

# RESEARCH

# PULSE

**VOLUME I  
ISSUE 2**



# From the Desk of the Vice Chancellor

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Dear Readers,

Welcome to the second issue of our biannual magazine Research Pulse, where we explore the cutting edge of business research and academic thought. As we delve into this issue, I am reminded of the incredible strides our faculty, scholars, and alumni have made in advancing the frontiers of business knowledge.

This edition highlights groundbreaking research that addresses some of the most pressing challenges in today's business landscape. From innovative strategies for sustainable growth to new insights into global trade, agriculture, and the economy, our contributors have provided valuable perspectives that will inspire and inform.

Research Pulse brings interesting excerpts from the Ph.D. program for budding researchers starting their journey with the Indian Institute of Foreign Trade to help them gain a 360-degree view of the program. The magazine elaborates upon the achievements of the Ph.D. scholars and the exciting journey they have been through. It provides a holistic picture of the Ph.D. program to the new-coming researchers, encouraging them to produce quality research throughout their journey at the institute.

In addition to featuring scholarly articles and research findings, we are excited to spotlight the remarkable achievements of our scholars and faculty. Their dedication and ingenuity are at the heart of our mission to drive impactful change in the business world.

I encourage you to explore the diverse range of topics covered in this issue. Your engagement with the content not only enriches our academic community but also fosters a culture of curiosity and excellence.

I thank all the stakeholders for their continued support. Together, let's take forward the management research.

Warm regards,

**Prof. Rakesh Mohan Joshi**

**Vice Chancellor**

**Indian Institute of Foreign Trade**

# Message from the Head (Research)

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Dear Readers,

I am pleased to announce the release of the second issue of our Research Division's biannual magazine 'Research Pulse'. This publication aims to showcase the outstanding work and innovative research being conducted by the faculty members and research scholars in various domain, as well as to highlight our collaborative efforts and achievements.

Research Division is continuously making efforts to bring out quality research output from the Institute. 'Research Pulse' is one of the several endeavors taken by the Division to foster the culture of research among Ph.D. Scholars.

The second issue includes syndicate report and variety of articles under the various categories of Vishesh Vichar, Vichar Dhara, Shodh Jhalak, Samvad, Manthan, Prakshan, Shodh Sampan, etc. The issue also features Awards and Recognition and Samachar (IIFT in news).

The magazine serves as a platform to showcase initiatives and the innovative ideas, reflecting through the diverse range of articles and opinions. I invite everyone to take a moment to read through it and celebrate the incredible work being done by researchers.

I want to extend my heartfelt thanks to everyone, especially Editorial Team, who contributed to this edition whether through writing, editing, or providing valuable insights and have made this publication possible.

Let us continue to inspire one another and push the boundaries of knowledge and innovation.

Best regards,

**Prof. Asheesh Pandey**

**Head (Research)**

**Indian Institute of Foreign Trade, New Delhi**

# Message from the Program Director

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Dear Readers,

It gives me immense pleasure to introduce the latest edition of Research Pulse Magazine, a platform dedicated to the innovative research conducted by our vibrant Ph.D. community. The magazine serves as a voice for aspiring researchers to share their insights, engage in academic discourse, and contribute to the growing body of knowledge across various disciplines.

In this issue, you will find a collection of opinion articles, thought-provoking essays, and meticulously researched papers, all authored by scholars who are pushing the boundaries of what is known and understood in their respective fields. Each article reflects not only the intellectual rigor of its author but also the passion and dedication that drive academic inquiry.

As you explore the pages of this magazine, I encourage you to reflect on the diverse perspectives and methodologies that enrich our scholarly community. Whether you are at the beginning of your research journey or nearing the completion of your Ph.D., I hope Research Pulse continues to inspire you to think critically, collaborate, and contribute meaningfully to your field.

I would like to extend my heartfelt thanks to all the contributors for sharing their work and to the editorial team for their commitment to excellence. Together, we are creating a space where ideas can thrive and research can flourish.

Best regards,

**Dr. Preeti Tak**

**Program Director - Ph.D. (Management)**

**Indian Institute of Foreign Trade, New Delhi**



# Preface

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The second issue of the biannual magazine Research Pulse is back with an updated worldview on the infinite vistas that the field of research seeks to uncover. In our own way, the magazine attempts to unravel the research in the hallowed halls of the Indian Institute of Foreign Trade by its inquisitive researchers, esteemed faculty members, and indomitable scholars in various fields. To a layman, the field of research might seem extremely exclusionary by its very nature. Here is where Research Pulse offers a more nuanced and balanced viewpoint that is both inclusive and incredibly incisive in its commentary for the readers.

The magazine's Vichar Dhara section can be considered a mental compendium of the author's viewpoint towards the latest trends in research and their insights on contemporary issues.

As the name suggests, the next section of the magazine, Shodh Jhalak, seeks to provide a glimpse of the fascinating research being done here at IIFT by our indefatigable researchers.

Further on, the Samvad section glances upon the spirit of eternal learning prevalent here at IIFT,

manifested by the litany of special guest lectures and workshops conducted to ensure that our scholars and researchers are always at the cutting edge of developments in the world of research.

The Manthan section is a glimpse of the camaraderie and spirit de corps in IIFT that results in the peer-to-peer interaction sessions that espouse a community-led learning atmosphere where one person's learnings and mistakes are stepping stones for another's success. The sessions often hover on the depth of the research being done as well as the latest research tools being used.

The Prakashan section of the magazine then focuses on the publications that our esteemed panel of researchers, scholars, and academicians have managed to garner in top-ranked, peer-reviewed international journals, compendiums, research periodicals, and management books to show the world what we at IIFT are working on.

Finally, the Shodh Samapan section focuses on the completed research projects that have emerged from our institution.

## Message from the Editorial Board

Dear Readers, we are excited to welcome you to the second issue of our biannual research magazine, "Research Pulse". This publication is the result of months of hard work by our dedicated team, and we are delighted to finally share it with you. At the Indian Institute of Foreign Trade, we are committed to excellence in every endeavour, always striving to reach new heights. Research plays a pivotal role at our institute, and Research Pulse is designed to offer a platform for faculty, research scholars, research enthusiasts, and industry experts to share their knowledge and insights in the field of International Trade and Business. This magazine is not just a publication; it is a space where achievements, talents, and potential are showcased. While the mission of the magazine is to provide an overview of the Ph.D. program and its peripherals, the vision is to establish Research Pulse as an independent entity that captures

the interest of aspiring researchers and informs them about the programme.

In this second issue, we highlight various research projects and activities undertaken by our Ph.D. scholars and faculty members as well as opinion articles on contemporary issues in International Trade and Business. To our valued readers, we sincerely thank you for your support and interest.

We hope the articles will challenge your perspectives, expand your knowledge, and spark meaningful discussions. Your feedback and involvement will play a crucial role in shaping future editions. We are also grateful to our mentors Prof. Asheesh Pandey, and Dr. Preeti Tak for their incessant guidance and support in bringing this magazine to fruition.



**Aaqib Chaudhary**

Ph.D. Batch 2021 (Global Trade)



**Sadhvi Sharma**

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**Pratibha Kushwaah**

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## Editorial Board

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## Research Division

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Dr. Preeti Tak (Program Director, Ph.D. Management)

Mr. Rakesh Ojha (Section Officer)

Ms. Seema Sharma (Senior Assistant)

Ms. Purnima Duggal (Personal Assistant)

Mr. Abhishek (Junior Assistant)

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## Vishesh Vichar (Special Opinion)

Vishesh Vichar features unique perspectives from experts and contributors on timely or contemporary topics. At IIFT, Vishesh Vichar offers insightful commentary, sparking discussion and providing readers with thought-provoking viewpoints on current issues.

### The U.S. Bio-Secure Act, 2024: A Window of Opportunity

The US-China trade war is spreading its scope, anchoring tariff, non-tariff, regulatory, and restrictive trade practices to realign the U.S. supply chains away from China. With the Bio-Secure Act of 2024 passing, it enters the next phase, the biotech war, aimed at restricting Chinese access to American biotechnology resources, incentivizing domestic biomanufacturing, and limiting collaborations with foreign entities deemed as potential security threats to the United States. Correspondingly, the U.S. aims to reshape global supply chains, realigning them with friendly democratic countries of Asia and Europe, particularly India, South Korea, and ASEAN countries. The ramifications of this shift extend far beyond geo-economics, interacting with the unfolding geopolitical, geostrategic, and geo-diplomatic maneuver(s), reshaping the global landscape in profound ways. Let us delve into them in context, comprehending what lies ahead regarding opportunities and deliverables for our policymakers and industry.

#### Reshaping the Business Dynamics

The U.S.-China biotech conflict is a crucial battleground in the broader geopolitical struggle for technological dominance. As biotechnology becomes integral to future healthcare, defense, and agricultural innovation, control over this sector will influence global power dynamics. Correspondingly, the unwavering and undaunting bipartisan support of the U.S. legislators for the *Bio-Secure Act* signals the U.S. commitment to maintaining its technological edge while limiting China's rise as a biotechnology superpower. The geopolitical realignment extends beyond the usual trade instruments such as tariffs, standards, compliance procedures, and technical, sanitary, and phytosanitary barriers to the regulatory ballgame,

restricting market access to the listed and named Chinese pharmaceutical entities in the U.S. market, unlike practiced under the WTO non-discriminatory trade regime.

In doing so, this Act aims to curb China's access to innovative research and innovations in the U.S. market, even being registered as a U.S. company with links to the Chinese Communist Party and Military establishment. The bipartisan support of the legislators is rooted in fears of economic espionage and the potential weaponization of biotech advancements by the Chinese counterparts, given its unfolding increasing belligerence since 2013. The growing suspicion between these two powers will have broader geopolitical implications, as other nations may be forced to choose sides in this new tech-driven cold war. Smaller countries, particularly in Asia and Africa, could find themselves balancing relations with the U.S. and China, potentially deepening global geopolitical polarization amid this realignment of supply chains.

Figure 1: Bio-Secure Act, 2024: A U.S. commitment to maintaining its technological edge



Source: <https://www.istockphoto.com/photos/colorful-medicine-tablets>

## Geo-Economic Opportunity

Geo-economically, the *Bio-Secure Act* is a clear manifestation of the U.S.'s geo-economic strategy to decouple from China by restricting Chinese access to U.S. biotechnology markets in terms of Contract Research Organizations (CROs) and Contract Development and Manufacturing Organizations (CDMOs) and federal funding. Washington is accelerating the realignment of supply chains that had become deeply interwoven with China over decades. Consequently, the U.S. firms, previously dependent on China for APIs, biotech components, and R&D collaborations, will now seek alternatives in countries like India, Vietnam, and South Korea. India is well-positioned to capture a significant share of this market as the U.S. companies seek to mitigate their risks associated with overreliance upon China. India's burgeoning pharmaceutical sector, with its expertise in API manufacturing, CROs, and CDMOs, offers a viable and cost-effective alternative, tough to be ignored by the U.S. companies in the high volume, low-value drug segments, given India's innate capabilities in generic drug manufacturing. The 'fathering clause' as introduced ensures that this geo-economic realignment remains jerk-free for both involved U.S. firms and their new counterparts.

Geo-strategically, biotechnology, encompassing everything from pharmaceuticals to agricultural innovation and biodefense, represents the frontier of the next industrial revolution. By passing the Biosecure Act, the U.S. seeks to safeguard its leadership in this sector, ensuring that sensitive technologies do not fall into the hands of potential adversaries. The restriction on Chinese access to U.S.-funded biotech research and innovations has been designed to limit China's ability to close the technological gap. From a strategic standpoint, this is essential to maintaining U.S. dominance in the civilian applications of biotechnology and the military and defense sectors.

For India, the geostrategic implications are multi-

-faceted. As the U.S. seeks to forge stronger alliances with countries capable of supporting its technological ambitions, India stands to benefit through greater collaboration in biotechnology and defense-related innovations. The U.S. is collaborating with its allies in Europe, Japan, South Korea, and, increasingly, India to establish alternative supply chains for biotechnology and pharmaceuticals. The realignment of supply chains away from China allows these countries to collaborate on developing resilient, secure, and innovative supply chains that are less susceptible to external manipulation or disruption.

The Bio-Secure Act presents a unique geo-economic opportunity for India to strengthen its relationships with the U.S. and its allies. India's pharmaceutical and biotech sectors are well-positioned to benefit from this shift, with U.S. firms actively seeking to diversify their supply chains. However, this economic opportunity comes with challenges. India must carefully balance its growing ties with the U.S. while maintaining its diplomatic neutrality and strong relations with China and other non-aligned countries.

## References

<https://www.congress.gov/bill/118th-congress/house-bill/7085/>



Dr. Ram Singh, Professor, Global Trade Operations & Logistics, Head (CDOE)

Dr. Ram Singh is Professor of Global Trade Operations & Logistics and Head (CDOE) at IIFT Delhi. He has more than 25 years of experience in the areas of International Business, Export-Import Management, International Trade Logistics, Exim Documentation & Procedure, International Marketing

(The views expressed here are authors own views only)

## Vichar Dhara (Opinion Articles)

Vichar Dhara represents the author's perspective on a topic through a clear and concise statement, exploring new arguments, organizing them, offering solutions, and delivering a compelling conclusion. At IIFT, Vichar Dhara navigates the swiftly evolving research trends by presenting well-rounded viewpoints from authors on current issues.

### Israel War: Disruption of Trade Relations

#### Introduction

International trade is contingent upon the diplomatic ties between nations and the availability of their inherent or artificial resources by the principles of supply and demand. The Middle Eastern nations possess significant reserves of crude oil, which serve as a primary source of petroleum, fossil fuels, and several other products. However, Israel holds significant strategic importance due to its geographical location, which facilitates a substantial volume of trade and fosters the development of diplomatic relations with neighbouring nations. Military wars cause trade disruptions, resulting in changes to a country's economic structures, regulations, and established trade patterns. These changes impact a country's standing within the international trading system.

Israel's ongoing conflicts and wars have had a significant impact on international trade in the region. The geopolitical turmoil in the Middle East has created an unstable and unpredictable environment that directly affects trade activities. The Arab-Israeli conflict, in particular, has led to trade restrictions, loss of business opportunities, and disrupted supply chains, impacting both Israeli and Arab economies. The constant threat of violence and conflict makes it difficult for goods to be transported across borders and through conflict zones. This increases transportation costs and leads to delays in delivery times, affecting businesses' ability to meet market demands.

The establishment of the state of Israel occurred in May 1948 during a period of armed conflict with neighbouring Arab nations. The immediate economic challenges were significant, encompassing the need to secure funding and conduct military operations during a time of war, facilitate the intake of a substantial number of immigrants including tho-

-se initially housed in camps in Europe and on Cyprus, ensure the provision of essential commodities to both existing and incoming populations, and establish a government bureaucracy capable of effectively managing these multifaceted tasks. During the period spanning from 1950 to 1965, Israel saw a notable period of economic expansion, characterized by significant growth rates. Specifically, the country's real GNP (Gross National Product), representing the total value of goods and services produced, exhibited an average annual growth rate of over 11 percent (Kumaraswamy, 2010). Moreover, the per capita GNP, which measures the average economic output per individual, showed a growth rate surpassing 6 percent. Over around forty years, spanning from the mid-1960s to the present, the economy of Israel saw significant development and transformation, accompanied by corresponding shifts in economic policy. The Arab-Israeli conflict has emerged as a significant determinant influencing these developments.

The substantial rates of income growth and per capita income observed in Israel until 1973 were not sustained in subsequent years. The Gross Domestic Product (GDP) growth exhibited fluctuations, often ranging from 2 to 5 percent. However, it had a notable surge, peaking at 7.5 percent in 2000 (Liverani, 2014). Conversely, during the recession period from 2001 to mid-2003, the GDP growth rate declined to negative values. Towards the end of the twentieth century, the per capita income had obtained a value of around \$20,000, comparable to the levels observed in other highly developed industrialized nations.

Israel is widely recognized as a globally highly robust and technologically proficient market economy. However, Hamas' attack on Israel reflec-

-ted their machinery failure in the name of technological advancement and a defence system that is attracting the rest of the world. The nation's skilled labour force and significant presence of venture capital contribute to its prominent position in pioneering sectors, including high-tech, biological sciences, etc., supported by the Western world.

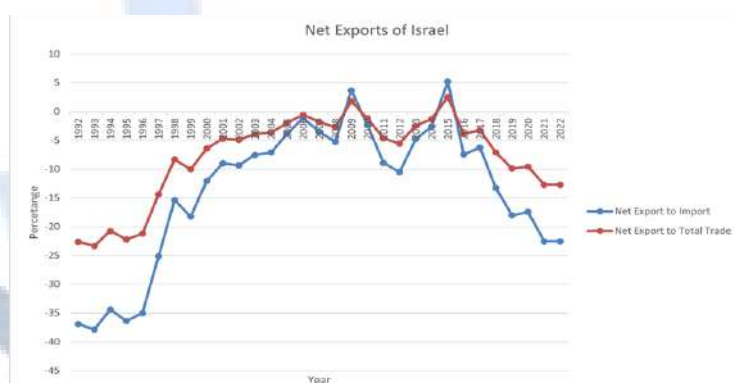
### Israel's Trade Relations

The core relation with Israel and other trading partners started in 1985 when the USA signed a free trade agreement (FTA). The Foundation of the Joint Economic Development Group (JEDG) took place to stabilize the economy and trade. Subsequently, other developed and developing countries also recognized Israel as a nation during the last 30 years. The major player, the USA, supports Israel in their development and influences other Arab nations to join their hands for trade. In this sequence, Israel proliferates with the help of the USA. This can be seen in their international trade contribution to Israel, which is much higher than that of other countries. In conjunction with the United States, Germany is usually seen as one of Israel's most significant friends. Israel and Germany have a robust bilateral relationship characterized by extensive trade, defence collaboration, scientific cooperation, and cultural linkages (Lavy, 2014). Germany is Israel's second most significant commercial partner, while the areas above of cooperation between the two nations continue to flourish. In the 1990s, Germany helped Israel in the context of their commercial relations (Belkin, 2007). Nevertheless, throughout time, there has been a decrease in commerce with Israel.

The commercial relationship between the United Kingdom and Israel has had a gradual deterioration throughout the period spanning from 1992 to 2022. It significantly contributed over 5% to the trade during the early stages. However, after 2003, its contribution declined, reaching a level of 5% or below. Likewise, Japan's contribution has

experienced a decline during a specific timeframe. Nevertheless, China's involvement has witnessed a gradual rise over a specific duration. The initial percentage was below 1%, but it has experienced a significant growth to over 10% by 2022. The level of trade between Russia and Israel exhibits consistent fluctuations throughout time. However, it has never exceeded a threshold of 3%. Nevertheless, the bilateral commerce between India and Israel has demonstrated incremental progress during the given timeframe, although it has not surpassed 4%. Figure 1 illustrates Israel's net exports in relation to all nations globally, spanning 1992 to 2022.

Figure 1: Net Exports of Israel

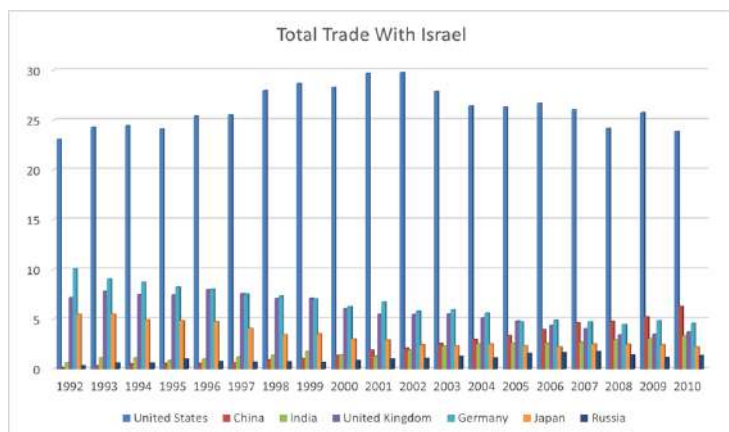


Source: Compiled by authors from Bloomberg database

The graph shows that Israel consistently experienced a trade imbalance over the years, indicating that its purchases from other countries exceeded its exports to them, except in 2009 and 2015. Nevertheless, there has been a gradual decline in the trade deficit from 1992 to 2009. Subsequently, there has been a resurgence in the trend towards an escalation in the trade imbalance. The graph above illustrates the percentage of imports accounted for by net exports, as well as the overall value of trade.

Figure 2 analyzes the overall trade between Israel and many leading nations based on their GDPs. The aggregate trade percentage is computed for the period spanning from 1992 to 2010. According to the data presented in the image, the United States exhibits the biggest proportion of overall trade with Israel compared to other countries. In 2002, a significant proportion of all trades, namely above 25%, was observed as the highest recorded trade volume. Subsequently, it becomes evident that Germany occu-

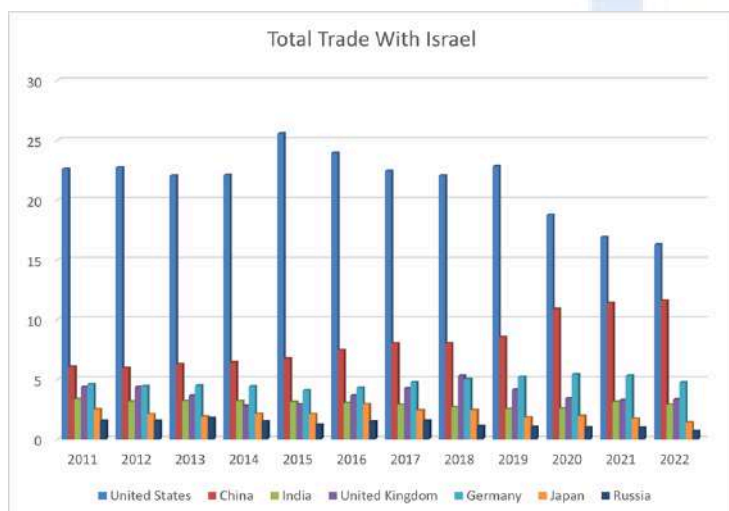
Figure 2: Total Trade with Israel (1992-2010)



Source: Compiled by authors from Bloomberg database

...pied the second position in terms of trade percentage, amounting to almost 10% in 1992. However, this proportion has fallen over the subsequent years, reaching less than 5% by 2010. However, the trade ratio between India and Israel has shown improvement over time. In 1992, India had a meagre share of commerce with Israel, around 1%, which experienced a rise to over 4% by 2010. The United Kingdom has historically had a favourable commercial relationship with Israel; however, this partnership has experienced a deterioration in recent years. Like India, Russia has also experienced a notable rise in the proportion of commerce conducted with Israel over a specific time frame.

Figure 3: Total Trade with Israel (2011-2022)



Source: Compiled by authors from Bloomberg database

Building upon the preceding graphical representation, figure 3 illustrates Israel's trade proportion with other nations over the period from 2011 to 2022. The data above suggests that the US is

the first nation, followed by China. Israel's trade performance has seen significant improvement throughout the period spanning from 2011 to 2022. In 2011, the ratio was around 6%; however, in 2022, it will increase to almost 11%. The trade percentage with India has exhibited fluctuations, but predominantly remaining at a maximum of about 4% over the period spanning from 2011 to 2022. The trade between Israel and Russia exhibited an upward trajectory until 2013, then saw a decrease and reached about 1% in 2022. The trade percentage between Israel and Germany for 2011-2022 ranges between 4 to 5%. Moreover, Japan has demonstrated a rather stable pattern of trade, with an average growth rate ranging from 3% to 4% from 2011 to 2022.

Figure 4: Year-on-Year Change in Total Trade with Israel (2011-2022)



Source: Compiled by authors from Bloomberg database

Figure 4 illustrates the annual fluctuations in Israel's trade with other nations from 2011 to 2022. It may be deduced that the United States of America exhibits the highest degree of change over a given period. The percentage has undergone a transition from 3.5% in the year 2015 to a negative value of 4% in the year 2020. Like the United States, China has experienced a significant increase in its year-on-year change, rising from -0.5% in 2011 to 2.5% in 2020. Similarly, the United Kingdom has experienced a notable shift from a negative growth rate of -0.5% in 2013 to a positive growth rate of 1% in 2018. Nevertheless, India has maintained a range of -0.1% to -0.5% in terms of its economic growth, except in 2021, when it saw a positive growth rate of 0.5%.

## Trade Relations with India

The bilateral commercial contacts between the two nations significantly increased in 1992 after the formal establishment of diplomatic ties. In 1992, the trading industry was predominantly focused on exchanging valuable commodities, particularly precious metals like diamonds. Presently, both nations have expanded the scope of their commerce to encompass a variety of sectors, including engineering goods, electronic goods, fertilizers, textiles, agricultural products, petroleum products, pearls, and valuable and semi-precious stones.

Negotiations for the Free Trade Agreement between India and Israel have been reinitiated to reach a conclusive agreement by the middle of 2022. The bilateral commerce trade between the two countries significantly grew over the years (Sharma & Bing, 2015). In 1992, the trade volume was recorded at US\$ 200 million. However, this figure had risen substantially by the fiscal year 2020-21 to reach US\$ 4.66 billion. Furthermore, from April to November 2021, the trade volume reached US\$ 4.82 billion. Notably, India enjoyed a favourable trade balance in this bilateral trade relationship. India is Israel's third most significant trading partner in the Asian region and ranks seventh on a worldwide scale (Asrar, 2023). Several Indian software businesses, including Jain Irrigation, Sun Pharma, Tata Consultancy Services, Wipro, Tech Mahindra, State Bank of India, Larsen & Toubro, and Infosys, are increasing their operations in Israel. Israeli corporations have invested in several sectors in India, including renewable energy, real estate, and water technology. Additionally, they are establishing research and development centers and manufacturing units in the country.

India is the seventh-largest services exporting country globally [1]. The dominance of diamonds, petroleum products, and chemicals primarily characterizes the bilateral trade in commerce. However, there has been a notable trade surge in sectors such as electronic machinery, high-tech items, communications systems, and medical equip-

ments. During the fiscal year 2022-23, there was a significant increase in India's export of petroleum products to Israel, with a growth rate of 3.5 times, reaching a value of \$5.5 billion. This figure represents a substantial rise compared to the previous year's export value of \$1.6 billion. India's exports experienced significant growth of 77% compared to the preceding year, thereby leading to a notable gain of 37% in overall commerce between the two nations. Nevertheless, the upward trend in petroleum exports has not been maintained thus far in the fiscal year 2023-24.

Earlier, the trading relations between Israel and India started at a meagre percentage, but slowly and gradually, they have become better. Earlier, India was more of a socialist economy that believed in socialism rather than capitalism. However, the perception has changed, leading to a capitalist economy. India used to believe in non-alignment; in other words, it did not favour any group, which has changed over the years. India has become a part of various groups of countries like BRICS. Israel has always been a capitalist economy, and its economic activities flourished quickly.

## Impact of War on International Trade

The ongoing conflict between the Palestinian terrorist organization and Israel will result in a cessation of commerce by Israel with several nations. In Israel, all residents receive comprehensive training to provide them with the necessary skills to respond to conflicts and wars effectively. Consequently, in the event of a breakdown in security, the populace can be mobilized to participate in warfare. Due to that, overall trade was affected during that period. It certainly affects Israel's economic growth. Thereby ultimately affecting the country's imports and exports. The ongoing war may result in a decline in trade between India and Israel (Chatterjee & Singhal, 2023). The current battle between Hamas and Israel is anticipated to have implications for India's aspirations to assume a more prominent position in the realm of global trade. The potential



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[1]<https://pib.gov.in/PressReleasePage.aspx?PRID=2034949>



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Deepika Gupta is a Ph.D. Management research scholar at IIFT Delhi having research interest in Finance

(The views expressed here are authors own views only)



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(The views expressed here are authors own views only)

## Navigating Training and Development in a VUCA World: Strategies for Organizational Resilience and Agility

### Introduction

This article discusses the necessity of trained employees for a VUCA world. It focuses on the strategies an organization should embrace for resilience and agility. Traditional approaches to workforce preparation are insufficient when technological improvements quicken, and market factors change. In an environment of constant upheaval, organizations must embrace creative tactics to survive and thrive amid continuous disruption.

Organizations recently have been dealing with major and unanticipated events like trade conflicts, the COVID-19 pandemic, financial crises, and geopolitics, all of which have profoundly affected society and the global economy (Bennett & Lemoine, 2014; Baran & Woznyj, 2020; El Hathat et al., 2023).

The acronym VUCA, which stands for volatility, uncertainty, complexity, and ambiguity, is being used more often by academics and practitioners to characterize these dynamic environmental changes (Bennett & Lemoine, 2014). The term VUCA refers to the changing external environment that affects company operations directly or indirectly. The demands of a volatile, uncertain, and personalized workplace necessitate that people acquire new skills and knowledge. (Nowacka & Rzemieniak, 2021). If they are unable to do so, they may face a variety of difficulties, such as a stagnating career or a reduced capacity to adapt well to quickly changing surroundings (Kim et al., 2024).

Before diving into the strategies for organizational resilience and agility we must understand the concept of Human Capital Theory. The idea of human capital theory highlights the significance of human resources (HR), including their talents, knowledge, and skills related to their jobs, as well as their role in promoting productivity and economic growth (Becker, 1964).

Within an enterprise, the cumulative knowledge, skills, experience, and talents held by the staff are referred to as "human capital."

It is frequently regarded as an intangible asset that may be enhanced, invested in, and developed to provide long-term gains. While discussing human capital theory about employee competencies, it is important to look at how each employee's unique set of talents and abilities affect the overall performance and competitiveness of the company. A set of behaviours known as competencies are essential for attaining certain goals and objectives (Bartram, 2005).

Figure 1: Delving into VUCA World



Source: Created using MetaAI

As the Human capital theory supports development of human resources, many authors have identified learning and development in the VUCA world as an important topic for the organizations thriving for excellence in their operations. The VUCA-ready employees are the need of the hour. In this article, we will discuss two recent and relevant research studies. Both (Shet, 2024) and (Garavan et al., 2024) have given us important insights into the topic. For an employee to successfully navigate through VUCA issues, Shet (2024) described ten critical talents that are divided into four categories: cognitive, analytical, cross-cultural, and personal effectiveness. According to the VUCA framework, the following abilities are classified as cognitive: personal ambidexterity, agile attitude, and cognitive flexibility. These cognitive abilities are essential for people to adapt, make choices, and deal with the difficulties and complexity of a volatile, uncertain, and complicated environment.

The two analytical skills in the VUCA framework for creating a workforce prepared for VUCA environments are creativity and complex problem-solving. These analytical skills are necessary for people to think critically, come up with creative ideas, and handle challenging situations in a volatile and uncertain world. The VUCA framework's cross-cultural competencies for developing a workforce prepared for change are cross-cultural intelligence and cross-cultural collaboration. These cross-cultural skills are necessary in today's more globalized and linked world to interact, communicate, and collaborate with people from diverse cultural origins. Adaptive attitude, ongoing learning, and personal resilience are categorized as personal effectiveness in the VUCA paradigm for developing a workforce ready for volatility. These personal effectiveness skills are critical in a volatile, unpredictable, and complex (VUCA) workplace because they enable people to manage stress, adapt to change, and continue learning and developing.

Rapid changes in markets, sectors, and technology define the VUCA world, making it more crucial than ever to pick up new skills and adopt fresh perspectives and styles. In light of this, workers who lack flexibility and an agile mentality run the danger of becoming obsolete in such a setting. They can find it difficult to make quick adjustments and stay relevant in their fields of work or businesses. Complex problems abound in VUCA contexts, necessitating creative solutions. To promote growth and competitive advantage, the ten abilities found in this study are essential. These include the ability to solve difficult problems creatively, resilience on a personal level, ongoing learning, agile thinking, an adaptable mindset, cognitive flexibility, personal ambidexterity, cross-cultural cooperation, and cross-cultural intelligence. Thus, to stay relevant in the VUCA environment, both the company and the employee must learn these abilities. As a result, I support the creation of an extensive range of worker competencies that are appropriate for the VUCA period.

VUCA's abilities contribute to a positive learning

attitude by fostering resilience, flexibility, and a dedication to lifelong learning. People with these competencies are inclined to welcome change, maintain motivation in the face of obstacles, and view education as a continuous process of personal development. These skills help people work together more effectively as they make them more proactive and capable learners. Additionally, by encouraging cognitive flexibility, agility, and an optimistic outlook on change, VUCA abilities increase self-confidence in learning. These qualities support people in developing into more proactive, resilient, and adaptive learners with a growth attitude and a firm conviction in their ability to learn well in challenging and uncertain situations.

**Figure 2: Analytical skills in the VUCA Framework**



Source: Created using MetaAI

Garavan et al. (2024) proposes a new paradigm for learning and development (L&D) under highly dynamic VUCA settings. It highlights the significance of sustainability and its consequences on individuals, organizations, and society at large. It highlights the need for L&D to settle disputes, focus on long-term effects, and offer metrics that demonstrate the value of human development at various sizes. The framework identifies seven crucial elements for a strategic sustainability L&D function and professional position that are appropriate for unstable and unpredictable environments. The following are the seven essential components that authors discuss for a strategic sustainability L&D function in extremely volatile VUCA contexts:

First, keep an eye out for any changes in the VUCA environment by constantly scanning your surroundings and taking proactive steps to address them. To realign its focus, the learning and development function has to actively observe and assess external elements in the macro environment. Gathering dynamic data, detecting shifts in the VUCA environment, and anticipating and addressing new challenges and trends are all necessary for this process. The ability to sense external cues allows the learning and development function to adjust to highly dynamic VUCA environments with effectiveness, predict changes, and stay ahead of the curve. In a dynamic environment, this skill is crucial for organizations to stay sustainable and competitive.

Second, a strategic alignment of learning and development (L&D) entails constant monitoring to make sure that L&D procedures are compliant with the larger macro environment. To achieve this alignment, L&D activities must be integrated with employee development requirements, organizational sustainability goals, and societal impact considerations. Strategic alignment of learning and development (L&D) with external circumstances and business objectives can improve an organization's ability to adapt to changing conditions and foster long-term success. Proactively interacting with upper management, influencing decision-making from below, and showcasing the importance of learning and development in addressing macro-environmental changes are further components of this strategic alignment.

Third, creating agile learning and development (L&D) processes involves developing flexible and adaptive strategies to respond effectively to uncertainties and rapid changes in highly dynamic VUCA (volatile, uncertain, complex, ambiguous) environments. This includes implementing practices that enable quick adjustments to learning interventions, fostering adaptability, and enhancing the capacity to meet evolving needs. Training and development activities may be delivered quickly and effectively by L&D by implementing agile frameworks and concepts. Additionally, it entails

coordinating L&D procedures with organizational agility to guarantee that L&D enhances the organization's total resilience and adaptability.

Emphasizing the importance of quick responses to environmental changes, crisis management, and aligning practices with new realities are key components of creating agile L&D processes. Fourth, the need to launch new learning and development (L&D) initiatives that are in line with the changing VUCA environment is emphasized by L&D practices. Promoting sustainability at the human, organizational, and social levels is the main goal of these activities. One of the most important things is to put plans into place that will help the organization achieve its long-term financial, ecological, and social goals. These procedures also seek to achieve a balance between developing and using human resources, cultivating regenerative connections with stakeholders, and accounting for any unfavourable comments or outcomes. Organizations may prioritize continual learning and development, increase their agility, and support sustainable growth by implementing these components into their L&D strategies.

Fifth, it emphasizes how crucial values and behaviours are in directing learning and development (L&D) professionals in volatile, uncertain, and complex environments. It highlights how crucial it is for professionals to make strategic decisions, cultivate a sustainable mindset, support justice and fairness in relationships, and strike a balance between the requirements of internal and external stakeholders. By modeling these values and practices, L&D professionals may increase their effectiveness, gain the trust of stakeholders, provide outcomes that last, and effectively navigate the challenges of unstable and unpredictable environments. Sixth, it highlights how decision-making abilities affect learning and development (L&D) professionals in volatile, uncertain, and context-driven environments. It covers the significance of managing conflicts when putting sustainable methods into reality, considering both short- and long-term viewpoints, negotiating ambiguity, including many stakeholders in decision-making processes, and giving sustainable L&D

practices top priority. L&D professionals may effectively negotiate complicated situations, lead strategic initiatives, and support sustainable development in dynamic organisations by incorporating these factors into decision-making.

The seventh is using strategic thinking in VUCA environments for learning and development (L&D) professionals. It highlights how crucial it is for L&D specialists to build cognitive strategies to find novel and creative solutions to unusual challenges. Innovative approaches are used in strategic thinking to create new L&D procedures and solutions. Additionally, the argument notes that L&D professionals frequently concentrate on tactical and operational issues, suggesting the necessity for improving skills in strategic thinking. Developing strategic thinking skills is known to depend heavily on learning agility.

By promoting strategic thinking, L&D experts may make a substantial contribution in highly dynamic VUCA situations and generate innovative solutions to organisational challenges. The research also looks at competencies, adaptability, training effectiveness, and how technology may help the L&D department be more agile in unpredictable and volatile circumstances. Employees in such circumstances need to be competent in a number of areas, such as cognitive flexibility, analytical abilities, cross-cultural intelligence, and personal effectiveness, in order to not only survive but also thrive. This emphasizes how important competencies are in very dynamic VUCA environments. Additionally, the paper discusses the significance of supporting competency development for all employee categories, including those with non-standard contracts, to ensure sustainability and competitiveness in unpredictable and uncertain times. The author talks about how training efficacy affects workers' job happiness and lowers their inclinations to leave.

To improve an organization's sustainability and competitiveness in volatile and uncertain times, the author further emphasized the necessity of offering chances for competency development to all employee categories, irrespective of the nature of

their contracts. It emphasizes how important training programs are in providing workers with the know-how to successfully navigate dynamic and unpredictable environments. The research also emphasizes the vital role that flexibility plays as a competence that allows workers to make good use of training in challenging work environments, like the COVID-19 epidemic. The study emphasizes the usefulness of flexibility in facilitating employees' navigation of challenging and unpredictable situations and demonstrates how it improves the transfer of training to the workplace. The study also emphasizes the interaction of variables including motivation, social support, and flexibility in encouraging the use of training in demanding work contexts. It also discusses how technology may increase the process of learning and development of flexibility, allowing for quicker learning interventions at critical junctures. It highlights possible problems and poses important queries regarding the application of technology to training and development. These disputes stem from worries about data collection, how workers feel about being watched, and the potential loss of social relationships in schools with high computer use. The study concludes that while technology can be helpful by making learning possibilities more flexible and accessible, there may also be disadvantages that need to be carefully evaluated to guarantee successful and ongoing skill development. The study also looks at how artificial intelligence (AI) may be used to provide learning and development (L&D) solutions, noting that AI can be used by the L&D department to maximize employee possibilities for CPD.

The VUCA world is giving inevitable challenges to organizations every day. Unequivocally, the responsibilities of learning and development function of the organization has increased. The organizations should focus on developing training programme which can develop the competencies to combat with the VUCA world with resilience and agility. Also, it should be important that employees should develop a keen interest in learning new things. Only the training programs are insufficient due to their limited capacity. Other reasons are also there such as scarce

funds, focus on primary operations of the organization, and unavailability of good resources and methods for developing such learning and development programs. These training programs may or may not make the daily tasks of the employee easier or more convenient, however, it can inculcate resilience and agility in an employee. An organization having such employees will exhibit the characteristics of being resilient and agile. It is the current need of organizations to develop such training programs. Those who understand are benefitted by it.

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## Export Restrictions on Indian Agriculture - A Boon or Bane?

### Introduction

India, the world's most populous nation exceeding 1.4 billion people, faces a critical domestic imperative: ensuring food security for its vast population. Simultaneously, as the 11th largest exporter of agricultural products globally, India holds a sizable influence in enhancing international food accessibility and availability. Cereals, crucial staples for a substantial segment of the global populace, form a key portion of India's agricultural exports. These exports play a pivotal role in securing food supplies for importing nations such as Bangladesh, Iran, Saudi Arabia, China, and the United Arab Emirates [1]. India's dual role thus involves meeting domestic food demands while contributing significantly to the global food supply chain.

Figure 1: Pictorial representation of agricultural exports



Source: <https://eng.ruralvoice.in/national/india-performs-well-in-agri-processed-food-exports-increased-by-9-per-cent.html>

In 2018, the Indian government initiated a series of agricultural export policies designed to enhance the export of agricultural commodities, thereby increasing foreign exchange earnings and providing benefits to producers and traders. By 2022, these policies had borne considerable fruit, with India achieving an impressive \$63 billion in agricultural export revenues. Despite these achievements, India's export policies have been intermittently characterized by imposing restrictions on essential foodstuffs such as rice, wheat, and onions. Critics argue that such restrictive measures could potentially undermine India's standing as a leading developing nation in global agricultural trade.

Moreover, there is an argument to be made that India's export bans might be perceived as irresponsible, particularly if they are motivated not solely by considerations of domestic food security, but by political factors. In the lead-up to the March 2024 elections, there appears to be a significant impetus to placate the urban middle class by addressing escalating food prices. However, while open markets indisputably fuel economic growth, strategic limitations on the export of agricultural products can yield numerous advantages, especially in the face of global volatility and domestic vulnerabilities. India's population, exceeding one billion, heavily relies on a stable food supply. Export restrictions on essential food items such as rice, wheat, and onions are crucial for managing domestic prices, particularly during periods of global shortages, natural disasters, or seasonal fluctuations. These measures can prevent panic buying, hoarding, and inflationary spirals, which disproportionately affect vulnerable populations.

Beyond price stabilization, export restrictions serve as a safety net, ensuring sufficient food reserves for India's growing population. This is particularly critical given the unpredictable weather patterns, climate change concerns, and potential disruptions in global food supply chains. The delicate balance between domestic demand and global market forces underscores the precarious nature of India's food security. During global food shortages or natural disasters, export restrictions can act as a buffer to prevent sudden spikes in domestic prices of essential food items like rice, wheat, onions, and pulses. This article aims to elucidate the underlying compulsion of the Indian government to impose restrictions on agricultural products.

### Ensuring Domestic Supply and Curbing Price Volatility

A pertinent example of India's strategic export limitations is the wheat export ban imposed on May 13, 2022, in response to the Ukraine-Russia conflict. The Indian government implemented this ban to add-

-ress international price volatility (Martin & Anderson, 2012), secure domestic food supplies (Abbott, 2012), and protect farmers' incomes. Despite the ban, wheat exports doubled between April and August 2022 compared to the same period in 2021, according to data from the Ministry of Commerce and Industry. This paradoxical increase is attributed to pre-existing contracts and the global demand surge caused by the Russia-Ukraine war, which affected wheat supplies.

**Figure 2: Export Restrictions hauling India's Agricultural Exports**

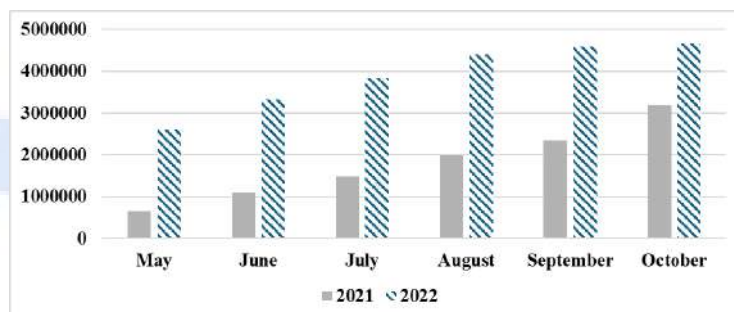


Source: <https://knnindia.co.in/news/newsdetails/sectors/exports-restrictions-to-drag-indias-agricultural-exports>

India's wheat exports from May to October 2022 amounted to 234 lakh metric tonnes (MT), a noteworthy rise from 108 lakh MT in the same period the previous year (Figure 3), after the imposition of export prohibition, while this export restriction excluded consignments registered before May 13 and specific requests from other nations to address their food security needs. The remarkable increase in demand came from East Asian countries, particularly South Korea, which had not imported Indian wheat for the past six years. Between April and August 2022, South Korea emerged as a major buyer, importing 5.04 lakh MT of Indian wheat [2]. This shift underscores India's enhanced role in the global wheat market amidst the supply disruptions caused by the ongoing conflict and also reflects the necessity of imposing export restrictions to ensure domestic supply and food security in the nation. Considering this, despite non-basmati white rice prohibition, specific quantities are allowed for export to food-scarce countries to support international markets such as

Nepal, Cameroon, Malaysia, the Philippines, Seychelles, Core d'Ivoire, the Republic of Guinea, UAE, Bhutan, Singapore, and Mauritius. In FY 2022-23, India exported 17.8 million tonnes of non-basmati rice and 4.6 million tonnes of basmati rice, including 7.8-8 million tonnes of parboiled rice.

**Figure 3: Export of Wheat in 2021 Vs 2022**



Source: Compiled by authors from Directorate General of Commercial Intelligence and Statistics (DGCIS) database

### Fostering Domestic Processing and Downstream Industry Promotion

The Indian food and beverage packaged industry is experiencing extensive growth, with the market size projected to increase from \$33.7 billion in 2023 to \$46.3 billion by 2028 [3]. Despite its potential, India's agricultural sector often grapples with low-value addition; exporting raw agricultural products typically yields lower returns compared to processed and value-added items. By restricting raw material exports, the Indian government aims to encourage domestic processing industries, which in turn create jobs, boost rural economies, and promote technological advancements in the agricultural sector (Dahiya et al., 2023). For Instance, India's sugar industry, being the world's largest producer of sugar and the second largest exporter after Brazil, India imposes restrictions on sugar exports. These measures are intended to encourage domestic sugar mills to refine and export value-added products such as confectionery and biofuels. In line with this policy, the Directorate General of Foreign Trade (DGFT) extended the restrictions on the export of various types of sugar (raw, white, refined, and organic) beyond October 31, 2023, vide notification No. 36/2023 dated October 18, 2023, under HS Codes 1701 14 90 and 1701 99 90 [4]. This decision underscores the government's commitment to priori-

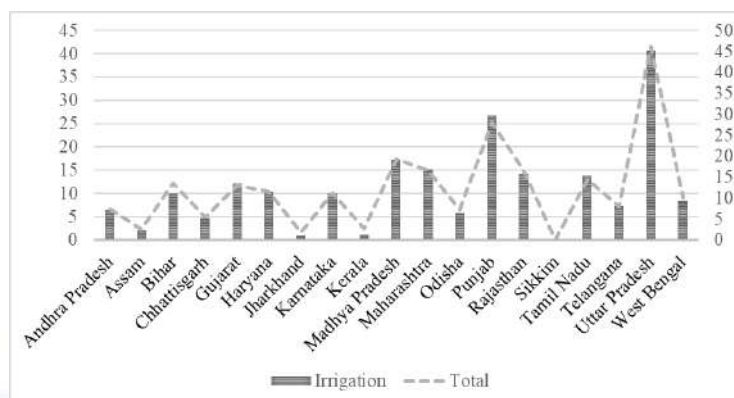
-zing the interests of its 1.4 billion domestic consumers by maintaining affordable sugar prices amidst global inflation, evidenced by an average annual inflation rate of 2% in retail sugar prices over the past decade. These measures prevent hoarding and ensure a balanced and fair sugar market. Additionally, the sugar export policy supports ethanol production, diverting 43 lakh metric tonnes (LMT) of sugar for an estimated revenue of ₹24,000 crores. This policy also aids in the timely clearing of cane dues, which have reached an all-time low.

Overall, India's approach to restricting raw agricultural exports and promoting domestic processing not only stabilizes domestic markets but also fosters economic growth and technological progress within the agricultural sector.

### Addressing Environmental Concerns

India is ominously affected by climate change, leading to escalating challenges in its agricultural sector, particularly concerning water scarcity, soil degradation, and unsustainable farming practices (Bozzola et al., 2023). Approximately 144 million hectares of land in India are impacted by erosion due to wind or water. Agriculture accounts for around 70% of the world's surface water usage for irrigation, with a two-fold increase in irrigated crops over the past 50 years, resulting in a two to three-fold increase in crop yield. Consequently, water scarcity critically impacts crop production, especially in regions with insufficient rainfall. As per 2022 assessments, groundwater extraction for irrigation stands at a staggering 208.49 billion cubic meters (Figure 4), coupled with the fact that key states in India are utilizing the maximum amount of water in irrigation. According to FAO, agriculture has utilized over 90% of India's water withdrawals since 2000, which paints a concerning picture. The average annual utilizable surface water resource of Indian basins is 690 billion cubic meters, which also caters to irrigation needs. The agricultural demand for stored water in India is already high and is projected to rise by 56% by 2050 (Islam, S. M. F., & Karim, Z.,2019).

Figure 4: Utilisation of Groundwater in the Agriculture Sector



Source: Compiled by authors from Dynamic Ground Water Resources Assessment,2022

This large water usage is attributed to the deficiency of advanced technology and the lack of knowledge among farmers about sustainable agricultural methods, combined with the increased production driven by higher exports. As a result, export restrictions on water-intensive crops such as rice, wheat, sugarcane, and cotton, or environmentally harmful agricultural products, can be instrumental in promoting sustainable farming, conserving water and soil fertility, and protecting biodiversity. Uncontrolled exports of certain agricultural products can lead to environmental degradation and unsustainable resource depletion (Anderson, 2022).

In 2019, India imposed a ban on exporting basmati rice seedlings to protect this precious variety from unauthorized cultivation in water-stressed regions. This policy aims to safeguard the unique characteristics of basmati rice and promote water-efficient farming practices. Similarly, recent concerns about the over-extraction of groundwater for sugarcane cultivation have prompted discussions on potential restrictions on sugar exports. These measures align with India's commitment to water conservation and its vision for a climate-resilient agricultural sector.

### Protecting Livelihoods And Rural Development

Agriculture is highly susceptible to external factors such as floods, droughts, and phenomena like El Niño. Consequently, volatile agricultural markets can leave farmers vulnerable to price crashes and exploitation by intermediaries. Farmers may feel compelled to cultivate specific crops to meet international market demands, often at the expense of

crop diversification and sustainability. Therefore, export restrictions can serve as a buffer, ensuring fair prices for farmers and promoting sustainable agricultural practices. However, it's important to acknowledge that restrictions can also limit access to higher international prices. Complementary approaches, such as improved storage facilities, insurance programs, and investments in rural infrastructure, are crucial for supporting farmers and promoting long-term rural development. India's vast agricultural sector is home to millions of farmers who depend on fair and stable prices for their produce. According to Statista, in 2021, 43.96% of the population relied on agriculture. Uncontrolled exports can indeed lead to price fluctuations, impacting farmer income. The combination of well-designed export policies and robust support structures can provide a safety net for farmers and foster a more resilient agricultural sector.

### **Conclusion**

The debate surrounding export restrictions on Indian agriculture is a complex and multifaceted one, filled with potential benefits and drawbacks. The article has explored the arguments for and against such restrictions, focusing on key areas such as ensuring domestic supply and price stability, promoting domestic processing and downstream industries, addressing environmental concerns, and protecting livelihoods and rural development. It is evident that a one-size-fits-all approach is not suitable. Rather, a nuanced and balanced approach is necessary to harness the benefits while mitigating the drawbacks of export restrictions. This conclusion will delve into the need for a balanced approach, the necessity for policy interventions for a sustainable future, supporting farmers through change, enhancing rural infrastructure, strengthening market mechanisms, and the way forward for Indian agriculture.

Export restrictions, when imposed indiscriminately, can lead to unintended consequences such as reduced farmer income due to limited access to higher international prices, emergence of black markets, and potential trade disputes with partner

nations. However, the potential benefits of export restrictions, particularly for water-intensive crops or in times of scarcity, cannot be ignored. The key lies in crafting a well-designed policy framework that considers both long-term goals and immediate needs. To ensure a sustainable future, policy interventions must be strategically implemented. Targeted measures should focus on water-intensive crops like rice, sugarcane, or cotton, where environmental concerns or domestic food security are at stake. These decisions should be based on robust data and scientific analysis of crop yields, water availability, and market trends. Transparency and predictability in implementing export restrictions are essential to avoid market uncertainty and manipulation. Moreover, export restrictions need to comply with World Trade Organization (WTO) regulations to minimize trade disputes and maintain international trade relations.

Moreover, enhancing rural infrastructure is another critical component of a balanced approach. Building a network of efficient cold storage facilities across the country can minimize post-harvest losses and enable farmers to hold onto their produce until market prices are favourable. Improved transportation infrastructure will connect farmers with local and international markets more efficiently, reducing dependence on intermediaries and maximizing profit margins. Promoting the establishment of processing units and downstream industries in rural areas can create new job opportunities and encourage diversification away from raw material exports.

Furthermore, strengthening market mechanisms is equally important. Providing farmers with real-time market information through market information systems can help them make informed decisions regarding planting, storage, and sales, maximizing their earning potential. Strengthening Farmer Producer Organizations (FPOs) can empower farmers by providing collective bargaining power, access to credit and markets, and better negotiating positions for their produce. Promoting crop insurance schemes and other risk management tools can provide financial security to farmers in times of crop failure or market fluctuations.

The future of Indian agriculture rests in its ability to strike a delicate balance. By strategically implementing export restrictions when necessary, while simultaneously investing in sustainable practices, market infrastructure, and farmer support mechanisms, India can leverage its vast agricultural potential to ensure food security, promote rural development, and become a global leader in sustainable agriculture. Continuous monitoring and evaluation of policy interventions are essential to assess the effectiveness of export restrictions and adjust them as needed based on their impact on domestic supply, price stability, farmer income, and international trade relations. This data-driven approach will ensure that India reaps the benefits of well-designed export restrictions while mitigating unintended consequences.

Innovation and collaboration are key to success in this endeavour. Investing in research and development of drought-resistant crop varieties, climate-smart agricultural practices, and efficient water management systems is crucial. Furthermore, fostering a collaborative approach involving farmers, policymakers, industry leaders, and research institutions will ensure a holistic and sustainable vision for Indian agriculture. By prioritising long-term sustainability, farmer welfare, and responsible trade practices, India can leverage export restrictions as one tool within a broader strategy to build a future-proof and thriving agricultural sector.

In conclusion, the debate surrounding export restrictions on Indian agriculture is not about a simple "boon or bane." It's about navigating a complex landscape with careful planning, targeted interventions, and continuous adaptation. Export restrictions, when implemented strategically and supported by robust policies and infrastructure, can serve as a buffer against price volatility, ensure fair prices for farmers, and promote sustainable agricultural practices. They can also drive long-term rural development and employment for millions of agricultural households by building storage facilities, transportation networks, and pro-

-cessing plants. However, these measures must be balanced with the need to protect farmer incomes, maintain market efficiency, and adhere to international trade regulations. A strategic and holistic policy approach, underpinned by dynamic export policies, sustainable farming incentives, infrastructure investment, and robust support programs, can harness the potential of export restrictions to drive rural development and sustainable growth in the agricultural sector. By adopting such a comprehensive framework, India can navigate the intricate dynamics of agricultural trade and achieve a balanced and prosperous future for its farmers and rural communities.

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[4]<https://www.dgft.gov.in/CP/?opt=notification>

### Notes

[1]<https://www.trademap.org/>

[2]<https://theprint.in/economy/russia-ukraine-war-prior-orders-new-importers-why-indias-wheat-exports-doubled-despite-ban/1183888/>

[3][https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Food%20Processing%20Ingredients%20Annual\\_New%20Delhi\\_India\\_IN2024-0014.pdf](https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Food%20Processing%20Ingredients%20Annual_New%20Delhi_India_IN2024-0014.pdf)



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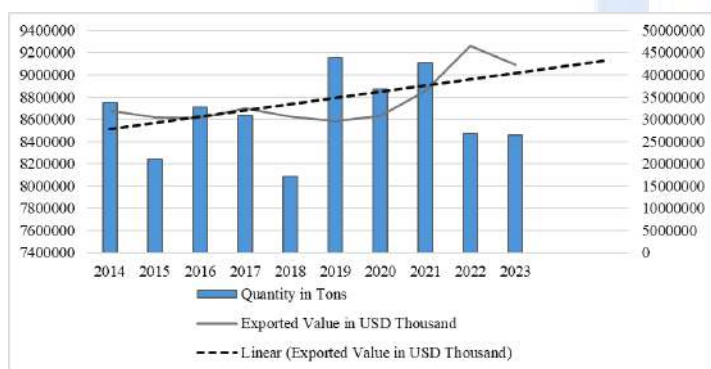
(The views expressed here are authors own views only)

## India's Coffee Industry: An Analysis of Export Dynamics

### Introduction

Coffee (*Coffea arabica*) is one of the most significant commodities in global trade, second only to petroleum products (Murthy & Madhava Naidu, 2012). The value of international coffee trade has surged, climbing from \$32 billion in 2014 to \$46 billion in 2022, reflecting its growing potential as a major source of foreign exchange (Figure 1). Even amid global disruptions from 2019 to 2021, the steady rise in coffee trade highlights the commodity's resilience and increasing global demand. Beyond being a beverage, coffee has embedded itself into contemporary life, shaping social interactions, daily routines, and cultural practices worldwide. Brazil, Vietnam, and Colombia lead in coffee exports, while Brazil, Switzerland, and Germany dominate in foreign exchange earnings from coffee. India, the seventh-largest coffee producer, saw a 43% surge in coffee exports in early 2024, driven by rising global prices [1]. Despite its significant production, India ranks eleventh in exports, revealing untapped growth potential.

**Figure 1: Year-wise increase in the international trade value of coffee (value in USD Thousand)**

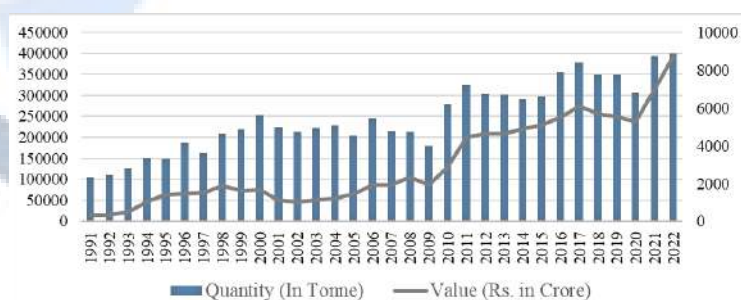


Source: Compiled by author based on the International Trade Map data

The history of coffee in India traces back to around 1600 AD when Baba Budan, an Indian Sufi saint, journeyed to Mecca. While passing through Mocha, a Yemeni port famous for its coffee trade, Baba Budan discovered the refreshing beverage known as Qahwa. Enthralled by its taste, he smuggled seven coffee beans back to India by concealing them on his person, defying the strict

Arab regulations safeguarding their coffee monopoly. Upon his return to Chikmagalur (now Chikkamagaluru) in Karnataka, he planted these beans in his hermitage's courtyard, laying the foundation for coffee cultivation in India. The plants spread, eventually leading to the establishment of coffee cultivation in the Baba Budan Hills. The Indian coffee industry later faced challenges during the Great Depression, leading to the formation of the Coffee Cess Committee, which evolved into the Coffee Board of India, initially offering financial support to exporters and later managing the marketing of coffee during World War II (Bhattacharya, 2017).

**Figure 2: Indian Coffee Exports in the Past 30 Years**



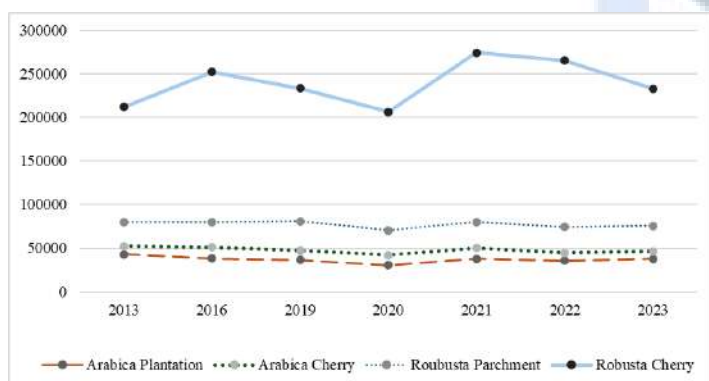
Source: Compiled by author based on the Coffee Board of India

After India's independence in 1947, coffee production was pooled centrally, but significant changes followed the 1991 economic liberalization. Post-1991, the government allowed coffee planters to market their produce directly, moving away from the centralized pool system and aligning with global trends (Naidu, 2018; Soujanya et al., 2023). Initially governed by a quota system under the International Coffee Organization in 1962, the market liberalized by 1991, ending the Coffee Board's export monopoly and empowering farmers. This shift, alongside India's diverse coffee varieties, has led to a surge in export value from ₹348 crore in 1991 to ₹8,723 crore in 2022 (Figure 2), underscoring coffee's significant economic contribution.

The global coffee industry revolves mainly around two species: *Coffea arabica*, known as Arabica, and *Coffea canephora*, or Robusta. Coffee trading happ-

-ens on two major exchanges: ICE (Intercontinental Exchange) for Arabica and LIFFE (London International Financial Futures Exchange) for Robusta (Soujanya et al., 2023). Commercial coffee cultivation started in 1840 under British rule in India, with plantations set up in South India's hilly regions. Initially, the focus was on Arabica, but a severe coffee leaf rust outbreak in the 1870s (Yirga, 2020) led many planters to switch to Robusta due to its more excellent disease resistance. From 2013 to 2024, Robusta Cherry consistently led export quantities, thanks to its resilience against pests, cost-effectiveness, and suitability for specific blends and instant coffee. Arabica Plantation exports declined from 2013 to 2020 before slightly recovering, while Arabica Cherry exports fluctuated, reflecting changing production and market conditions. Robusta Parchment exports remained stable, slightly increasing over the years (Figure 3).

Figure 3: Category-wise Export Of Coffee From India



Source: Compiled by author based on the Coffee Board of India database

The expansion of coffee production in India has paralleled the growth in Robusta cultivation areas, which are driven by rising demand. Robusta cultivation grew from 24,910 hectares in 1950-51 to 217,052 hectares by 2022-23, while Arabica expanded from 67,613 hectares to 215,476 hectares over the same period (Figure 4). Robusta production surged from 3,382 metric tons to 252,000 metric tons, and Arabica grew from 15,511 metric tons to 100,000 metric tons. This growth reflects the industry's strategic shift towards Robusta, a more resilient and higher-yielding variety, with Robusta cherries being exported to countries like Italy, Germany, and the UAE.

### Current Market Landscape

India cultivates coffee across more than 479,000 hectares [2], involving over 680,000 small-scale farmers [3]. Post-independence, the government promoted coffee cultivation in non-traditional areas, expanding into regions like Tamil Nadu's Nilgiris and Pulneys and later into Andhra Pradesh and Odisha. India grows 16 unique coffee varieties, primarily in the ecologically sensitive Western and Eastern Ghats. Karnataka leads production, contributing over 71%, followed by Kerala and Tamil Nadu. In 2024, India's coffee output exceeded 374,000 metric tons, with growth seen in areas like Andhra Pradesh's Araku Valley.

The Coffee Board of India classifies coffee-growing regions into three main categories: traditional (Karnataka, Kerala, Tamil Nadu), non-traditional (Andhra Pradesh, Odisha), and the northeastern states. Among these, Karnataka is the most dominant, with Chikmagalur (Chikmagaluru) and Coorg (Kodagu) as the leading contributors. Together with Hassan district, these areas in Karnataka produce over 71% of India's coffee, benefiting from ideal growing conditions. Chikmagalur (Chikmagaluru) produces a balanced mix of Arabica and Robusta, while Coorg focuses mainly on Robusta. Kerala, the second-largest coffee-producing state, contributes 21% to the national output, with Wayanad district being a significant Robusta producer. Tamil Nadu ranks third, producing 5% of India's coffee, with the Nilgiris and Pulney regions known for their high-quality Arabica beans. Approximately 70% of India's coffee is exported, while domestic consumption, though low at around 100 grams per capita, has grown at a CAGR of 5.2%, reaching 125,000 tonnes in 2022. This growth is driven by increasing awareness of coffee's health benefits, such as its antioxidant properties and potential to enhance mental performance, making it more popular among younger consumers.

Tamil Nadu and Karnataka in southern India remain the heart of coffee cultivation, with a rich tradition of South Indian filter coffee—a strong brew typically mixed with milk and sugar. The rise of international coffee chains and local cafes in major cities has fueled

a "cafe culture," boosting domestic coffee demand. This growth signals potential for increased consumption in India but also suggests a reduced surplus for export. Coffee exports remain vital for farmers' income. Additionally, global Robusta prices have hit a 30-year high due to supply challenges in Vietnam and Brazil, benefiting the Indian coffee sector. This surge led to a 20% increase in Indian exporters' per unit realization, reaching ₹2.7 lakh per tonne in the 2023-24 fiscal year.

In early 2024, Indian farmgate prices for Robusta coffee exceeded those of Arabica, mirroring global trends. Robusta parchment prices ranged from ₹14,000 to ₹14,500 per 50 kg bag, while Robusta cherry, India's most produced variety, was priced at ₹8,500 to ₹8,950. While Robusta dominates Indian coffee production, Arabica, known for its mild flavour, remains significant, with over one million 60-kilogram bags produced in the 2022/2023 season. Arabica cherry and parchment prices were around ₹8,000 to ₹8,300 and ₹13,900 to ₹14,300 per bag, respectively.

### Challenges

The Indian coffee sector, while full of opportunities, faces several challenges. It is highly labour-intensive due to cultivation in forested areas under natural shade, with manual harvesting and sun-drying methods. This unique approach employs around 10 lakh individuals, half working directly on plantations. Further, climate change, including erratic rainfall, significantly affects yields. Unseasonal November rains, for instance, have disrupted the sun-drying process, delaying coffee picking and compromising quality.

Additionally, wild animals like elephants also threaten crops. Rising temperatures and insufficient pre-monsoon rains threaten the 2024-25 crop, creating favourable conditions for white stem borer pests, which thrive in dry weather. As a result, India's Arabica cultivation is projected to decline by 1%, with yields dropping 3% to 402 kg per hectare. The 2024-25 season is expected to produce 6 million 60-kg bags, with Arabica increasing by

10% and Robusta at 4.6 million bags. These challenges highlight the need for adaptive strategies to protect coffee production from climatic variability.

### Price Fluctuation

Robusta coffee, prized for its bold flavour and high caffeine content, is a major crop in India, with strong international demand providing significant income for farmers. Despite rising prices, Indian coffee exporters face a challenging situation. Even as Robusta prices reach record highs, many growers hesitate to release their crops, limiting availability. This scarcity reduces new export orders and potentially pushes buyers to seek alternative sources. Nevertheless, India's coffee exports hit a record high of over \$1.26 billion by March 2024, primarily due to the surge in Robusta prices. The strong export demand is driven by short covering in Robusta futures and tight supply. Growers are strategically releasing their stock in small amounts to maximize profits. Price expectations, inventory management, and increasing domestic demand influence this limited availability for export. Thus, the current dynamics in the Indian Robusta coffee market present a complex situation marked by high prices, scarcity, and strong export demand, highlighting the need for adaptive strategies to manage these evolving conditions.

### Conclusion

The substantial 386.8% rise in export value from 2003 to 2022, compared to a modest 24.2% growth in production, highlights a strategic focus on higher-value exports. However, challenges like the dominance of Robusta (71.6% in 2022-2023), climate change and rising temperature, threat of pest and animal attacks need addressing. To tackle these issues and leverage opportunities, key recommendations include investing 2% of sector GDP in R&D for climate-resilient varieties and boosting productivity by 25% through mechanization. Additionally, strategies such as enhancing specialty coffee exports from 5% to 15% by 2028 and establishing direct trade relationships to uplift farmer incomes by 20-25% are crucial. These combined efforts could elevate India's

global market share from 3.5% to 5% by 2030, potentially increasing export revenues by 50-60%.

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## Notes:

[1]<https://www.thehindubusinessline.com/economy/agri-business/h1-2024-coffee-exports-jump-43-to-926-million-on-higher-prices-volume/article68355444.ece#:~:text=India's%20coffee%20exports%20rose%2043,exports%20stood%20at%20%24647.76%20million.>

[2]<https://www.statista.com/statistics/977990/india-coffee-cultivated-area/>

[3]<https://www.statista.com/statistics/977843/coffee-plantations-daily-employment-india/>



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Siya Singh is a research intern at IIT Delhi with a keen interest in economics, finance, and global trade.

(The views expressed here are authors own views only)

## Shodh Jhalak (Research Glimpse)

Shodh Jhalak offers a brief overview of ongoing research work. At IIFT, Shodh Jhalak provides insights into studies on contemporary issues, helping to expand knowledge and demonstrate the ability to critically analyze and evaluate the topics. This creates a foundation for a well-informed understanding of the research issues being explored.

### Working Capital: Mitigating Overinvestment in Indian Manufacturing

#### Introduction

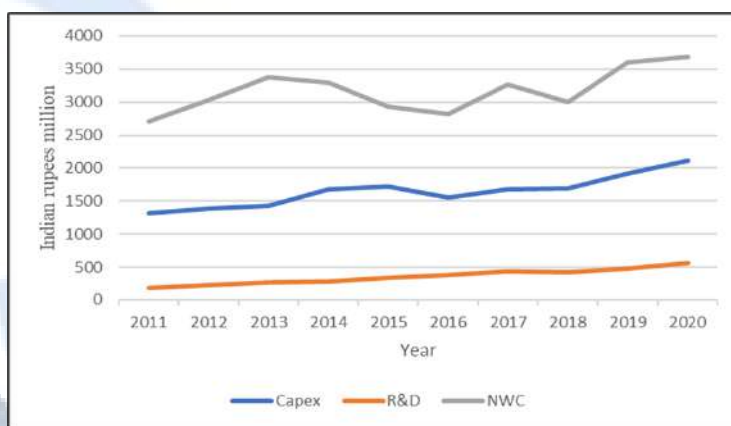
Working capital management (WCM) is a crucial aspect of corporate financial management, and involves balancing the levels of current assets, such as cash, inventories, and receivables, against current liabilities like payables and short-term debt. The objective of WCM is to manage the company's short-term assets and liabilities and to ensure operational efficiency and financial stability. Effective WCM is vital for maintaining liquidity, enabling a firm to meet its short-term obligations while optimizing its profitability. In an increasingly volatile economic environment marked by high capital costs and unpredictable market conditions, the importance of WCM cannot be overstated. It helps businesses survive and thrive by freeing up capital for long-term investments, reducing financing costs, and ultimately enhancing shareholder value. Overinvestment in working capital occurs when firms allocate excessive resources, beyond what is necessary for efficient operations, to current assets like inventory and accounts receivables. This can lead to significant opportunity costs and inefficiencies.

#### Present scenario of working capital investment in India

In today's globalized economy, WCM is particularly important in capital- and labor-intensive sectors like manufacturing. The importance of working capital in a manufacturing company's investment becomes clear through Figures 1 and 2. These figures demonstrate how different investment types of Indian manufacturing firms have evolved in absolute and relative terms. In terms of absolute values, the investment in working capital has exhibited fluctuations over time, reaching approximately 3600 million Indian rupees in 2020. However, in relative terms, working capital investment (WCI) for Indian manufacturing

firms is much higher than Capital Expenditure (CAPEX) and Research and Development (R&D). For the years 2011-2020, Figures 1 and 2 show high investments in working capital throughout the years.

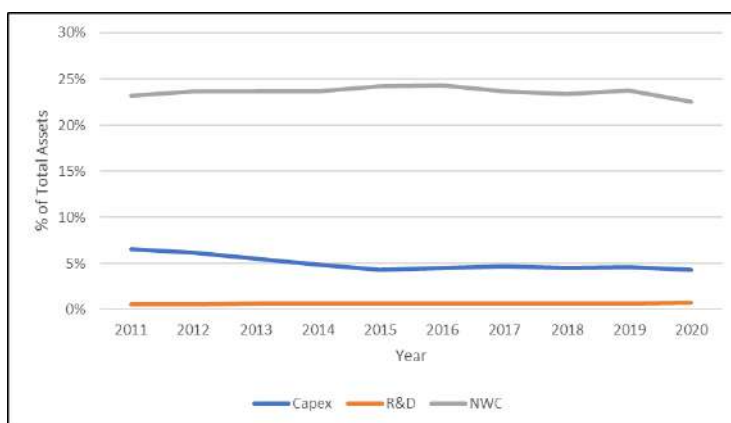
Figure 1: The temporal trend of a firm's investments



Source: Prowess IQ

Figure 1 depicts the temporal trend of a firm's investments measured in absolute terms, specifically in millions of rupees adjusted to the 2020 value. It showcases the total amount allocated by the firm towards Capital Expenditure (CAPEX), Net Working Capital (NWC), and Research and Development (R&D) across the years 2011 to 2020. NWC is calculated as the sum of inventories and receivables minus payables.

Figure 2: The longitudinal progression of a firm's investments



Source: Prowess IQ

Figure 2 illustrates the longitudinal progression of a firm's investments, including Capital Expenditure (CAPEX), Net Working Capital (NWC), and Research and Development (R&D), normalized by total assets, spanning from 2011 to 2020.

#### Aggregate values in total assets, sales, cash, NWC, and its components (by year)

Table 1 shows the average values for total assets, sales, cash holding, NWC, and its components (receivables, inventories, and payables). The last row of Table 1 shows the growth rate of each variable throughout ten years from 2011 to 2020. Both have experienced significant growth, with total assets growing at 10% and sales at 9%. This highlights the company's expansion in size and revenue-generating capacity. A negative growth rate of -1% indicates a reduction in cash reserves, which could be a concern for liquidity. NWC, Inventories, Receivables, and Payables have grown at rates between 6% and 7%, suggesting that while the company has increased its working capital components, it has also increased its obligations.

The rise in inventories and receivables may indicate overinvestment in working capital. While higher inventories can reduce stockouts and enhance customer satisfaction, they also tie up funds that could be used elsewhere. Similarly, increased receivables reflect more credit sales, which could lead to liquidity issues if not managed properly. The rise in payables suggests an extension of payment terms with suppliers, which can be a strategic move to manage cash flows but might also affect supplier relationships.

It is important to note that at the beginning of the sample period, firms holding cash related to NWC was about 47%. In comparison, in 2020, this proportion was reduced to 21.5%. Investment in NWC for Indian manufacturing firms has been given more importance, consistent with Ernst and Young's (2014) report.

Between 2011 and 2020, the yearly growth rate of each variable was positive except for cash, as there was a negative growth rate in cash holding. The negative growth in cash could be due to more money tied up in inventory, early payments to

suppliers, and late payments from customers.

This could be because Indian manufacturing firms can get better prices on inventory by buying in volume, and their production can be more efficient when they produce more inventory and achieve economies of scale. However, cash-flow shortfalls can easily wipe out these advantages. If firms end up short of cash, they may need to borrow money, which they will need to pay interest and finance charges. Moreover, if they become short on capital due to holding excess inventory, they cannot take advantage of opportunities requiring capital outlay.

**Table 1: Aggregate values by year**

Year	Total Assets	Sales	Cash	NWC	Inventories	Receivables	Payables
2010-11	20147	22593	1337	2825	3138	2248	2561
2011-12	22707	27687	1161	3536	3743	2982	3188
2012-13	24655	30336	1245	3919	3963	3206	3249
2013-14	27277	32288	1185	3854	4236	3370	3752
2014-15	29167	32883	957	3451	4059	3162	3770
2015-16	32260	30471	807	3117	3837	3066	3787
2016-17	35562	33340	776	3629	4595	3265	4231
2017-18	38907	36687	698	3529	4959	3688	5119
2018-19	43034	42960	724	4125	5497	3991	5363
2019-20	45748	39761	940	4364	5226	3811	4674
Growth Rate	10%	9%	-1%	6%	6%	7%	7%

Source: Compiled by authors

Note: The table reports yearly aggregate values for total assets, sales, cash holdings, net operating working capital (NWC), and its components. NWC corresponds to inventories plus receivables minus accounts payables. The sample contains listed manufacturing firms from the prowess IQ for the period 2011-2020.

The sample includes 8340 observations for 834 unique firms. All rupee values are in millions and adjusted to the 2012 rupee by the consumer price index. The last row displays the average annual growth rate of the corresponding variables.

Besides these time series and aggregate value representations, the significance of WCM for Indian manufacturing firms can be further underscored with tangible and real-world data. At the end of 2020, the Indian manufacturing firm's total investment in working capital (i.e., inventories plus receivables) amounted to ₹9.04 billion, which accounts for 23% of their total sales and above 20% of the book value of their assets. Almost 50% of this aggregate working capital has been financed by accounts payable (i.e., supplier credit), leading to an aggregate investment in NWC of ₹4.35 billion. These Indian manufacturing data are similar to a WCM report (Ernst and Young, 2014), devoted to the largest 500 companies as per revenue as listed in the BSE in the year (2012-2013). The report highlights that the unnecessary portion of NWC represents up to Rs 5.3 trillion or \$ 97 billion. This is equivalent to 12 percent of their aggregate sales. Companies often neglect the advantages of NWC as a potential source of cash to fund growth. In line with this description, the quantity of each component of working capital should be managed appropriately to optimize working capital. Excess NWC is unproductive and does not earn any cost of capital (Aktas et al., 2015). Therefore, it is perfectly reasonable for firm managers to strive for optimal working capital, maximizing firm value.

Effective working capital management enables companies to reduce reliance on external funding and increases financial flexibility. This significance of working capital optimization has increased with the onset of the pandemic. Covid-19 has resulted in considerable disruption in the supply chain, leading to numerous challenges in managing working capital. Focus on preserving cash in such unprecedented times has become paramount.

### Scope for improvement in WCM practices of Indian Manufacturing Firms

The opportunity cost of overinvesting in working capital is significant. Roshan and Chatnani (2023) state that resources that are tied up in inventory or receivables could be better utilized in corporate investment. By freeing up these resources, firms can enhance their competitive edge and contribute more robustly to the economy by investing these excess funds in corporate investment, driving innovation, expansion, and long-term growth. Corporate investment can take several forms, including:

**1. Research and Development (R&D):** Investing in R&D can lead to developing new products and technologies, fostering innovation, and giving firms a competitive advantage in the global market.

**2. Capacity Expansion:** By investing in new production facilities or upgrading existing ones, firms can increase their output, meet growing demand, and achieve economies of scale.

**3. Digital Transformation:** In an era where technology drives efficiency and productivity, investing in digital solutions can streamline operations, reduce costs, and improve overall performance.

**4. Marketing and Sales:** Enhanced marketing efforts can increase brand awareness, attract new customers, and boost sales, driving revenue growth.

**5. Employee Training and Development:** Investing in employee skills and knowledge can improve productivity, innovation, and job satisfaction, leading to better overall performance.

**6. Debt Reduction:** Paying down debts can reduce interest expenses and improve the firm's financial stability and creditworthiness.

**7. Sustainability Projects:** Investing in sustainable practices can reduce environmental impact, improve compliance with regulations, and enhance the company's reputation.

**8. Strategic Acquisitions or Partnerships:** Acquiring complementary businesses or forming strategic partnerships can provide access to new markets, technologies, and customer bases.

## Conclusion

There is immense scope and need for companies to improve their working capital practices, which can help improve profitability and efficiency across the organization. The current scenario of overinvestment in working capital among Indian manufacturing firms is a critical issue that demands attention. By recognizing the factors driving this trend and understanding the potential benefits of reallocating resources to corporate investment, firms can position themselves for tremendous success. The shift from excessive working capital to strategic investment promises enhanced firm performance, economic growth, and a more competitive manufacturing sector in India. Firms must adopt a more strategic approach to financial management, ensuring that resources are utilized to drive long-term growth and prosperity. There is scope for research in WCM practices of Indian firms considering the above discussions.

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Dr. Niti Nandini Chatnani, Professor, Finance & Head (International Collaboration & Capacity Development)

Dr. Niti Nandini Chatnani is Professor of Finance and Head (ICCD) at IIFT Delhi. She has more than 25 years of experience in the areas of Security Analysis & Portfolio Management, Commodity Trading & Price Risk Management, and Financial Management



Roshan, Research Scholar, Batch 2018

Roshan is a Ph.D. Management research scholar at IIFT Delhi having research interest in Finance

(The views expressed here are authors own views only)

## Samvad (Research Talk at IIFT)

Samvad in research involves the exchange of information, ideas, suggestions, and opinions to foster mutually beneficial relationships among stakeholders. At IIFT, Samvad serves as a platform to cultivate a spirit of dialogue and scholarly discussions among faculty, experts, and researchers, thereby creating a comprehensive and supportive research environment.

The Indian Institute of Foreign Trade (IIFT) is dedicated to fostering research skills and expanding the knowledge base of its research scholars. To achieve this, the institute periodically arranges special guest lectures featuring esteemed faculty members from both within the institute and external academic and industry experts. These sessions provide research scholars with valuable opportunities to engage with experienced professionals, gain diverse insights, and deepen their understanding of various research methodologies and industry practices.

Name	Profile	Topic
Prof. Abhijit Sharma	Professor, Huddersfield Business School, UK	Making a research contribution at Doctoral Level: Potential Benefits from Use of Quantile Methods in Applied Social Sciences
Dr. Arpita Joardar	Associate Professor, University of Massachusetts, Dartmouth	Liabilities and Benefits: Examining the Two Sides of the Foreignness Coin from Entrepreneurial Perspective
Prof. Arpan Kumar Kar	Professor of Information Systems, Indian Institute of Technology Delhi	Theory Building in Management with Big Data Driven Studies



Group Photograph with Prof. Abhijit Sharma



Group Photograph with Dr. Arpita Joardar



Group Photograph with Prof. Arpan Kumar Kar



Participants in a lecture by Prof. Arpan Kumar Kar

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### Five-day workshop on Time Series and Panel Data Analysis

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Five-day workshop on Time Series and Panel Data Analysis from 28th February 2024 to 3rd March 2024 was organized by the Research Division, IIFT under the direction of Dr. Preeti Tak, PD, Ph.D., and conducted by Dr. Miklesh Prasad Yadav, Assistant professor, IIFT, Kakinada. The main goal of the workshop was to familiarize the participants with the concepts of time series and panel data and various models used to analyze these data with hands on practice on R and gretl software.



Group Photograph of all the participants who attended the workshop

## Manthan (Peer-to-Peer Interaction)

Manthan involves deep contemplation and the pursuit of knowledge through peer interaction. At IIFT, Manthan allows peers to exchange experiences, reflect on their research journeys, and develop new insights. This interaction helps in shaping their research identities by fostering open and collaborative discussions.

By sharing diverse perspectives and experiences, research scholars at IIFT enhance their understanding of various research issues, methodologies and concepts. This collaborative environment encourages critical thinking, fosters innovative ideas, and provides emotional and intellectual support. Additionally, such interactions help in building a strong network of professional relationships, which can lead to future collaborations and opportunities. Ultimately, peer interactions play a crucial role in refining scholars' research skills and advancing their academic and professional growth.

Topic for Interaction (Session-wise)	Scholar's Name and Batch
Understanding Gamification as a Marketing Strategy" and "How to Conduct a Thematic Analysis Using Grounded Theory Approach	Ayushi Gupta, 2021
A Literature Review To Address Food Loss In The International Supply Chain Of G20 Countries: A 2050 Research Agenda	Aaqib Chaudhary, 2021
How to plan a synopsis?	Ayushi Chauhan, 2021
Analyzing impact of corporate governance index on working capital management through fractal functions	Deepika Gupta, 2021
Introduction to Scientometric Analysis	Vibhooti Mishra & Sushmeet Kaur, 2021



Aaqib Chaudhary, Batch 2021



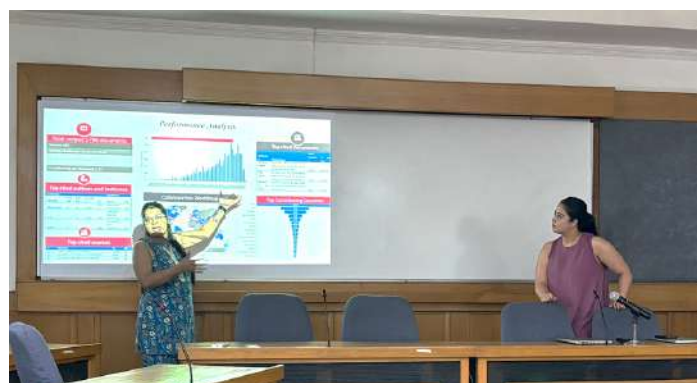
Ayushi Chauhan, Batch 2021



Deepika Gupta, Batch 2021



Ayushi Gupta, Batch 2021



Vibhooti Mishra & Sushmeet Kaur, Batch 2021

## Prakashan (Select Publications)

Prakashan means to communicate knowledge and disseminate scientific information to the public by conducting in-depth studies on relevant topics. At IIFT, Prakashan covers research articles, books, chapters, documents, and other items published in peer-reviewed journals, top-ranked international journals, and globally acclaimed international book publishing houses across different management fields by the faculty members for communicating messages to the research and reader community.

Arora, K., & Siddiqui, A. A. (2024). Exploring trade and technological linkages: evidence from India's sectoral GVC participation. *Transnational Corporations Review*, 16(1), 17–31. <https://doi.org/10.1080/19186444.2022.2041350>

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### **Conference Publications**

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Agarwal, N., Seth, N. (2023). Resilience Enablers for Mitigating Risks in Supply Chain. 26th Nirma International Conference on Management (NICOM-2023). Nirma University Ahmedabad

Chaudhary, D., Agarwal, N. (2024). Strategizing Sustainability: Analyzing Barriers to Last Mile Logistics through Interpretive Structuring Modelling (ISM), 2nd International Conference on Emerging Applications of Artificial Intelligence, Machine Learning, and Cybersecurity (ICAMC 2024)

### **Opinion Articles**

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Singh, R & Mukherjee, D. (2023). Bolstering Value-added Agri Exports. Retrieved from <https://agrospectrumindia.com/2023/09/05/bolstering-value-added-agri-exports.html>

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### **Book Chapters**

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Jaiswal, A., Agarwal, N., Kumar, R., Singh, N., & Maan, H. (2024). Assessing the Strategic Transformation of the Indian Insurance Sector Evolution Amidst COVID-19. *Revolutionizing Customer-Centric Banking Through ICT*, 239-257. DOI: 10.4018/979-8-3693-2061-7.ch012

## Shodh Samapan (Completed Research)

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Shodh Samapan give a glimpse signifying the conclusion or completion of research thesis. At IIFT, researchers are encouraged to delve into topics of their interest, fostering a sense of accomplishment. This exploration leads to the introduction of new insights and contributions to the existing body of literature upon the completion of their research thesis.

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### Thesis completed:

#### **Exploring the Role of Visual Art in Marketing (Authored by: Mansi Gupta (Batch 2018); Supervisor: Prof. Rakesh Mohan Joshi):**

- This research aims to examine consumer perceptions of integrating artwork, specifically paintings, into product design. It synthesizes existing studies on the art infusion phenomenon, which explores how art influences consumers' perceptions and evaluations of associated products.
- The study provides a comprehensive review of the origin, significance, evolution, and development of art infusion, categorizing its drivers within a classification framework and detailing interrelationships through a conceptual framework. Art can transform product design, capturing consumer attention during initial contact via internet searches, advertisements, or retail aisles.
- This study categorizes the perceptual values derived from art-infused products using a phenomenological approach based on means-end chain theory and laddering.
- The study also investigates the practical applications of art infusion for marketers, using structural equation modeling to explore factors influencing art infusion. Additionally, it examines consumer willingness to pay for art-infused products through choice-based conjoint analysis. This research highlights the widespread adoption of art infusion by brands globally, emphasizing its ability to enhance product uniqueness and prestige, thereby driving superior profits.

#### **A Select Study of Supply Chain Resilience in Automobile Industry of India (Authored by: Nishtha Agarwal (Batch 2019); Supervisor: Prof. Nitin Seth):**

- The research indicates that businesses have achieved significant success by operating global supply chains, benefiting from optimal resource allocation and access to growing markets. However, this success comes with increased risks from global market volatility, highlighted by the disruptions of the COVID-19 pandemic, especially in the automobile industry creating an urgent need to build supply chain resilience, which helps in preparing for, responding to, and recovering from disruptions.
- A literature review indicates limited research on building resilience in automobile supply chains and its impact on business outcomes. To address these gaps, a study focuses on the Indian automobile industry with four objectives: understanding resilience's relevance, identifying resilience enablers, developing a framework linking enablers to outcomes, and quantifying their effects.
- The study's findings offer significant implications for enhancing supply chain resilience in the automobile industry and other sectors, aiding in decisions like facility location and supplier selection.

## Awards and Recognitions



Roshan

Honoured and awarded with the Best Paper Award along with recognition at three different conferences for the research paper titled "Peer effects in working capital investment policy: Evidence from Indian Manufacturing firms" at 11th International Youth Conference, Jaipur International Doctoral Research Conference, IP University, Delhi, February 15-16, 2024, at 12th International Conference on Contemporary Issues in Management, Bangalore, February 23-24, 2024, and at Two-day international conference, Sri Aurobindo College, Delhi, February 23-24, 2024.

Awarded with Certification of Appreciation for winning Third Best Research Paper Award for the research paper titled "Extreme Quantile Connectedness between Crude Oil and Indian Equity Sectors: A Portfolio Hedging Analysis" at 6th International Conference on Financial Markets & Corporate Finance (ICFMCF 2024) held on 6th-7th July 2024 at IIT (ISM), Dhanbad



Pratibha Kushwaah

# IIFT IN NEWS

# Samachar

Samachar is a factual report on current events. The faculty members at IIFT have been writing on trending issues of national and global interest and the work has found a place in some of the leading newspapers in print and electronic media.

## NIRF ranking 2024: Commerce ministry's IIFT moves up twelve place to 15th

In the last year's ranking, IIFT was at 27th spot as against 24th in 2022

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### OPINION

## Explained: India's rice export curbs amid global challenges

Ram Singh and Aaqib Chaudhary — July 25, 2024



## Looking at setting up centre for negotiations on FTAs, other biz deals: Comm Secy

PTI - Last Updated: Jul 16, 2024, 10:52:00 PM IST

### Synopsis

The commerce ministry plans to establish a center for negotiations to enhance skills in areas like free trade agreements and business deals, Commerce Secretary Sunil Barthwal announced on Tuesday. Speaking at the Indian Institute of Foreign Trade (IIFT), Barthwal emphasized the importance of negotiation skills and indicated that the center will also develop these skills among IIFT students. The initiative aims to improve IIFT's ranking and foster industry interaction. Barthwal highlighted sectors with significant export potential, such as pharmaceuticals and textiles, and underscored the crucial role of international business and business analytics in the global economy.



The **commerce ministry** is looking at setting up a centre for **negotiations**, as this is an important skill set required in areas like **free trade** agreements and other **business deals**, a top government official said on Tuesday. Addressing students and faculties of the **Indian Institute of Foreign Trade (IIFT)** here,

millenniumpost

Delhi Edition  
14 Jun 2024

## On the verge of reality

Through a multitude of measures and schemes, India is fast catching up the trend of building a carbon market, which could soon materialise in the country



PUNTA ANAND & ASHESH PANDEY

India is poised to pioneer its Carbon Market transition. The rapidly increasing global warming around the globe has become a cause of concern for every economy today. The Paris Agreement on Climate Change and the Kyoto Protocol serve as the major guiding lights for institutions and other bodies working towards climate change, the latter being a landmark document.



The end of all the trading transactions will be maintained by the Cash Clearing of India (CCI). To regulate all this, a national clearing committee (NSC) consisting of the secretaries and the joint secretaries of ministry of power and ministry of environment, and other expert members from CERC and CCI will be formed to assist the IEE and oversee the entire mechanism of the scheme. India's carbon market will also function in two forms - commodity and

## INDIAN INSTITUTE OF FOREIGN TRADE CELEBRATED ITS 61ST FOUNDATION DAY

Institute of Foreign Trade celebrated its 61st Foundation Day on 2024. Dr P K Gupta, Registrar, IIFT welcome address highlighted the contributions made by the former staff of the Institute. He added enormous efforts and knowledge by our former faculty have laid a foundation for IIFT which is now one of the top B-Schools of try.

On the occasion, the Institute's annual Hindi magazine 'Yagya 2023' was released and the retired employees were also felicitated with mementoes. The event was followed by the cultural programme by Bhaatkhande Sangit Vidyalaya.









# About IIFT

Indian Institute of Foreign Trade is an autonomous institute under the aegis of the Ministry of Commerce, Government of India. The institute was granted “Deemed to be University” status in 2002. The institute is granted AACSB accreditation on 17th November 2021. With this, IIFT bags a position amongst the top 900+ business institutes in the world having received this accreditation. The National Assessment and Accreditation Council (NAAC) has also recognized IIFT as Grade “A+” institution in its third cycle in 2023. IIFT has four campuses: Delhi, Kolkata, Kakinada, and GIFT City (Gandhinagar).

