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A STUDY OF ECONOMIC FACTORS' INFLUENCE ON INDIAN STARTUPS

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Abstract

Startups, which are new firms that focus on innovation, scalability, and rapid expansion, have gained in popularity as a result of the technological advancements that happened in the latter half of the twentieth century and early twenty-first century. In addition to customer demand, the expansion of these enterprises is fueled by a variety of variables, including technological advancement, financial availability, the current state of the ecosystem, legislative acts, and the general health of the ecosystem. Nonetheless, entrepreneurs face a lot of hurdles in order to stay successful. This list of challenges is comprehensive and includes a wide range of elements, including law, funding, the capacity to recruit top talent, fierce market competition, and operational concerns. There are several aspects that will influence the success of new enterprises in the coming years. Some of these aspects include the implementation of ecologically friendly corporate practices, international collaboration, and long-term growth. There are numerous reasons why new enterprises are critical to the growth of both the economy and society. Foreign Direct Investment has a remarkable contact on the growth of Indian startups. The loosening of FDI regulations in sectors such as e-commerce, fintech, and technology has created several chances for startups to raise funds from foreign investors. As costs rise due to inflation, companies with restricted budgets may struggle to remain profitable without raising their own prices, thereby making their offers less competitive. GDP can be Nominal GDP, which indicates current market prices, or real GDP, which accounts for inflation and could be considered a more realistic comparison. It is frequently used as an indication of economic health, with rising GDP indicating expansion and falling GDP indicating economic collapse.

Keywords: Startups, Innovation, FDI, GDP, Inflation.

Introduction

Startups in India

In the last decade, India has emerged as a major hub for start-ups, experiencing a significant surge in entrepreneurship and innovation. The Indian government has implemented several initiatives and policies to encourage the growth of start-ups, which have contributed significantly to the Indian economy. In this note, we will explore the current state of start-ups in India, the factors contributing to their success, and the challenges they face.

India now houses the third-largest start-up ecosystem in the world, with over 50,000 start-ups operating in the country. A report by NASSCOM claims that the value of the start-ups in India is expected to reach $1 trillion mark by 2025, with the available potential to engender 25-30 unicorns (start-

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ups with a valuation of over $1 billion) (David et al, 2021). The Indian start-up ecosystem is dominated by three sectors: e-commerce, fintech, and healthtech. E-commerce has been the most successful sector, with companies such as Flipkart and Snapdeal leading the way (Shenoy, 2015). Fintech is another rapidly growing sector, with companies like Paytm and PhonePe providing digital payment solutions to millions of Indians. Healthtech is also gaining traction, with companies like Practo and Portea Medical providing innovative healthcare solutions.

Factors Contributing to the Success of Start-ups in India

The Indian government has implemented several policies to encourage the development of startups, including the Start-up India initiative, which provides funding, tax benefits, and other incentives to startups. The initiative also provides legal support and facilitates easier access to provide funding for startups (Dinesh & Sushil, 2019). The growth of digital infrastructure, including the widespread availability of smartphones and high-speed internet, has created a large market for good-quality startups in India. The provision of good-quality digital infrastructure has enabled start-ups to scale up rapidly and reach a wider audience. India has a large pool of skilled and talented professionals (Behera & Gaur, 2022), which has been a key factor in the success of good-quality startups in India. Many startups have been able to leverage this talent pool to develop innovative products and services. There has been a surge in funding for startups in India, with investors from around the world investing in Indian startups. Several venture capital firms and angel investors have also emerged to provide funding to startups throughout the different stages of their growth.

Foreign Direct Investment (FDI)

Foreign Direct Investment (FDI) plays a significant role in fueling the growth of startups in India. With the government's progressive policies and a burgeoning market, India has become an attractive destination for foreign investors looking to tap into the country's vibrant startup ecosystem. The relaxation of FDI norms in sectors like e-commerce, fintech, and technology has opened up numerous opportunities for startups to secure funding from global investors. This influx of foreign capital has enabled startups to scale rapidly, expand their operations, and innovate in ways that might not have been possible with domestic resources alone (Rani & Kumar, 2022). FDI has also brought in expertise, technology, and global best practices, further enhancing the competitiveness of Indian startups on the global stage. However, the dependence on foreign investment also means that startups must navigate the complexities of international regulations and investor expectations. Ensuring a favorable investment climate through stable policies and transparent regulations is crucial for sustaining the flow of FDI into the startup sector, which is vital for the continued growth and development of India's startup ecosystem (Kaushal, 2021).

Inflation

Inflation poses significant challenges for startups, particularly in managing increased costs for factors of production and other operational expenses. As inflation drives up prices, startups with limited budgets may struggle to maintain profitability without raising their own prices, which could make their offerings less competitive. Additionally, rising interest rates, a common response to inflation, can make borrowing more expensive, straining the finances of startups that rely on external funding. Reduced consumer spending, as a result of eroded purchasing power, can further impact startups, especially those in discretionary sectors (Jain & Reddy, 2017). However, inflation can also present opportunities for innovation and efficiency, as startups may be driven to streamline operations, develop cost-effective products, or diversify their offerings to mitigate risks. Startups with strong pricing power or those offering essential goods and services may be better

positioned to navigate inflationary pressures. To succeed, startups need to be agile, manage costs effectively, secure necessary funding, and adapt their business models to the changing economic landscape.

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is a very important indicator of a country's economic performance capable of being measured in several ways, usually a quarter or a year. It comprises four main components: consumption, which includes household spending; investment, covering businesses' expenditures on manufacturing of capital goods; spending by the government on public services and infrastructure; and net exports, which is the excess amount of a country's exports over its imports. The study by Sahu & Kshatriya (2024) claims a clear positive effect of increasing GDP on the startup growth in India. GDP can be Nominal GDP, which indicates current market prices, or real GDP, which accounts for inflation and could be considered a more realistic comparison. It is used as an indicator of economic well-being, where a rising GDP signals growth and a declining GDP indicates economic downturns. Despite its widespread use, GDP has limitations, such as not accounting for income inequality, environmental impacts, or the informal economy. While it is a crucial tool for policymaking, investing, and international comparisons, it provides a narrow view of economic activity and should be complemented by other indicators to fully assess a country's overall well-being.

Problem for the Study

In the present scenario, developing nations are generating more economy through innovation ecosystems and startups. In this respect, India is fore front liner for innovations and establishing more number of startups which are enabling to sort out the social issues as well as earn more economy. In India, the number of startups from 2017 till now the growth rate of startups is keeping on increasing and also generating more youth employment in this segment. The developing nations are keenly focused on Gross domestic product, in this aspect, the number of startup growth and contribution to the GDP is one of the prominent factors, besides inflation is also another one factor that influences start-up growth Hence India has focused on controlling the inflation and improving GDP. Based on these two factors, the foreign investors are eager to invest in Indian startups. Hence, the researcher has made an attempt to analyze the GDP, Inflation and FDI factors that influence the number of startups in the Indian market and the level of correlation between these factors.

Objectives of the Study

1. To analyze the correlation between GDP, Inflation and Startup growth.
2. To identify the relationship between Foreign Direct Investment and number of Startups in India

Review of Literature

David et al. (2020) note that India boasts the world's third-largest startup ecosystem, with approximately 26,000 enterprises. There have been 26 "unicorns"—startups worth over $1 billion—and over $36 billion in inflows in the last three years. India's startup ecosystem has evolved rapidly thanks to private investors including seed, angel, venture, and private equity funds and public institutions like incubators and accelerators. The 2016 government-launched Startup India project is creating an enabling environment. The Indian government is building ICT infrastructure and supporting e-governance, investments, and technological innovation through universities and research to create a knowledge-based and digital economy. These programs foster entrepreneurship and economic progress. According to research, startup ecosystem expansion has been concentrated in large states and cities with substantial financial resources, notably in IT-enabled businesses like e-commerce, transportation, and banking. Small enterprises outside of big cities are ignorant of or have not enrolled in government incentives and tax breaks for

entrepreneurs. Despite advances, Indian firms face major challenges. These include an unstructured and fragmented market across most sectors, a lack of transparent policy efforts that startups may quickly benefit, inadequate infrastructure, knowledge, and exposure, and business problems. Increased publicity about government programs and incentives, targeted credit distribution to priority industries, efforts to reach and connect Tier 2 and Tier 3 cities, and simplified funding and tax incentives for local and international investors could benefit Indian startups.

Bojing Liu et al (2021) examine Chinese startups' corporate social responsibility (CSR) using industrial organization theory's structure-conduct-performance analytical framework, assuming normalcy after COVID-19. We start our examination of startup structural changes and CSR performance with pandemic implications. We find that the epidemic boosts new business success. We believe entrepreneurs' CSR should be "altruistic and self-interested" rather than philanthropic. Due to the pandemic, entrepreneurs should reassess their CSR strategy, says this report. Even during the pandemic, the company's "economic man" and "social man" remain linked; their roles in economics, ethics, and the law are similar, and generosity is fundamental. As the COVID-19 pandemic spreads, entrepreneurs should prioritize social responsibility.

Sneha et.al (2023) suggest that the India ecosystem, which includes over 60,000 registered enterprises, may contribute four to five percent of the country's GDP over the next three to five years. According to the Economic Survey 2021–2022, India has the third-largest start-up ecosystem globally, behind the US and China, with about 61,400 registered start-ups. Due to the start-ups' rapid expansion, which has also had a significant impact on the Indian economy and demonstrated that they can contribute approximately 4-5 percent of the nation's GDP, India today boasts the third-largest start-up ecosystem in the world. The primary focus of this study is on how start-ups affect the Indian economy and the ecosystem's natural potential to foster equality, sustainability, and growth.

Maran. et.al (2023)’s research has investigated startup creates jobs for locals, those people start spending more on goods and services, which increases the amount of money given to the government and the overall economy. An increase in the number of prosperous new enterprises in one area leads to the growth of the local market. The aforementioned table indicates that India's economic contribution to GDP was 25.2 billion in 2022, followed by 38 billion in 2021, 11.37 billion in 2020, 13.14 billion in 2019, and 10.8 billion in 2018 from both China and India. In terms of economic contributions, China's GDP contributed 39.06 billion dollars in 2022, 58.9 billion dollars in 2021, 17.62 billion dollars in 2020, 20.3 billion dollars in 2019, and 16.43 billion dollars in 2018, which was the lowest amount.

Research Methodology

The research methodology is an instrument to develop and conclude the research according to its scope and objectives, the study has analyzed GDP, Inflation and Foreign Direct Investment role for the development of startups in India. The study has used descriptive research methods and used secondary data for analyzing the results, the data are collected from government bulletins, economic journals, and printed newspapers and magazines. The selected study period of the research is ten years, the researcher has used Pearson correlation statistical tool to assess the significance between GDP and number of startups growth, inflations and startup growth and Foreign Direct Investments and startup growth in India. Correlation was used for analysis since GDP, inflation and FDI are quantitative variables and the number of startups is also a quantitative variable. Correlation checks if there is any association

between the variables. The paper also uses MANCOVA analysis to check the dependence relationship with GDP and inflation as the independent variables, FDI as the covariate and North, South, East and West zone startups during this period as the dependent variables. The selection of the startups for study in India is from among digital agencies, services, manufacturing, and technology areas. The effect of FDI on the number of startups could be assessed, even though FDI has an influence on the number of startups.

Data Analysis and Interpretation

Table 1: The association between GDP and the number of Start-ups

		GDP	Start Up
GDP	Pearson Correlation	1	.805*
	Sig. (2-tailed)		0.016
	N	8	8
Start Up	Pearson Correlation	.805*	1
	Sig. (2-tailed)	0.016	
	N	8	8

GDP determines the monetary value of completed goods and services, or those that the final consumer purchases, that are created in a country during a given period of time, such as a quarter or a year. It encompasses all output created within the borders of a country. It includes some nonmarket productions, like government-supplied goods and services for education and defence, GDP is composed of both market-driven and nonmarket goods and services. A different concept called gross national product, or GNP, adds together all of a country's citizens productivity. Therefore, the product of American manufacturing held by a German company would add to the GDP of both the United States and Germany.

The table 1 shows the country's GDP influence on the growth of the number of start-ups in India, in this respect, the Pearson correlation test used to find out the significant association between GDP and the growth of the number of start-ups. The results reveal the observed p-value is 0.016, which is less than the 5% level of significance(0.05). The result indicates that the correlation between the number of start-ups and GDP is significant. The reason could be that both GDP and the number of start-ups increase together. More number of start-ups may contribute to more GDP, and also more GDP may result in an increase in the growth of the number of start-ups in India. The GDP may be influenced by the number of start-ups. An increase in GDP may bring a positive economic climate and also Government may bring in policies suitable for start-ups in the economy. This in turn boosts the economy and results in the growth of independent businesses per capita income. The developed countries have a high per capita income which results in a comfortable standard of living for individuals. The above facts can be considered and included in formulating Government policies for start-ups.

Table 2: The association between inflation and number of Start-ups

		Start Up	Inflation
Start Up	Pearson Correlation	1	0.566
	Sig. (2-tailed)		0.144
	N	8	8
Inflation	Pearson Correlation	0.566	1
	Sig. (2-tailed)	0.144	
	N	8	8

Inflation is an increase in price-levels across the economy. A persistent rise in the cost of goods and services is known as inflation, and it can have a detrimental effect on customers' purchasing power and force them to make difficult financial decisions. Rising prices

can also be a result of predictions for higher inflation, which can be brought on by factors like increasing production costs or increased demand for goods and services. When customers' frequent purchases of goods and services—from furniture and appliances to haircuts and medical care—increase over an extended period of time, it's referred to as inflation. Neither overnight inflation nor a rise in the price of a single item cause inflation to occur.

The table 2 exhibits the country's inflation influence on the growth of the number of start-ups in India, in this respect, the Pearson correlation test was used to find out the significant relationship between inflation and the growth rate of the number of start-ups. The results observed that the Sig. (2-tailed) is greater than 0.05, indicating that the correlation is not significant between inflation and number of start-ups growth in India. Inflation is a general indicator of the economy, it keeps changing due to different external environmental factors. Hence, as per the result, the inflation factors do not at all affect the growth of the number of start-ups in India. As far as the Indian economy is concerned for the period, inflation levels do not seem to affect the number of start-ups in the period significantly. In fact, a steady inflation level (2%) is considered favourable for any economy. In such a case, the growth in the number of start-ups may not be affected by inflation levels in the economy. But, it is possible that an unfavourably high inflation in some period can reduce the real income of the people in the country. In those cases, start-ups may find it difficult to get the necessary funds to grow.

Foreign direct investment (FDI) is a major contributor to India's economic growth as it offers a substantial non-debt funding source for the nation's development endeavors. International companies intentionally invest in India, leveraging the country's unique investment benefits, including tax exemptions and relatively inexpensive labor expenses. This facilitates the acquisition of new skills and facilitates the establishment of jobs and other advantages. These investments are coming into India due to a number of reasons, including the government's aggressive policy framework, a dynamic business environment, rising global competitiveness, and expanding economic influence.

Table 3: The association between Foreign Direct Investment (FDI) and Start-ups

		Start Up	FDI
Start Up	Pearson Correlation	1	0.411
	Sig. (2-tailed)		0.36
	N	7	7
FDI	Pearson Correlation	0.411	1
	Sig. (2-tailed)	0.36	
	N	7	7

The table 3 shows the relationship between Foreign Direct Investment and the number of start-ups growth. The Pearson Correlation test was used to find out the association between the two factors, since the Sig (2-tailed) is 0.36, which is greater than the critical significance value of 0.05, hence, the correlation coefficient is not significant (0.411). The analysis indicates that the start-ups in India did not depend on FDI significantly for their funding during this selected study period. FDI (Foreign Direct Investment) many times arrive in a country in the form of funds for start-ups. High FDI's in an economy indirectly indicate the confidence of the foreign sources in the host country's economy and the Government. However, the country's economy has a high dependence on foreign sources relatively.

Results of MANCOVA analysis

Table 4: Multivariate tests: Dependent variables: Northstartups, Southstartups, Eaststartups, Weststartups

Effect	Statistic	Value	F	Sig.
Intercept	Pillai's Trace	.151	1.822	.143
	Wilks' Lambda	.849	1.822	.143
	Hotelling's Trace	.178	1.822	.143
	Roy's Largest Root	.178	1.822	.143
FDI	Pillai's Trace	.392	6.615	.000
	Wilks' Lambda	.608	6.615	.000
	Hotelling's Trace	.645	6.615	.000
	Roy's Largest Root	.645	6.615	.000
GDP	Pillai's Trace	1.488	6.518	.000
	Wilks' Lambda	.036	15.510	.000
	Hotelling's Trace	13.725	33.884	.000
	Roy's Largest Root	12.826	141.084	.000
Inflation	Pillai's Trace	1.260	2.889	.000
	Wilks' Lambda	.183	3.206	.000
	Hotelling's Trace	2.416	3.409	.000
	Roy's Largest Root	1.312	8.249	.000
GDP * inflation	Pillai's Trace	.929	1.902	.007
	Wilks' Lambda	.297	2.136	.002
	Hotelling's Trace	1.673	2.360	.000
	Roy's Largest Root	1.175	7.385	.000

Table5: Test of between subjects effects: Dependent variables: Northstartups, Southstartups, Eaststartups, Weststartups

Source	Dependent Variable	F	Sig.
Corrected Model	Northstartups	35.760	.000
	Southstartups	28.692	.000
	Eaststartups	58.344	.000
	Weststartups	61.168	.000
Intercept	Northstartups	4.210	.046
	Southstartups	3.383	.073
	Eaststartups	.768	.386
	Weststartups	5.604	.022
FDI	Northstartups	7.027	.011
	Southstartups	7.357	.009
	Eaststartups	22.170	.000
	Weststartups	13.373	.001
GDP	Northstartups	61.665	.000
	Southstartups	36.590	.000
	Eaststartups	91.128	.000
	Weststartups	98.322	.000
inflation	Northstartups	4.820	.000
	Southstartups	6.876	.000
	Eaststartups	6.242	.000
	Weststartups	7.069	.000

GDP * inflation	Northstartups	3.371	.006
	Southstartups	5.180	.000
	Eaststartups	3.620	.004
	Weststartups	6.439	.000

The MANCOVA analysis is performed with North zone startups, South zone startups, East zone startups and West zone startups as the dependent variables, GDP and inflation as the independent variables with FDI acting as the covariate. With this approach, the effect of GDP and inflation on the dependent variables is studied controlling for the effect of FDI. For MANCOVA, the GDP and inflation were converted from continuous variables to categorical variables and used for analysis. The results indicated that each of the statistics Pillai's trace, Wilks' lambda, Hotelling's Trace and Roy's Largest Root is significant for GDP and inflation, which means that the groups under these independent variables are significantly different. It is seen that the interaction terms between GDP and inflation are also statistically different, which means that the value of dependent variables with an independent variable is different (e.g. GDP) for different values of the other independent variable (e.g. inflation). FDI is considered to be the covariate and it also has a significant effect on North, South, East and West zone startups. Whereas Table 4 shows the effect of the independent variables on dependent variables considered together in a single model, Table5 shows the effect of the independent variables on the dependent variables with each dependent variable considered alone. Again, a significant relationship is found between each dependent variable and the independent variables, meaning that the individual dependent variables are also predicted significantly by the set of independent variables.

Conclusion

Startups play a significant role in developing nations economy and the number of startups in these countries is constantly increasing. In this respect, India is one of the leading countries which focuses on youth and intuits their mind for design thinking, problem solving, creativity and innovations, these factors have highly influenced the skills of the youth and the Indian government innovation ecosystems are strongly supporting the startups in India. Based on these initiatives, India is placed as the third largest country in terms of number of startups. Also, the results proved that the Indian GDP has constantly increased and the number of startups has also increased, the inflation control has enabled to sustain the existing startups. The trend for the growth of startups is positive progress in the country. The foreign direct investment is another factor in finding out the significant relationship with the number of startups, and the result inferred is positive for the nation. The study has inferred that the macro-economic factors are important to improve the number of startups, employment generation and economic growth in India.

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