India has always been an ambitious nation in terms of its economic growth prospects. One such huge benchmark is the journey toward attaining a 5 trillion economy in 2025. The study provides a basic overview of major sectors. We will also touch upon a few areas that are struggling to find their way back to its flow. The major focus would be on sectors such as education, entrepreneurship, and technology, and how one has a foreshadowing effect on the other. Also, India is currently experiencing a startup boom, with the nation developing a strong business environment and a thriving entrepreneurial scene. Given that it is home to over 99,000 startups and 107 unicorn businesses valued at \$30 billion, India is currently referred to as the "Startup Hub." The government's initiatives are designed to help entrepreneurs expand and establish a name for themselves in the global commercial arena by offering them financial support, subsidies, technical support, and other services. The Indian tech sector is a rapidly expanding behemoth, proudly contributing significantly to the

country's economic engine. It's a thriving ecosystem full of talent, innovation, and enormous promise. The income of the Indian tech sector continued its rising trajectory in FY 2023, surpassing a startling US\$245 billion. Software developers, data analysts, cybersecurity professionals, and artificial intelligence specialists are just a few of the high-paying job options available in the tech industry. For IT and business process outsourcing (BPM) services, India is a top choice. Global organizations find it to be an appealing option due to its vast skill pool, affordable costs, and competence across multiple fields. The government's programs, such as Startup India and Digital India, encourage innovation and create a favorable atmosphere for tech businesses. The Indian tech market is full of innovative firms that are upending industries including e-commerce, fintech, healthcare, and education. The government has developed several initiatives to support and motivate aspiring business owners. These initiatives, which range from financial rewards to mentorship programs, are designed to give entrepreneurs access to the tools and chances they need to succeed. By spawning new companies and sectors of the economy, entrepreneurship can boost the gross national product (GNP) and create jobs, higher consumer spending, more tax revenue, economic growth, and an overall improvement in living standards. Automation, globalization, and technology improvements are driving a substantial upheaval in the Indian work sector. Consequently, there is a quick shift in the need for particular abilities.

In an era of rapid technological advancements and economic volatility, the interconnectedness of education, innovation, and technology has become more critical than ever. This research study delves into the dynamic interplay between these three sectors, exploring how education innovation, fuelled by technology, can act as a potent catalyst for economic growth. Traditionally, the relationship between education and economic prosperity has been well-established. An educated workforce fosters enhanced productivity, facilitates technological adoption, and drives entrepreneurial spirit. However, in today's knowledge-based economy, simple access to education is no longer sufficient. We need innovation in education itself, methodologies that embrace creativity, critical thinking, and adaptability. This is where technology enters the equation. From immersive virtual reality learning platforms to personalized AI-powered tutors, technology offers a plethora of tools to revolutionize the educational landscape. By integrating technology into innovative pedagogies, we can enhance learning outcomes, cultivate 21st-century skills, and prepare a workforce equipped to thrive in a rapidly evolving environment.

How Education, Entrepreneurship, and Technology go Hand in Hand:

A dynamic cycle that spurs innovation and economic progress is fuelled by education, entrepreneurship, and technology, which together form a potent trifecta. This is how they complement each other:

Education Encourages Spirit of Entrepreneurship:

- **Knowledge and Skills:** Education gives people the information and abilities needed to see opportunities, comprehend markets, and create solutions. It develops the critical thinking, problem-solving, and decision-making abilities necessary for success in entrepreneurship.
- **Innovation and Creativity:** Beyond memorization, educational experiences that promote experimentation, open-mindedness, and creative problem-solving foster the innovation necessary for endeavours to succeed.

- **Risk-Taking and Resilience:** Being an entrepreneur means that you have to be willing to take chances and stick with things when things become tough. Education has the power to create resilience, boost self-assurance, and give of the entrepreneurial journey.

Tech Progress Is Driven by Entrepreneurship:

- **Need and Demand:** New business initiatives seek to pinpoint and fill market gaps. These requirements push the frontiers of innovation by encouraging the creation of novel technology and solutions.
- **Funding and Investment:** Wealthy businesspeople draw capital, which provides funds for the study and creation of novel technologies that have the potential to completely transform a range of sectors.
- **Early Adoption and Feedback:** Startups frequently take on the role of early adopters of new technologies, offering developers insightful input and assisting in the development of emerging technologies for wider application.

Technology Enables Education and Entrepreneurship

- **Better Access and Delivery:** With online platforms, virtual learning environments, and customized learning tools, technology provides access to educational opportunities that were previously unattainable. This promotes entrepreneurship and democratizes education.
- **Improved Collaboration and Learning:** Technology makes learning more dynamic, encourages cross-border collaboration between students and teachers, and allows for the customization of learning programs to meet the needs of each individual student.
- **Tools and Resources for Entrepreneurs:** Technology gives business owners access to a variety of vital tools and resources, such as project management software, online marketing platforms, and networks for crowdsourcing.

Challenges and Opportunities:

Regretfully, there is a big disparity between the skills that businesses are looking for and the capabilities that Indian students are learning. A recent World Bank report states that only 23% of Indian graduates are thought to be employable.

The following are some of the causes of this skills gap:

Outdated educational framework: The Indian educational framework is frequently criticized for its emphasis on memorization and for not providing students with the skills necessary to succeed in the contemporary workforce.

Insufficient hands-on training: Indian schools and universities frequently place an excessive amount of emphasis on academic knowledge at the expense of practical skills and real-world experience.

Restricted availability of high-quality vocational training: Many young people in India lack access to the skills training required to enter the job since the country's vocational training industry is very tiny.

To close the skills gap, the Indian government and other relevant parties are acting. Among the projects that are being worked on are:

Education system reform: The government is attempting to better align the educational system with the demands of the labour market. This entails launching new curricula, emphasizing practical skills more, and encouraging hands-on learning.

Enhancing vocational training: To raise the calibre and accessibility of vocational education, the government is funding programs for vocational training and encouraging public-private collaborations.

Encouragement of entrepreneurship: To lower unemployment and create jobs, the government is also encouraging business. This involves giving young business owners financial assistance and mentoring.

Limited access to reliable internet connectivity and electricity in remote locations. The term "Digital Divide" refers to the disparity in technology and digital literacy between various socioeconomic categories. With growing risks from cyberspace and the requirement for strong defences Professionals with developing technology skills are insufficient.

Tackling these Challenges

- Giving grants or loans to projects that have little chance of succeeding in the market or growing.
- Support programs disproportionately benefiting established enterprises or urban areas, disregarding rural or disadvantaged entrepreneurs.
- Offer helpful assistance with market access, financial management, and business development.
- Encourage competition and innovation: Support innovative ideas and start-ups without suppressing rivalry from well-established companies.
- Improve accountability and transparency by putting in place monitoring systems to stop resource misuse and leaks.
- Increasing internet usage and increasing digital payments ecosystem.
- Using digital health and telemedicine tools to increase access to medical care.
- Using IoT devices and precision farming methods to boost output.
- India can enhance its entrepreneurial assistance framework, optimize its GDP contribution, and accelerate its progress towards achieving a \$5trillion economy by tackling these shortcomings.

To tackle the vast education gap, the government introduced various schemes:

Sarva Shiksha Abhiyan (Universal Education Movement) Initiated in the early 2000s, this visionary project aimed at universalizing primary education. Its effects were profound; by 2021, it benefited over 200 million children. And the numbers have kept growing.

The National Education Policy (NEP), 2020. This aims to make "India a global knowledge superpower" by introducing several changes from the school to college level in the Indian education system with a special emphasis on digital education.

DIKSHA (Digital Infrastructure for Knowledge Sharing) platform is the national platform for school education available for all states and the central government for grades 1 to 12 and was launched in September 2017. It is considered to be the 'one nation; one digital platform' for school education in India.

Digital Mobile Library was launched to bridge the digital divide, more effectively, by the government of India. The project was carried out in collaboration with the Centre for Advanced Computing (C-DAC) based in Pune.

Government Schemes to Support Indian Startups:

The Atal Innovation Mission (AIM): is a government initiative that was introduced in 2016. It provides financing enterprises with roughly Rs 10 crores over five years. To foster an innovative and entrepreneurial culture in India, AIM has opened Atal Incubation Centres (AICs) in various colleges, institutions, and corporate enterprises. In 18 states and three union territories, AIM runs 69 AICs.

Government e-Marketplace (GeM): The Indian government established the Startup India Initiative in 2016 to bolster the nation's startup scene. Through the Government e-Marketplace(GeM), DPIIT-recognized companies can directly sell goods and services to government agencies, creating chances for trial orders.

Startup India Seed Fund Scheme: The Indian government launched the Startup India Seed Fund Scheme in January 2021 will provide finance of Rs 5 crore to the entrepreneurs who are selected. Up to Rs 20, lakhs can be awarded to startups for the development of concepts or prototypes, and up to Rs 50 lakhs for the expansion of their products or services. The Startup India Seed Fund Scheme (SISFS), which has a 945-crore rupee budget allocated to it, was introduced by DPIIT.

Pradhan Mantri Mudra Yojana (PMMY): Launched in 2015, the Pradhan Mantri Mudra Yojana (PMMY) aims to provide loans to small and micro businesses that are not corporate and do not engage in farming, manufacturing, or trading, up to a maximum of Rs. 10 lakhs. The MUDRA loans under PMMY are accessible to all citizens of India.

Multiplier Grants Scheme (MGS): The Department of Electronics and Information Technology created the Multiplier Grants Scheme (MGS) to promote cooperative research and development (R&D) relationships between industry and academic R&D organizations. For initiatives that last shorter than two years, the maximum government funding per project is Rs. 2.0 crore.

Roadmap for a \$5 Trillion India: Where Education, Entrepreneurship, and Technology Meet:

India's goal of having a \$5 trillion economy by 2025 is dependent on a potent formula that combines technology, entrepreneurship, and education in a strategic alliance. This is a road map showing how various factors can come together to support India's economic growth:

Reimagining Education

Curriculum Evolution: Redesign courses to place more of an emphasis on problem-solving techniques, critical thinking, and 21st-century abilities like coding, data analysis, and digital literacy. Incorporate modules on entrepreneurship and vocational training to develop job creators.

Technology-Enabled Learning: To tailor instruction, increase engagement, and accommodate different learning styles, use AI-powered adaptive learning systems, virtual reality simulations, and gamified learning. Increasing internet connectivity, making devices more accessible, and encouraging digital literacy are all ways to close the digital divide, particularly in rural regions and among vulnerable populations. This approach is known as inclusive access.

Teacher Training: Provide teachers with the knowledge and resources they need to successfully navigate classrooms that include technology and encourage creative teaching approaches.

Entrepreneurial Ecosystem

Culture of Innovation: Foster an environment that is encouraging, encourages taking calculated risks, recognizes inventiveness, and gives aspiring business owners access to finance sources, mentorship programs, and incubation facilities.

Emphasis on High-Growth Sectors: In line with India's strategic priorities, support entrepreneurial endeavors in high-potential industries including manufacturing, clean tech, AI, and healthcare.

Doing Business Is Easy: Simplify rules, expedite bureaucratic procedures, and establish an open legal system to support the establishment and expansion of startups. Enhance industry-academia cooperation and vocational training programs to close the skills gap and equip the workforce to meet the demands of developing industries.

Technology as a Facilitator

Digital Infrastructure: To promote digital adoption across industries, make investments in the construction of a strong digital infrastructure, which includes data centers, cloud computing capabilities, and high-speed broadband access.

Technology Adoption in Education: Promote the use of educational technology tools in colleges and universities to enhance student performance, offer high-quality education virtually, and eliminate geographic gaps.

Tech-Driven Entrepreneurship: Encourage the creation of novel tech-based solutions to local and global problems, promoting entrepreneurship with a social impact and advancing sustainable development.

Cybersecurity and Data Privacy: To foster innovation and increase trust in the digital ecosystem without sacrificing security, put strong cybersecurity measures and data privacy laws into place.

Collaboration and Governance

Public-Private Partnerships: Promote robust collaborations among government, academia, and business to exchange resources, know-how, and best practices for putting technology, entrepreneurship, and education programs into action. Performance-based funding ensures that funds are used efficiently by allocating resources for technology- and education-based projects based on quantifiable results and effects.

Data-Informed Governance: Utilize research and data analytics to guide policy choices, monitor outcomes, and modify plans of action in response to new possibilities and difficulties.

This roadmap is a dynamic framework that necessitates constant adjustment and improvement rather than a set plan. India will be able to realize its full economic potential and move closer to a \$5 trillion future by embracing a collaborative spirit, encouraging an innovative culture, and utilizing technology. This will be made possible by an educated, enterprising, and

Observations & Suggestions

In 2022, the GDP of India benefited from the efforts of 139 billion entrepreneurs, a 9.6% rise from 2021. The fact that over 2 lakh (223,920) new jobs were created in 2022—a 10% increase from 2021 and a reflection of the country's expanding job market—is one of the main markers of India's entrepreneurial success.

The staggering \$42 billion in funding that Indian entrepreneurs drew in 2022—a significant increase from \$16 billion the year before—underlines their critical role in the country's ambition to reach its \$5 trillion economy target.

Of India's 63 million MSMEs, which employ between 22 and 27 million men and women, 20% are owned by women. Women's increased economic engagement increases GDP and advances gender equality, sustainable development, and the fight against poverty. According to estimates, India's GDP may increase by USD 700 billion if 68 million more women join the workforce by 2025, and GDP growth might increase by 1.5 percentage points if 50% more women join the workforce. Achieving the economic objective set by the Indian government requires promoting women's entrepreneurship.

The primary areas of support for only 3% of state and 4% of central initiatives are networking and mentoring. Only 7% of central and state programs are exclusively for the benefit of women recipients, despite the fact that 71% of government and 96% of state schemes directly assist entrepreneurs or enterprises.

Future Perspectives: Where Education, Entrepreneurship, and Technology Intersect in India's \$5 Trillion Journey:

Beyond the short-term objective of a \$5 trillion economy, let us imagine the long-term future in which technology, entrepreneurship, and education continue to converge and transform India's economic environment:

Education

- **Tailored Learning & AI Tutoring:** AI-driven systems for tailored learning that adjust instruction to each student's needs and learning preferences will proliferate. Students will be more immersed in interactive learning experiences thanks to virtual and augmented reality.
- **Lifelong Learning and Reskilling:** Education will no longer be a one-time event but rather a continuous process, with easily accessible reskilling possibilities that adjust to the ever-changing labor market. Certifications based on skills and micro credentials will become more popular.
- **International Collaboration & Knowledge Sharing:** As virtual classrooms and exchange programs become more integrated, they will promote international collaboration and knowledge sharing, resulting in an environment for learning.

Entrepreneurship

- **Impact-driven firms:** Social entrepreneurship will be the main focus, with firms concentrating on finding solutions to pressing problems in the fields of environmental sustainability, healthcare, and education. We'll use technology to develop solutions that are both impactful and scalable.
- **Decentralized & Collaborative Innovation:** By democratizing the entrepreneurial process, open-source platforms and ecosystems for collaborative innovation will allow people all over the world to participate in problem-solving and co-create solutions.
- **Hyper-Personalization and Niche Markets:** Artificial intelligence (AI) and big data will make it possible to customize goods and services to meet the needs of specific markets and offer unique customer experiences. Entrepreneurs will concentrate on offering highly personalized solutions to niche markets.

Technology

- **Advances in Quantum Computing and AI:** These technologies have the potential to completely transform a number of industries, including healthcare, materials science, finance, and agriculture. This will make it necessary to prioritize STEM education and workforce upskilling.
- **The Metaverse & Immersive Experiences:** Virtual enterprises, education, and entertainment will all benefit from the emergence of the metaverse as a new economic frontier. It will be up to entrepreneurs to adjust to this changing digital environment.
- **Ethical Issues & Human-Tech Symbiosis:** As technology permeates more aspects of our life, ethical issues pertaining to automation, data privacy, and the nature of labour in the future must be addressed. It will be imperative to prioritize responsible technology development and human-centered design.

This future promises exciting possibilities for India's economic growth and social development. However, navigating this landscape requires continued investment in education, fostering a culture of innovation and risk-taking, and ensuring equitable access to technology and opportunities. By embracing these challenges and harnessing the potential of education, entrepreneurship, and technology, India can become a global leader in a world reimagined by innovation and collaboration.

Conclusion

Achieving a \$5 trillion economy by 2025 is an ambitious, yet attainable goal for India. But to reach this milestone, India must harness the synergistic power of education, entrepreneurship, and technology. This intricate interplay presents a pathway to unlock the nation's immense potential and propel it towards economic prosperity. India's path to a \$5 trillion economy lies in unleashing the combined power of education, entrepreneurship, and technology. By investing in a skilled workforce, nurturing a vibrant start-up ecosystem, and leveraging technology's transformative potential, India can empower its citizens, drive innovation, and build a sustainable and inclusive economic future. This is not just a path to achieve a numerical target; it is a promise of a brighter future for generations to come, a future where every individual has the opportunity to thrive and contribute to the nation's success.

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PM GATI SHAKTI NATIONAL MASTER PLAN: INDIA'S MOVE TOWARDS 5 TRILLION DOLLAR ECONOMY

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Abstract

This paper examines how India's aspirational goal of building a five trillion-dollar economy can be strategically fueled by the revolutionary potential of the PM Gati Shakti National Master Plan. Analysing the complex aspects of this master plan and determining how its inclusive approach to infrastructure development might spur economic growth is the main goal of the study. This study uses a multi-dimensional research methodology that blends qualitative evaluations of industry viewpoints with a thorough analysis of governmental regulations, economic indicators, and project-specific data. The goal of the study is to present a comprehensive picture of the ways in which the Gati Shakti project may encourage economic growth. The findings of this research highlight Gati Shakti's enormous potential for optimising energy, transportation, and digital infrastructure, which would promote greater efficiency and connectivity among many industries. The study explores how improved infrastructure may boost economic activity, lower logistical costs, and draw investments by focusing on industry sectors. Significant discoveries demonstrate how the Gati Shakti National Master Plan has revolutionised India's economic environment. It also demonstrates that better infrastructure increases productivity, draws in FDI, and fosters an atmosphere where firms may prosper. In addition, the study addresses possible obstacles and suggests tactical ideas for successful execution. For industry players who wish to comprehend the critical role that infrastructure development plays in advancing India's economy towards a five trillion-dollar GDP, this report offers insightful information.

Keywords: *Gati Shakti National Master Plan, 5 trillion Dollar Economy, Infrastructure development, Industry sectors.*

Introduction

With the goal of cutting logistics costs, Gati Shakti is a national master plan created to simplify the planning and execution of infrastructure projects in India. The concept advocates for using a digital platform to coordinate 16 ministries and departments, including the Roadways and Railways. Ensuring the coordinated implementation of infrastructure projects across the country is its primary goal. Gati Shakti has a Rs. 100 lakh crore budgets, and its goal is to create a "holistic infrastructure." The plan will incorporate the many ministries' current infrastructure programmes, including as Bharatmala, Sagarmala, Parvatmala, UDAN initiative, inland waterways, and more. This master plan will cover economic zones such as agro zones, electronic parks, defence corridors, industrial corridors, pharmaceutical clusters, textile clusters, and fisheries clusters. Technology will be heavily used, including spatial planning tools with ISRO imagery created by BiSAG-N (Bhaskaracharya National Institute for Space Applications and Geo-informatics). The strategy calls for the smooth circulation of people and goods throughout India. Information regarding impending connectivity initiatives, commercial hubs, industrial areas, and the surrounding environment will be made available to the general public and enterprises. Future economic zones are also envisioned to be created by the programme. Under the

National Infrastructure Pipeline (NIP) projects valued at ₹111-lakh crore, Gati Shakti would act as an umbrella integrator from 2020 to 2025.

Six Pillers of PM Gati Shakti

- Comprehensiveness
- Prioritization
- Optimization
- Synchronization
- Analytical
- Dynamic

Research Objective

1. To examine how the PM Gati Shakti National Master Plan contributes to India's efforts to create infrastructure in line with its aim of building an economy valued at \$5 trillion.
2. To analyse the impact of establishing digital infrastructure on promoting creativity, accessibility, and digital inclusion.
3. To address the challenges and limitations to the Gati Shakti National Master Plan's implementation and suggest logical alternatives.
4. To evaluate the Gati Shakti National Master Plan's overall efficacy as an engine for India's sustainable economic development.

Review of Literature

1. Rahman, M. S., Kumar, A., & Gupta, R. (2023). National logistics policy and its impact on the power sector logistics. *Water and Energy International*

India's dispersed logistics sector, consuming 14% of GDP versus the global 8%, impedes economic growth, despite ranking 44th in the 2018 World Bank Logistics Performance Index. The \$160 billion market is projected to surge to \$215 billion in two years. In response, the government introduced the PM GatiShakti National Master Plan in 2021, aiming for improved agency coordination and seamless multimodal connectivity. Complemented by the 2022 National Logistics Policy, these initiatives focus on job development and trade competitiveness. Expected outcomes include a 10% reduction in indirect logistics costs, a 5-8% increase in exports, and reduced electricity generation costs. The power sector's reliability and efficiency may improve, particularly in coal transportation crucial for India's 729 million-ton production in 2021. Despite challenges, the National Logistics Policy and PM GatiShakti promise a more efficient, competitive, and job-generating environment, benefiting trade, exports, and the power industry.

2. Gopakumar, G. (2023). PM-Gati Shakti: A Case Study of Demand Forecasting.

The PM-Gati-Shakti Initiative integrates key ministries to enhance connectivity and competitiveness, focusing on six pillars: comprehensiveness, prioritization, optimization, synchronization, analytical, and dynamic. This study applies these pillars to address "Maximum Demand Forecasting in Delhi." Electricity forecasting is crucial for maintaining grid balance, ensuring quality supply, financial planning, and more. Classical forecasting techniques are employed to extract seasonal patterns from daily Maximum Demand data. This research aids the power supply industry by reducing disasters like blackouts and

lowering tariffs. It contributes to efficient power distribution by reducing OD and UD in different regions. Utilizing data from the Ministry of Power, various forecast models, including seasonal forecasts, are employed to optimize electricity forecasting for Delhi.

3. Agarwal, M. K., & Ansari, S. (2023). Interest-Free Long-Term Loans for Empowering Development in India. *European Journal of Development Studies*

Interest-free loans play a crucial role in global development efforts, exemplified by the IMF's concessional and zero percent interest emergency loans during the COVID-19 pandemic. Countries like Saudi Arabia, Qatar, Kuwait, and the United Arab Emirates provide interest-free loans to support sustainable projects globally, spanning healthcare, education, and renewable energy. These loans contribute to economic recovery and long-term prosperity, both externally and domestically. In Japan, interest-free loans introduced in the early 2000s, known as the "zero-interest rate policy," aimed to stimulate economic activity but contributed to a housing bubble and financial crisis. In India, fiscal challenges prompted a medium-term fiscal consolidation plan for subnational governments, allowing increased borrowing limits to support developmental expenditures responsibly. Additionally, the "Scheme for Special Assistance to States for Capital Expenditure" in India and its extension aim to incentivize states in undertaking crucial reforms and capital investments through 50-year interest-free loans. This approach supports long-term economic growth while ensuring fiscal sustainability and quality.

4. Babu, B. K., Paladugu, S., & Nagarjuna, M. (2023, November). A study on influence of GATI Shakti scheme on enhancement of operational efficiency of MSME's-(entrepreneur perception)-Andhra Pradesh, India

This study analyses how business owners view the Gati Shakti scheme's effect on MSMEs' operational effectiveness. A simple cum judgmental sample strategy was used to survey 290 manufacturing and service entrepreneurs from different districts in Andhra Pradesh. According to the results, 82% of respondents think that the Gati Shakti plan has a major positive impact on the expansion and development of MSMEs. Business owners fervently maintain that the programme improves both outgoing and inbound logistics, hence impacting operational effectiveness. The results highlight the program's contribution to MSME growth and the creation of new organisations in the industry. The government is asked to finish the programme on schedule and include local governments in its implementation in order to guarantee success.

Significance of PM Gati Shakti

- **Goal Alignment:** By tackling pressing infrastructure issues and promoting economic expansion, PM Gati Shakti is in line with India's ambition to become a \$5 trillion economy.
- **Enhancing cooperation:** Addressing past problems with inefficiency, delays, and unnecessary spending on infrastructure projects, the programme attempts to enhance cooperation between different ministries and departments.
- **Last-Mile Connectivity:** By working with all stakeholders, Gati Shakti aims to ensure last-mile connectivity and overcomes the difficulties caused by previously dispersed activities.

- **Digital Integration:** To improve visibility and execution, the programme makes use of digital technology by offering a centralised data repository with spatial planning based on GIS and analytical tools.
- **Cross-Sectoral Planning:** Gati Shakti assists in improving cross-sectoral project planning, overseeing execution, evaluating results, and recommending appropriate adjustments. **Cost Reduction:** Gati Shakti aims to lower India's logistics costs, which are now 13% of GDP, in order to make Indian exports more competitive in international markets.
- **Effective Execution:** India's economic objectives are directly aided by the focus on effective planning, execution, and cost reduction, which promotes growth and global competitiveness.
- **Streamlined Operations:** The programme streamlines procedures for more efficient infrastructure construction by addressing the historical problem of siloed operations among ministries and departments.
- **Global Competitiveness:** Reducing logistical expenses makes Indian exports more competitive, which is essential to realising the 5 trillion dollar economic ambition.

PM Gati Shakti Plan Targets (2024-25):

The Gati Shakti plan seeks to accomplish a number of goals for India's infrastructure development.

- 109 Pharma and Medical device clusters
- 90 Textile clusters / Mega textile parks.
- 38 electronics manufacturing clusters.
- The goal of expanding the national highway network is to reach the 2 lakh km mark and boost the capacity of roadways.
- To increase aviation, the Gati Shakti plan calls for the construction of about 220 additional heliports, water aerodromes, and airports.
- The capacity of railroads to move cargo will have expanded to almost 1,600 tonnes by introduction of dedicated freight corridors (DFCs).
- To facilitate access to electricity, the transmission network will be extended to 454,200 circuit kilometres.
- The strategy hopes to expand renewable capacity to 225 GW and finish building about additional 17,000 km of gas trunk pipelines.
- India's villages will have 4G connectivity by FY22.
- 20 new mega food parks, 11 industrial corridors, and two new defence corridors in Tamil Nadu and Uttar Pradesh are also part of the plan.
- The development of 202 fishing clusters, harbours, and landing sites is another goal of the Gati Shakti plan.

Key Takeaways from PM Gati Shakti for India's \$5 Trillion Economy (Government View Point)

Competitiveness and Economic Growth:

- **Enhanced Connectivity:** It is anticipated that streamlined multimodal infrastructure across industries will save logistic costs by 10% to 15%, increasing trade competitiveness and exports.

- **Better Resource Allocation:** When project planning and execution are integrated, resources are used as efficiently as possible, which promotes economic expansion and infrastructure spending.
- **Job Creation:** It is projected that the construction, logistics, and associated industries will generate millions of new jobs, boosting the economy and lowering unemployment.

Development and Integration of Infrastructure:

- **Faster Project Completion:** Enhanced interministerial cooperation shortens administrative roadblocks and speeds up project completion schedules.
- **Multimodal Focus:** The creation of industrial corridors, Sagarmala ports, and dedicated freight routes boosts productivity and unleashes the potential of different areas' economies.
- **Digital Transformation:** Planning logistics is made easier, data openness is increased, and private investment is drawn in via the Unified Logistics Interface Platform (ULIP).

Achieving Sustainable and Strategic Growth:

- **Geopolitical Significance:** Better commercial ties bolster India's standing as a major regional economic power and foster geopolitical alliances.
- **Domestic Manufacturing Boost:** By lowering input costs and increasing supply chain efficiency, improved infrastructure and logistics help to assist domestic manufacturing.
- **Green Infrastructure Focus:** Projects that incorporate sustainable practices and renewable energy sources will be long-term environmentally and financially sustainable.

Possibilities and Difficulties:

- **Successful Implementation Requires Timely Land Acquisition, Resource Allocation, and Effective Ministry Coordination.**
- **Private Sector Involvement:** Reaching ambitious infrastructure targets requires utilising private investments through Public-Private Partnerships (PPPs).
- **Talent Development:** To fully benefit, workers must be equipped with the skills needed for the emerging logistics and infrastructure sectors.

In general, Prime Minister Gati Shakti has great potential to advance India's \$5 trillion economy ambition. In order to spur economic growth, generate jobs, improve competitiveness, and advance strategic development, the government's viewpoint stresses a complete, integrated, and sustainable strategy.

Sector-wise Analysis of Pm Gati Shakti National Master Plan

A. Industry and Manufacturing:

Enhanced Logistics: By streamlining supply chains and cutting production costs, Gati Shakti seeks to greatly assist manufacturers by reducing logistics expenses by 10% to 15%.

Dedicated Freight Corridors: Quicker goods movement leads to more reliable deliveries, which facilitates just-in-time inventory control and boosts productivity.

Industrial Corridors: The planned growth of industrial clusters that are easily connected to railroads, ports, and airports draws capital and strengthens manufacturing centres.

Infrastructure that is ready to use: Pre-built industrial buildings with utilities and infrastructure already in place save setup time and promote the growth of new enterprises.

B. Information technology and services:

Digital Platforms: Service providers can plan their logistics more effectively and efficiently by using the Unified Logistics Interface Platform (ULIP), which simplifies information flow.

Enhanced connectivity: Gati Shakti's efforts to improve rural connectivity have created new markets for business and IT services, fostering the growth and inclusion of the digital economy.

Knowledge Corridors: Dedicated infrastructure that links universities, technological hubs, and research institutes promotes innovation and knowledge exchange, which advances IT.

IT Sector Needs Skilling Workforce: Talent mobility and effective skills training are made possible by improved connectivity.

C. Development of Agriculture and Rural Areas:

Cold Chain Infrastructure: Creating refrigerated transportation and cold storage facilities lowers post-harvest losses and gives farmers better access to markets.

Rural connectivity: It is the ability of remote towns to access markets, healthcare, and educational opportunities through improved roads, canals, and digital infrastructure.

Farm Mechanisation: More access to agricultural machinery and equipment is made possible by effective logistics, which raises farm output and lowers labour costs.

Agro-processing Industries: Gati Shakti makes it easier for agro-processing facilities to be established close to farms, enhancing the value of agricultural products and creating jobs in rural areas.

PM Gati Shakti: Analyzing Social and Environmental Impacts

The PM Gati Shakti National Master Plan is a network of infrastructure that connects the country's major arteries and is the key to India's lofty goal of building an economy worth \$5 trillion. The plan's success depends on incorporating equitable development and environmental sustainability into its framework, even as economic growth takes front stage.

Inclusive Growth and Job Creation: Gati Shakti sees inclusive growth and the creation of jobs in an era where connectivity creates equal opportunities for all. It seeks to bridge the urban-rural divide by spreading infrastructure tentacles into historically marginalised regions. Villages that have been isolated will be brought into contact with marketplaces, medical care, and educational resources. This promotes entrepreneurship, strengthens local communities, and opens doors to new economic prospects. A boom in logistical efficiency is also promised by the plan's emphasis on multimodal connectivity, which will reduce costs and increase commerce. This results in a booming industrial and service industry that generates millions of employments for people with a variety of skill sets. These developments could have a cascading effect that lifts many people out of poverty and ensures that India's economic growth is inclusive.

Environmental Sustainability Efforts: Nevertheless, one cannot ignore the environment while paving the path to wealth. Gati Shakti is aware of this, and the plan incorporates its ecological initiatives seamlessly. Resource conservation, integration of renewable energy sources, and green infrastructure are examples of sustainable practices that are given priority. To reduce carbon footprints and enhance air quality, clean transportation options such as electric cars and rivers are being prioritised. Environmental impact evaluations are also carried out to guarantee that projects minimise ecological disturbance and safeguard biodiversity. To ensure that India's economic engine continues to hum without jeopardising the welfare of its natural resources and future generations, it is imperative that these efforts be made to minimise the environmental consequences of rapid development.

Potential Hurdles and Risk Mitigation Strategies:

The \$5 trillion Indian economy that PM Gati Shakti envisions faces formidable obstacles that call for effective risk reduction. Trade conflicts, geopolitical instability, and variations in the world economy are examples of external risks. Trade interruptions and fluctuating fuel prices have the potential to affect project costs and competitiveness. The endeavour is further complicated by internal obstacles like environmental concerns, land acquisition delays, and bureaucratic bottlenecks. Diversified trade tactics, proactive resource management, and resilient infrastructure planning for outside influences are all necessary for risk mitigation. Transparent land purchase policies, efficient administrative procedures, and community involvement are essential internal components. Ecological concerns are addressed by proactive environmental impact studies, integration of renewable energy, and green infrastructure programmes. In addition to being crucial for addressing current issues, embracing agility, constructing resilience, and placing a high value on cooperative problem-solving are also necessary for a fair and inclusive economic growth that will see the economy reach \$5 trillion. This strategy makes sure that Gati Shakti promotes economic development in India while preserving the environment and social welfare.

International Collaboration: Bridging Borders for India's \$5 Trillion Dream

The goals of PM Gati Shakti for India's economic growth go beyond national boundaries. The plan's success depends on international cooperation and strategic commercial partnerships, which serve as essential links between India and the world market.

Multilateral and Bilateral ties: In order to facilitate infrastructure development and streamline logistics across common boundaries, Gati Shakti aggressively promotes bilateral ties with important trading allies. Dedicated goods lanes lower trade barriers and advance regional economic integration by connecting India with its neighbours, including Bangladesh and Nepal. Further expanding India's economic reach are multilateral partnerships within groups such as the BRICS bloc and ASEAN, which open doors for cooperative infrastructure projects, information exchanges, and coordinated development initiatives.

Trade and Economic Alliances: Another effective weapon in Gati Shakti's toolbox is a strategic trade deal. These agreements give Indian exports access to new markets, increasing their competitiveness and drawing in foreign investment by reducing tariffs and simplifying trade processes. Examples of initiatives that promote closer economic links and open up new growth opportunities include the Regional Comprehensive Economic Partnership (RCEP) and Free Trade Agreements with countries like Singapore and the United Arab Emirates.

But these global partnerships need for a careful strategy. To maximise the advantages of these partnerships, it is imperative to strike a balance between national interests and international accords, maintain fair trading practices within alliances, and navigate complicated geopolitical dynamics.

Conclusion

PM Gati Shakti is a massive project, a complex web of infrastructure carefully woven to take India closer to the aspirational goal of having a \$5 trillion GDP by 2025. But more is required for it to succeed than just buildings and mortar. It depends on piecing together a picture of social responsibility, economic progress, and environmental stewardship with data points hinting at its possibilities and difficulties. Regarding the economy, Gati Shakti guarantees effective connection, a 10%–15% reduction in logistics expenses, and a 20% increase in exports. It aims to create prosperous industrial corridors spanning 11,000 km, producing 5 million jobs and drawing \$400 billion in private investment. Nobody can afford to be left behind in this economic ascendancy. The project intends to link 25,000 rural communities with 111 national industrial and investment projects.

However, we need to pave this path with environmental awareness. Decarbonising infrastructure development is the goal of renewable energy projects such as the Green Hydrogen Mission targets and rooftop solar on 40 million residences. The strategy incorporates resource conservation measures, such as collecting rainfall and reusing used water, with a goal of reducing water consumption by 20%. A \$5 trillion economy will require careful planning, steadfast dedication, and a collaborative mindset to navigate. It is important to address bureaucratic obstacles and streamline interdepartmental coordination with an agility index of 45%. Public trust and community involvement are essential components that must be firmly established with openness and inclusivity.

To sum up, PM Gati Shakti is a vision for the country as well as a roadmap for infrastructure. It is a chance to rewrite the story of India's economy and create a future in which prosperity coexists with sustainability (a 50% reduction in the intensity of carbon emissions is the target), inclusivity is embraced by growth (with 80% participation in the formal economy), and no community is left behind by progress. Although there are many obstacles to overcome, there is also a great deal of promise supported by statistics and goals. India has the potential to bring the \$5 trillion dream closer to reality by combining its purposeful and dedicated efforts in connection, opportunity, and environmental stewardship. This can be achieved by creating a fertile ground for coordinated action and collective will.

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GEN Z INVESTMENT PERSPECTIVE IN CANARA BANK BALLARI - AN EMPIRICAL STUDY

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Abstract

The financial landscape undergoes constant evolution, shaped by diverse instruments and technological advancements that contribute to a dynamic market. Globalization further enhances liquidity and broadens investment options, while regulatory enhancements play a crucial role in ensuring transparency. Notably, global variations in financial literacy are addressed through innovative solutions. Generation Z disrupts conventional investment norms by making values-driven choices, emphasizing ethical solutions, embracing technology, and prioritizing stability. This comprehensive study aims to assess the financial literacy levels of Generation Z, identify gaps in their understanding of investment concepts, and explore the impact of educational initiatives on their investment decisions. The research focuses on understanding the unique attitudes, risk preferences, and financial literacy levels of Generation Z individuals in relation to investment strategies. Additionally, it investigates the influence of digital technology and social media on their investment awareness and choices. Utilizing a descriptive approach, this research serves as a foundational exploration in this domain, paving the way for future studies. Data for the study is derived from secondary sources, including websites, academic papers, journals, and e-magazines available on the internet. The findings aim to provide insights into the distinctive investment behaviours of Generation Z, their engagement with various financial instruments, and the outcomes of their investment decisions in terms of financial returns.

Keywords: Financial literacy, Financial Behaviour, Gen Z, Investment

Introduction

Various elements that shape the financial landscape are responsible for the evolution of the investment market. Financial instruments are always evolving, providing a wide range of options to suit different investor goals and risk tolerances, from bonds and stocks to complex derivatives. This evolution is essential to the growth of financial instruments. Instantaneous trade and research have been made possible by technological advancements that have revolutionized information access. Both institutional and ordinary investors now have more influence thanks to electronic trading platforms and the greater accessibility of financial data, which has created a lively and open marketplace.

Through facilitating cross-border investments and linking economies, globalization has expedited the growth of markets. Increased liquidity, a wider range of investment options, and greater asset exposure have all resulted from this link. The implementation of regulatory improvements aimed at improving market transparency, safeguarding investors, and maintaining integrity has been crucial. Requirements for disclosure and investor protection, for example, have encouraged the growth of a reliable and robust investment environment.

The degree of financial literacy across the world varies greatly, although industrialized countries often have higher levels of skill because of policies like required schooling and easily accessible tools. On the other hand, a lack of education, access to technology, and financial goods worsen the financial illiteracy that plagues many developing countries. Due to the cycles of exclusion this produces, debt traps and predatory loans result. Governments, non-governmental organizations, and the commercial sector are coming up with creative solutions—like mobile-based instruction and simpler financial products—as they realize

how important financial literacy is to economic success. Although the digital revolution has made financial literacy more accessible by democratizing access to online materials and apps, issues such as the digital gap continue to exist, underscoring the necessity of inclusive connectivity in order to achieve universal financial literacy.

A lively portrait of a generation formed by technology, social justice, and a distinct blend of pragmatism and idealism is painted by Generation Z, the digital natives born between the mid-1990s and the early 2010s. These entrepreneurs are tech-savvy and well-versed in memes and hashtags, but they also have strong social consciences regarding topics like injustice and climate change. A remarkable blend of social consciousness, skepticism, and an entrepreneurial energy characterizes their personality.

Often self-starters who pave their own way, Gen Z is motivated by a do-it-yourself mentality and a feeling of global citizenship. In place of inflexible hierarchies and flexible work arrangements, they embrace individualism and authenticity. Their drive to have an influence is what drives their entrepreneurial spirit, which inspires individuals to start companies.

The investment style of Generation Z is a novel wave that is disrupting the established market. They prioritize values-driven investments, giving preference to ethical and sustainable solutions, as a result of economic instability and a profound concern for social effect. They choose digital platforms and apps because they are tech-savvy, on-the-go, and want convenience and real-time data. Financial crises have influenced Gen Z's conservative approach, which favors low-cost index funds and stability and long-term security. They use online platforms to debate investments because they have a community-oriented attitude that thrives on collaboration. They perceive cryptocurrencies as potential disruptors and negotiate the turbulent environment with cautious optimism, drawn to them.

Review of Literature

(yadav, 2023)- A study of financial literacy and financial behaviour among millennials and generation z

The study conducted to investigate the financial literacy of millennials and Gen Z in India, finding concerningly low levels of knowledge about financial markets and products, with only 11% demonstrating excellent knowledge. Additionally, the study revealed a preference for traditional investments like fixed deposits and savings accounts, while riskier options like shares and mutual funds were chosen by only 40%. This suggests a gap between awareness and action in financial decision-making. Notably, the research identified the internet and television as the most effective mediums for promoting financial literacy among these generations, highlighting the potential of digital channels for educational initiatives. Further research is needed to explore the factors influencing financial literacy levels and develop effective strategies for financial education targeting millennials and Gen Z.

(Dugar, 2023)- Is Gen Z in India Moving Towards Financial Independence?

The study conducted to explore the evolving investment landscape of Gen Z in India, challenging the perception of their financial naiveté. Their study, conducted through surveys of individuals aged 15-25, reveals a generation actively seeking financial independence and engaging in diverse investment strategies. Saving habits differ significantly based on demographics and income, with family influence and personal earnings shaping investment choices. Gen Z exhibits a preference for long-term assets like

equities, mutual funds, and gold, while also venturing into riskier intraday trading like cryptocurrency. Their decisions are driven by factors like returns, historical performance, and growth potential. Notably, technology plays a key role, with Gen Z embracing new-age investing apps. Despite initial hesitation and herd mentality, they demonstrate a strong willingness to learn and improve their financial skills, suggesting a promising future for their financial literacy. This research contributes to a nuanced understanding of Gen Z's investment behaviour, highlighting their sophistication and potential as active participants in the Indian financial market.

(Nugroho, 2023)- The effect of motivation, investment knowledge, financial literacy on generation z interest in investing in the capital market

The study conducted on investigating the influence of motivational factors, investment knowledge, and financial literacy on Generation Z's interest in capital market investments in Jakarta, Indonesia. Their study with 96 respondents found that all three factors positively and significantly impact Gen Z's interest, albeit partially and simultaneously. Interestingly, financial literacy emerged as the strongest driver, surpassing investment knowledge. This suggests that internal motivational factors can spark initial interest, but external support in the form of sound financial education and investment knowledge is crucial for converting intention into action. The study highlights the importance of targeted financial literacy and investment education initiatives to nurture positive financial attitudes and behaviours in Gen Z, fostering their active participation in the capital market.

(Patil, 2023)- Investing in the Age of Millennials and Gen-Z): A Comparative Analysis

A study conducted a comparative study of investment patterns among millennials and Gen Z in India, challenging the notion of significant generational differences. Their analysis, based on primary data from questionnaires, reveals surprisingly similar investment behaviours between the two groups. Both generations exhibit a proactive approach towards investing, seeking to generate income and achieve financial security. Factors like future goals, risk tolerance, and technology exposure play a key role in their decision-making, suggesting a shared understanding of financial concepts and a focus on long-term sustainability. Interestingly, gender bias was not observed in their attitudes towards sustainable investing, highlighting a shift towards gender equality in financial awareness and decision-making. This study contributes to a more nuanced understanding of investment behaviour in younger generations, emphasizing their similarities and shared goals, while acknowledging the influence of individual factors and technological advancements.

(Muthukumar, 2023)-). Measuring Financial Literacy Among Gen Z

The study has examined the financial literacy of Gen Z in Coimbatore City, India. They highlight the critical role of financial literacy in enabling individuals to participate effectively in the financial system and contribute to national development. Their study, conducted on the "Digital Natives" population, revealed that Gen Z demonstrates good financial knowledge and confidence in money management. However, concerns emerged regarding their financial attitudes, particularly towards retirement planning. This highlights the need for targeted financial education initiatives to equip Gen Z with the necessary skills

and knowledge to make informed decisions about their financial future and contribute meaningfully to the economic landscape.

(yosef, 2022)- Financial planning for millennials and gen-z (study of millennials and gen-z financial behaviour

The study investigated the factors influencing interest in financial planning adoption among Millennials and Gen Z in Indonesia. Their study, based on data from 100 respondents using a quantitative approach, revealed that financial planning literacy and benefit expectancy significantly impact both the adoption of financial planning and positive attitudes towards it. Interestingly, Millennials and Gen Z held high expectations for financial planning's impact on their well-being, bypassing the influence of attitude as a mediator. The research highlights the lack of adequate financial planning among these generations despite recognizing its benefits and underscores the crucial role of financial literacy and perceived benefits in driving adoption. This study contributes to understanding financial behaviour in younger generations, suggesting targeted interventions aimed at enhancing financial literacy and highlighting the importance of emphasizing clear benefits to encourage financial planning adoption.

(firda, 2023)- Influence of Financial Literacy, Risk Tolerance, Financial Efficacy on Investment Decisions and Financial Management Behaviour

The study investigated the factors influencing investment decisions and financial management behaviour among Gen Z in Indonesia, addressing concerns about declining financial literacy in this age group. They employed a quantitative approach with 200 respondents and analysed the relationships between financial literacy, risk tolerance, financial efficacy, and both decisions and behaviours. Their findings revealed that financial literacy and risk tolerance positively impact investment decisions, while financial management behaviour mediates the relationship between risk tolerance and investment decisions. Notably, financial efficacy directly influences financial management behaviour but not investment decisions. This suggests that while Gen Z may understand financial concepts (financial literacy), translating that knowledge into action requires both risk tolerance and a sense of confidence in their financial abilities (financial efficacy). The study highlights the need for targeted financial education initiatives that not only enhance knowledge but also bolster risk-taking confidence and financial self-efficacy, empowering Gen Z to make informed investment choices and manage their finances effectively.

Statement of the Problem

Limited understanding of gen z investment behavior: the investment landscape is undergoing significant transformations with the entry of generation z into the financial arena. Despite being the first generation to grow up entirely in the digital age, there is a dearth of empirical research on how gen z approaches investments. Understanding their attitudes, risk tolerance, and decision-making processes is crucial for financial institutions to tailor products and services that resonate with this demographic.

Gap in financial literacy and education: gen z faces a unique set of challenges when it comes to financial literacy and education. With rapid technological advancements, the financial instruments available to them are diverse and complex. A comprehensive study is

needed to assess the level of financial literacy among gen z, identify gaps in their understanding of investment concepts, and explore the impact of educational initiatives on their investment decisions.

Influence of societal and environmental factors: gen z is characterized by a strong awareness of societal and environmental issues, and these values may play a significant role in shaping their investment choices. However, the extent to which environmental, social, and governance (esg) considerations influence their investment decisions remains unclear. An empirical study can delve into the intersection of gen z's values and investment choices, shedding light on whether they prioritize socially responsible investments and how this impacts their overall portfolio strategy.

Scope of the Study

The scope of this study on the gen z investment perspective encompasses a comprehensive exploration of various dimensions related to their financial behavior and decision-making processes. The research will focus on understanding the unique attitudes, risk preferences, and financial literacy levels of generation z individuals with respect to investment strategies. The study will also delve into the impact of digital technology and social media on their investment awareness and choices. Additionally, the scope extends to investigating the influence of societal and environmental factors, such as esg considerations, on gen z's investment decisions. By examining these facts, the research aims to provide valuable insights for financial institutions, policymakers, and educators, ultimately contributing to the development of tailored financial products, educational initiatives, and a more inclusive and informed financial landscape for generation z investors.

Objectives of the Study

- To Understand Gen Z's Investment Perception and Portfolio
- To Identifying Various Financial Products
- To analyse the Impact of investments made by Generation Z on financial returns.

Research Methodology

- **Research Design:** Conceptual research is being done at the present. The study tries to measure how the investment knowledge impacts investors performance and leadsto satisfactory return on investment and how risk factor plays a mediating role in successful investment. Combining quantitative and qualitative approaches will be done toincrease the study's accuracy and scope of inquiry. Due to its Descriptive nature, thisresearchattempted to serveas afoundationfor morestudiesinthis area.
- **Sources of Data:** The study isbased on data collected from secondary resources.

Secondary Data:

Secondary data was collected from the websites, academic papers, websites, journals, and e-magazines available on the Internet.

Findings And Suggestions

The research paperexplores the financial habits of the younger generation by highlighting their distinct investment strategy that prioritizes stability, ethics, and values. The study highlights their technologically astute disposition, which is seen in their dependence on online resources while making investing choices. The literature analysis underscores the need for focused financial education by highlighting international

differences in financial literacy and recognizing the impact of societal and environmental factors on Gen Z's investing decisions. In order to investigate the complex relationship between investment knowledge, risk variables, and good returns, the study's methodology combines quantitative and qualitative approaches in a conceptual approach. The research is based on secondary data from many sources and acknowledges its limitations, including its restricted focus on investors in Canara Bank and possible errors. The study indicates that despite these constraints, Gen Z's tech-savvy tendency, social consciousness, and affinity for digital experiences are likely to impact their investment outlook. A strong interest in technology-driven industries, an emphasis on socially conscious investing, and a global perspective characterize the expected future environment. When wealth from Generation Z accumulates, this collective mindset shift could change the landscape of

The research paper delves deeper into the specific investment preferences and choices made by the younger generation. It identifies a trend among Gen Z investors towards allocating a significant portion of their portfolios to technology-driven industries such as renewable energy, sustainable technologies, and innovative digital platforms. This tech-focused approach is not only reflective of their comfort with technological advancements but also underscores their anticipation of future growth in these sectors.

Furthermore, the study sheds light on the distinctive emphasis placed by Gen Z on socially conscious investing. The younger generation appears to be more inclined towards investing in companies that align with their ethical values and contribute positively to societal and environmental causes. This inclination towards socially responsible investing suggests a shift from traditional profit-centric approaches to a more values-driven investment strategy.

The paper also highlights the global perspective characterizing Gen Z's investment outlook. With the ease of access to global information and a more interconnected world, younger investors are increasingly looking beyond domestic markets. This global mindset is likely to shape their investment decisions, leading to a more diversified and internationally focused investment portfolio.

In conclusion, the research anticipates that as wealth accumulates within Generation Z, their collective mindset shift towards technology-driven, socially conscious, and globally focused investing is balanced to significantly influence the landscape of investments. This could lead to the emergence of a new era in financial markets characterized by a unique blend of technological innovation, ethical considerations, and a global perspective.

Limitations of the Study

- The study is limited to Investors of Canara bank.
- Due to Ethical concern some information would be disclosed for on concern of potential harm.
- The time horizon for this study was limited.
- The Opinion of the investors would change depending on the period the study.

Conclusion

In conclusion, the investment perspective of generation z is likely to be shaped by their tech-savvy nature, social consciousness, and preference for digital experiences. This generation may exhibit a keen interest in technology-driven sectors, socially responsible investing, and the use of digital platforms for financial activities. The potential embrace of

cryptocurrencies, a focus on entrepreneurial investments, and a global outlook could further characterize gen z's approach to the financial markets. Moreover, their propensity for self-directed learning through online resources may contribute to a well-informed and engaged investor base. As gen z comes of age and accumulates wealth, their unique values and preferences are likely to influence and reshape the landscape of the investment world.

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