



Research Paper

## Impact of Rupee Depreciation on the Growth Drivers of Indian Economy (Impact of Rupee Depreciation on MSMEs in India)

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### ABSTRACT

- **Objectives:** The objective of this paper is to study the relationship of variables impacting the overall performance of MSMEs based on the available data from the year 2005-2019.
- **Method:** The research is based on secondary data collected from various secondary sources such as newspapers, annual reports, MSME department and many other published reports. The data were interpreted in light of the objectives of the above study using an economic regression model of Ordinary Least Square Method (OLS).
- **Findings:** Conducting various test by running the regression model, it is observed that Infrastructure expenditure, Government expenditure on skill acquisition, Exports and Interest rate reflected a positive impact on the performance of MSME in India except for the Real Exchange Rate which showed a negative impact on the performance of MSMEs. This means that if the real exchange rate rises, rupees become expensive in relation to dollars, thereby resulting in depleting performance of MSME in India. Also, all the explanatory variables except for Interest Rate are statistically significant which means they cause a significant impact on the share in GDP of MSMEs.
- **Novelty/Recommendations:** One of the most challenging problems faced by MSMEs is providing the technology at a subsidised rate and cut down the price of fuel used in the production of goods and services. The government introduced countable schemes for credit, skillset and other important factors but neglected the issue of technology and the availability of raw material. So, the concerned authority should focus on the introduction of schemes working towards these factors.

The present paper takes into account analysing the secondary data collected to understand the role of Micro, Small and Medium Enterprises (MSMEs) in GDP contribution of the country. The major application of the paper is to explore the factors affecting the growth of MSMEs in India in detail and how depreciation has been an important constraint in the growth of this sector. MSMEs, also viewed as the growth drivers of the economy, acts like a catalyst in promoting growth and development of the country. The following study examines the challenges faced by MSMEs due to currency depreciation and the efforts taken by the administration in the development of MSMEs. The depreciation of Rupee can have both positive and negative impacts on the MSMEs which can be studied in this paper.

The research concludes on having seen the impact of explanatory variables on the performance of MSMEs by taking an econometric model into consideration using simple OLS method during the period 2005-2019. The F-test conducted within the study shows that the model features a goodness of fit and is statistically different from zero. Breusch-Godfrey test result witnessed no serial correlation which means that the variable's serial correlation is measured as zero, i.e., each observation is independent of one another. Breusch-Pagan test results concluded that heteroskedasticity does not exist in the residual model. And, with VIF being 2.34, we concluded that the associated independent variables are moderately collinearly related to other variables in the model. From the result and on the basis of the tests conducted, it is observed that the explanatory variables, Infrastructure expenditure, Government expenditure on skill acquisition, Exports and Interest rate have a positive impact on the performance of MSME in India except for the Real Exchange Rate (REER) which has a negative impact on the performance of MSMEs.

**KEYWORDS:** Devaluation, Investment, Literacy Rate, Credit Support, Depreciation, Financial, Cost-Effective, REER, Decentralisation, GVA, Exchange rate fluctuations, Unemployment, Globalisation

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## I. INTRODUCTION

Indian micro, small and medium enterprises have proven to be an active and dynamic sector for the economy. MSMEs play a sensitive and essential role in the equitable development and growth of India. In India, the SME sector with its vast network of about 633 lakhs has contributed greatly to the growth of the economy, creating about 120 million jobs<sup>1</sup>. Also, contributing about 33.4% to manufacturing output and about 45% to exports both directly and indirectly. The MSME sector is serving well in achieving the target of the National Manufacturing Policy of raising the share of the manufacturing sector in GDP from the current 16% to 25% by 2022. The sector's overall contribution to the national GDP is 8%. It contributes about 6.11%, 24.63%, 33.4% to the manufacturing GDP, services. Not only that but it's contribution to exports is 40%. The allocation in the Budget to MSME for the year 2018-19 was Rs. 3,790crores for credit support, and interest subsidy and innovations.

MSMEs are a major driver of the growth of the Indian economy, which is why they're considered by policymakers. Almost 95.58% of those organizations are registered as micro-enterprises, the rest are small and large. With nearly 51% of MSMEs in rural areas, the sector contributes to the economic empowerment and social inclusion of marginalized people through job creation. This sector is suitable for an economy with a surplus labour like India. Despite the significant contributions of the SME industry, the industry continues to face some constraints, such as in the 2010 Prime Minister's task force report, adequate and timely credit availability, costs, high funding, collateral requirements, access to equity and rehabilitation of patients, companies, etc. It therefore appears that adequate, timely and affordable credit is one of the biggest challenges facing the SME sector.

Depreciation refers to the decrease within the value of the domestic currency that's caused when the demand for foreign currency increases within the market. In such a scenario one needs to pay more to get a unit of foreign currency. It is the intentional downward adjustment of the currency of a country's worth against another country's currency.

Micro, Small and Medium Entrepreneurs often tend to face tough competition from other large-scale enterprises. Government has provided various schemes like marketing assistance scheme for Organisation exhibitions abroad, co-sponsoring and participation in international exhibitions or trade fairs. It's tough for the small and micro enterprises to require help from industrial banks and alternative monetary institutes thanks to their weak credit worthiness in India. Therefore, the government of India has offered many schemes and policies to help them with credits.

Poor transportation services in rural and semi urban areas, delays in obtaining power and water affiliation, permission from concerned authorities for discharge disposal etc. has also been a major area of concern. Micro & little Enterprises Cluster Development provides financial support for the institution of Common Facilities Centres (CFCs) for testing, coaching centres and different R&D activities and for the establishment/upgrade of infrastructure facilities (IDs) in new/existing/cluster industrial zones MSE.

Thus, the paper examines the existing schemes introduced by the government in the past few years towards improving the conditions of MSMEs and also suggested few measures that should have been taken much before in order to prevent the depleting conditions for few of the factors observed at present.

## II. LITERATURE REVIEW

Considering the time period from 2005 to 2019, MSMEs went through a number of drastic changes in terms of development and a numerous factor to count on. **Birch (1979)**, suggested one of the possibilities for SMEs is to create jobs and thus reduce unemployment in the economy. With the publication, the contribution of small industries to employment has been at the heart of the concerns of policy makers at all levels of the economy.

Adding to that, the impact of globalization and internal reforms on the small industry sector was highlighted by **BalaSubrahmanya (2004)** whose study found that small industries had suffered in terms of unit growth, employment, production and exports. The small industries were suffering from this issue from past few years and this issue was being neglected for a longer period of time due to which the industries underwent huge losses.

Considering the practical aspect of MSMEs in real world, **Dixit and Pandey (2011)** applied cointegration analysis to look at the causative relationship between SMEs' output, exports, employment, range

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<sup>1</sup> Annual Report MSME 2020-21

of SMEs and their mounted investment and India's GDP, total exports and employment (public and private) for the amount 1973-74 to 2006-07. Their study discovered the positive relation between SMEs' output and India's gross domestic product.

In fact, our research paper takes into account in studying the relationship of the performance of MSMEs with respect to real effective exchange rate, net exports, lending interest rate, expenditure on infrastructure and government expenditure on skillset where all the parameters observed a positive relation with relation to the performance of MSMEs except for real effective exchange, which observed a negative relation with respect to MSME's output.

The rapid growing role of small and medium-sized enterprises (SMEs) in the industrial sector was witnessed by **Venkatesh and Muthiah (2012)**. They stressed that it is essential to cultivate the SME sector for the economic well-being of the nation. The literature mentioned above highlights the aspects, like performance, growth and problems faced by MSMEs in the Indian economy and thus, induces a continuous analysis during the field. Such challenges faced by the industries are too taken into account in our study reflecting the conditions of MSMEs throughout the time period.

**B. Gururaj, M. Satishkumar and M.K. Aravinda Kumar (2016)** analysed the factors affecting the performance of exports in India indicating the economy to be more resilient in order to trade stocks and improve the competitiveness of exports, it would be useful for the government to consider mitigation strategies. The export of SMEs also seems to be positively influenced by a series of state specificity factors, such as the presence of port facilities, the availability of credit, proximity to foreign companies and the technological specialization of the state manufacturing sector.

### **CHALLENGES FACED BY MSMEs and MEASURES TAKEN BY THE GOVERNMENT TO IMPROVE THE CONDITIONS OF MSMEs**

There are many challenges faced by MSMEs. Some of the major challenges are listed below along with possible measures that can be taken by the government:

**GOVERNMENT PROPOSAL:** Lack of financial literacy about the programmes and schemes initiated by the government, inefficient support for the small entrepreneurs in the form of tools and equipment or credit facility. Widespread unawareness on utilisation and likely benefits of financial government schemes etc. are some of the reasons that illiterate or semi-literate entrepreneurs and even some MSME units find it difficult to access funds for their operational needs.

#### **Government measures:**

- Even though the government has taken various steps to make funds reach these units like the provisions of priority sector lending, specialized bank branches to lend to MSMEs, debt restructuring, credit guarantee trust, money assistance scheme etc. but still MSMEs find themselves hesitant to make use of government agencies for their financial needs.

**INEFFECTIVE MARKETING STRATEGY:** Micro, Small and Medium Entrepreneurs often tend to face tough competition from the products, sales and promotional strategies of other large-scale enterprises. They are unaware of the modern marketing and business strategies. They face difficulty in terms of cost, quality, standards, popularity, meeting ever-changing demands, etc. and are also unable to cope quickly with changing market scenarios. Their advertisement and sales promotion are comparatively weaker than those of multinational companies. As a result, ineffective advertisement and poor marketing channels leads to very poor sales.

#### **Government measures:**

- Government has provided various schemes like Marketing assistance scheme for Organisation exhibitions abroad, co-sponsoring and participation in international exhibitions or trade fairs. Also, for organising buyer-seller meets, marketing promotion activities and intensive campaigns. International Cooperation Scheme that provides financial assistance on reimbursement basis for airfare, space rent, freight charges, advertisement charges and entry or registration fee on reimbursement basis in case they participate in international exhibitions/trade fairs.

### **SKILL SET**

One of the constant problems round-faced by the MSMEs is their inability to draw in and devote quality Human Resources to the expansion agenda. Most of those MSMEs are usually within the stage of frequent firefighting and lack of workforce, providing they're thus thinly staffed. This winds up creating it quite troublesome for MSMEs to portion the resources to figure on long and midterm deals. Most of the work force used is either uneducated or undertrained creating the lower ability sets drawback additional pronounced within the MSME sector.

### **Government Measures:**

- Entrepreneurship ability Development Programme (ESDP): This programme aims at organising Entrepreneurship Development Programmes on a frequent basis to foster the talent of youth by raising their capability on numerous options of commercial activity needed for establishing MSMEs.
- Assistance to coaching establishments (ATI): This MSME scheme aims to produce capital grants to the coaching establishments at country level that are operational beneath the Ministry of MSME for the aim of creation and strengthening of infrastructure and support for entrepreneurship and ability development training/capability building programs.
- There are several coaching courses created on the market in an exceedingly range of putative Government recognised coaching institutes which incorporate certifications and certificate courses in skills like operation of stitching machine, cutting and trade, coming up with wear and lots of additional that each employee and social control levels will avail.

### **CREDIT AVAILABILITY**

One of the foremost necessary issues that small and micro enterprises face within the country is finance. This was because of a pair of main reasons- inadequacy of capital within the country and weak credit worthiness of MSMEs within the country. It's tough for the small and micro enterprises to require help from industrial banks and alternative monetary institutes thanks to their weak credit worthiness in India. Therefore, they're guaranteed to get credit at an awfully high rate of interest from cash lenders, thus, exploitative in character.

### **Government Measures:**

- INR 3 lakh crore collateral-free automatic loans for MSMEs to buy raw material, meet operational liabilities and restart businesses.
- **Prime Minister Employment Generation Programme (PMEGP):** PMEGP scheme is geared toward making employment opportunities in each urban and rural areas for the MSMEs through organising new self-employment in India. The Khadi and Village Industries Commission (KVIC) is managing this scheme at the national level.
- **Credit Guarantee Fund for Small & Micro Enterprises (CGTMSE):** The Ministry of MSME and SIDBI has mutually set the Credit Guarantee Fund Trust for MSEs (CGTMSE) to hold through the Credit Guarantee Scheme for Micro and Small Enterprises. The CGTMSE is administered by the Government of India and SIDBI.

### **TECHNOLOGICAL ADVANCEMENT**

Technological advancement could also be a crucial issue as it plays a role in either making or breaking their business. Their ability to adopt new technologies can develop them further competitively, value effectively and access to the market could also be easier, but their everyday urges hinder their long-term perspective. If they fail to keep up and adopt the advancing technologies, it will produce them obsolete and threaten their existence. In addition, power suppliers are not available to the small units on the mere asking, and whenever it's available, it's rationed out, limited to a strained time in some cases.

### **Government Measures:**

- **Credit connected Capital grant for Technology Upgradation (CLCSS):** To facilitate technology to Micro and Small Enterprises through institutional finance for the initiation of well-established and verified technologies among the precise and approved 51 sub-sector/products. Both upgraded projects and new projects are eligible.
- **A theme for Promoting Innovation, Rural trade & Entrepreneurship (ASPIRE):** This MSME theme aims at creating new jobs and decreasing unemployment, promote entrepreneurship culture in India, enhance economic development, facilitate innovative business solutions for unsatisfied social needs, and promote innovation to further strengthen the competitiveness of the MSME sector.

### **AVAILABILITY OF RAW MATERIAL**

A major problem for micro and small enterprises is the supply of raw materials. The resource problem is poor quality, an absolute scarcity and high cost of raw material.

Micro and small businesses without dedicated staff who are in contact with official bodies ultimately do not have sufficient raw material stocks. As a result of that they have to resort to free market purchases at very high prices, which in turn increases their production costs.

**Government measures:**

For this problem, the Government came up with a scheme 'Raw Material Assistance Scheme' which aims at helping MSMEs by way of financing the purchase of Raw Material. This scheme provides:

- Financial assistance and
- Material is provided at the bulk supplier's rate by eliminating the middleman and thus acquiring goods at lower prices.

**MARKET ACCESS**

With the onset of the globalization process, MSMEs are lagging behind rival companies and this is due to the shortage of use of technology. The poor information and skills in business development, accompanied by restricted access to technology and finance, cause real obstacles to industrial reform. MSMEs need assistance to improve and scale, get exposure to markets and finance and finally overcome regulatory restrictions.

For this, there's a desire for advanced technology and analysis and development, higher usage of digital and technology enabled platforms. MSMEs should adapt digital ways and usage of e-commerce can facilitate them to thrive within the world market.

**Government measures:**

For this, the government took some measures:

- Technology Upgradation and Quality Certification
- Marketing Promotion Schemes
- Credit coupled Capital grant for Technology Upgradation

**INFRASTRUCTURE ISSUES**

Poor transport services particularly in rural and semi-urban areas are cited as constraints for small businesses. Delay in obtaining power and water affiliation, permission from concerned authorities to discharge effluents etc, Inadequate Physical and Economic infrastructure, supplying and supporting schemes. Additionally, it severely restricts access to new and bigger markets. MSMEs have to settle for electronic payments and foster internal innovation that may facilitate them manage their businesses digitally and compete globally. Despite varied efforts to upgrade infrastructure, particularly micro-enterprises aren't sufficiently equipped with the mandatory support systems that not only hamper their daily activities but are also a threat for the future.

**Government Measures:**

- **Micro & little Enterprises Cluster Development (MSE-CDP):** This MSME program provides financial support for the institution of Common Facilities Centres (CFCs) for testing, coaching centres and different R&D activities and for the establishment/upgrade of infrastructure facilities (IDs) in new/existing/cluster industrial zones MSE.

**III. RESEARCH METHODOLOGY- DATA AND DESCRIPTIVE STATISTICS**

The paper studies the impact of the following parameters taken into consideration on the overall performance of MSMEs using the econometric regression model of the Ordinary Least Square Method (OLS).

This paper studies the positive and negative relation between the factors (or variables) affecting the overall growth of the number of MSMEs in India. The major issue found by the paper is that financial stability is something which is lacking behind because of which many small-scale enterprises were not able to flourish. Although the study is majorly based on the secondary data that we collected from various sources, still the paper doesn't fail to add interpretation based on the econometric model used.

During the study, major drawback was lack of adequate information due to which this paper does not go beyond a certain area. The model incorporates real exchange rate, FDI inflow, capital, trade balance, infrastructure expenditure, human capital, expenditure on skill development and unit of registered MSMEs as explanatory variables while performance of MSMEs was taken into consideration as the dependent variable. Thus, the model for the study is stated as follows:

$$\ln MSME = \beta_0 + \beta_1 \ln REER + \beta_2 \ln NXP + \beta_3 \ln INT + \beta_4 \ln FRA + \beta_5 \ln GOVXP + \mu$$

MSME = Performance of Micro, Small and Medium enterprises

REER = Real Effective Exchange Rate

NXP = Net Exports

INT = Interest Rate

**FRA** = Expenditure on Infrastructure by Government  
**GOVXP** = Government Expenditure on Skill Acquisition

**SUMMARY OF REGRESSION RESULTS**

**Dependent Variable:** MSME

**Method:** OLS Estimation Method

**Number Of Variables Used:** 14

**Sample Data Collected:** 2005-2019

**VARIABLE COEFFICIENT STD. ERROR T STAT PROBABILITY**

REER	0.804306	0.032224	2.50	0.037
NXP	0.062895	0.0207704	3.03	0.016
INT	- 0.796189	0.0815691	- 0.98	0.358
FRA	0.0001369	0.0000686	2.00	0.081
GOVXP	0.0538248	0.017637	3.05	0.016

Durbin Watson Stat = 1.823306

Breusch-Pagan = 0.0830

R Squared = 0.7575

Adj. R Squared = 0.6060

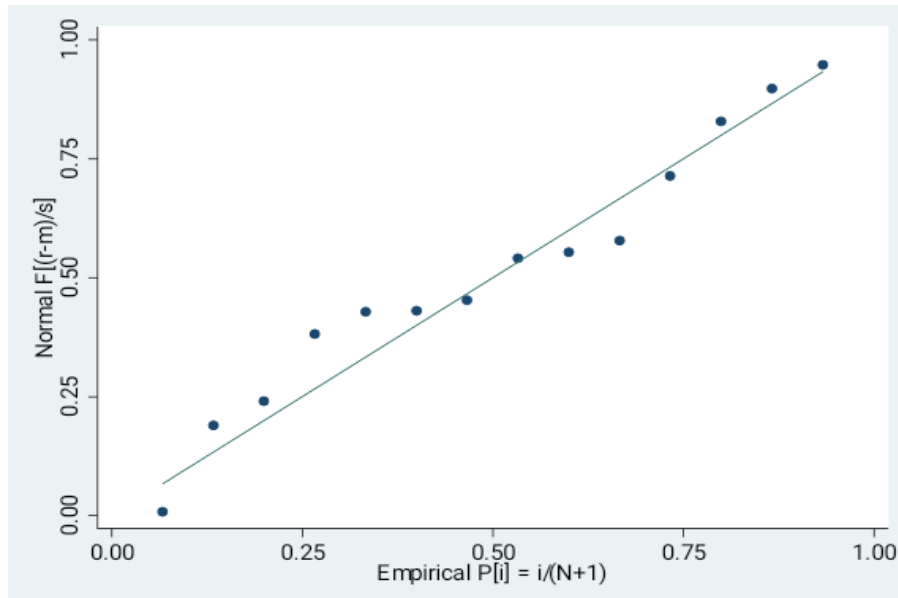
Mean VIF = 2.34

Breusch-Goldfrey = 0.7542

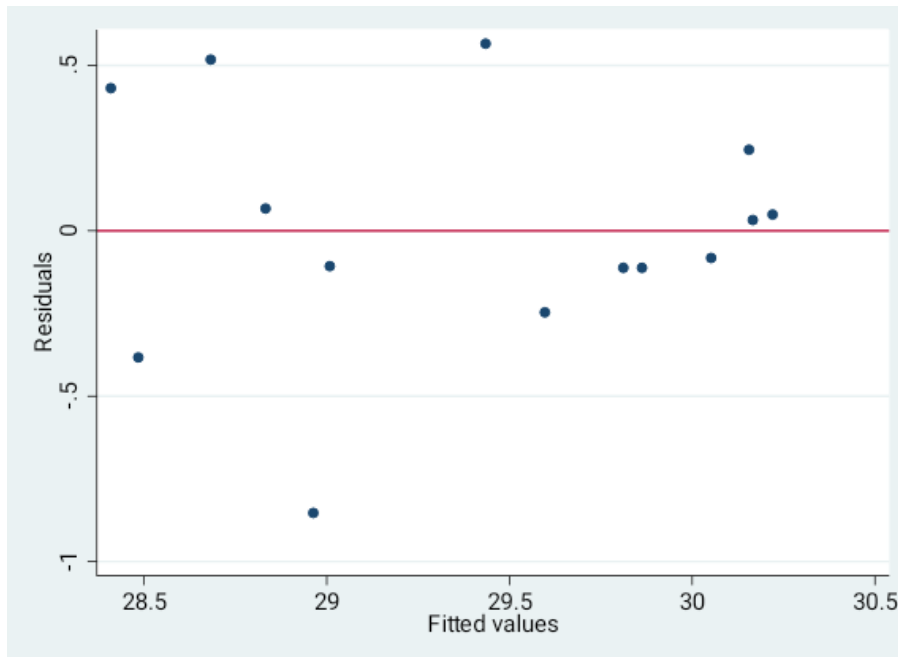
Source: Researcher's Computation on Stata

Parameters	Variables (Regressand)	Expected Relationship	Observed Relationship	Conclusion	Significant/ Insignificant
$\beta_0$	Intercept	+	+	Confirm	Significant
$\beta_1$	RER	+/-	-	Confirm	Significant
$\beta_2$	NXP	-	+	Confirm	Significant
$\beta_3$	INT	+	+	Confirm	Insignificant
$\beta_4$	FRA	-	+	Confirm	Significant
$\beta_5$	GOVXP	+	+	Confirm	Significant

Source: Researcher's Compilation



**Graph 1: Pnorm**



**Graph 2: RVF Plot**

#### **IV. CONCLUSION**

This paper examined the impact of rupee depreciation on the performance of MSMEs and with this depreciation, it raises the issue of macroeconomic financial stability which is overall affecting the performance of micro, small and medium enterprises in India.

To analyse the impact of explanatory variables on the performance of MSME we collected, tested and studied the data from the year 2005-2019. This study uses the econometric regression model of the Ordinary Least Square (OLS). From the result of OLS, it is observed that Infrastructure expenditure, Government expenditure on skill acquisition, Exports and Interest rate have a positive impact on the performance of MSME in India except for the Real Exchange Rate which has a negative impact on the performance of MSMEs. This means that if the real exchange rate rises, rupees become expensive in relation to dollars, thereby resulting in depleting performance of MSME in India. Also, all the explanatory variables except for Interest Rate are Statistically Significant which means they cause a significant impact on the Share In GDP of MSMEs. Interest Rate is not statistically significant which might be due to the reason that it lacks sufficient number of observations collected. Thus, the data collected for Interest Rate does not support the hypothesis as we faced some limitations while studying on the data including the lack of data from various sources, etc.

**D-Watson Test:** From the regression analysis, on having conducted the Durbin-Watson D-Test for autocorrelation, we found out the D-value to be 1.8233 which lies between 0 to 2. We cannot comment on the nature of autocorrelation as it lies between (2-Du) and (2+Du).

**F-Test:** The F-test conducted within the study shows that the model features a goodness of fit and is statistically different from zero. Alternatively, there is a significant impact between the dependent and independent variables in the model.

**Breusch-Godfrey Test:** This test was conducted to test for heteroskedasticity of errors in regression. After running the test, the result shows no serial correlation which means that the variable's serial correlation is measured as zero, i.e., each observation is independent of one another. We accept the null hypothesis, i.e., the error variances are all equal. Basically, the errors have the same but unknown variance, so there might exist constant variance or homoscedasticity.

**Breusch-Pagan Test:** The Breusch-Pagan test was conducted to test heteroskedasticity in a linear regression model which assumed that the error terms are normally distributed. After running the test, we concluded that heteroskedasticity does not exist in the residual model.

**Variable Inflation Factor (VIF):** This factor is used to measure the degree to which the variance of the OLS estimator is inflated because of Multicollinearity. Which shows that all the explanatory variables are ranging between 1 and 3, mean VIF being as 2.34. Hence, we can conclude that the associated independent variables are moderately collinearly related to other variables in the model.

**PNORM:** We checked PNORM, which basically checks the normality of the variables. So, as per the graph above, the variables are somewhat close to normally distributed.

**RVF:** With the help of RVF Plot relationship between fitted values and residual term is approximately linear, the points in the residual plot are scattered at random around the horizontal line at zero. This indicates that a linear model is an appropriate way to describe the relationship. The points in the residual plot below are random, hence the linear model is the best fit.

In the light of the above empirical findings in the analysis carried out, the following recommendations are proposed from the researchers' point of view:

The government should work on the lack of financial literacy and spread awareness amongst them on the benefits of financial government schemes. Government should reorient its policy towards the external sector and ensure that the sector contributes optimally to output growth. Thus, there is a need to develop a better communication strategy, provide innovative marketing tools and promote the use of new age media tools. One of the most challenging problems faced by MSMEs is the availability of credit. Government should come up with a few schemes or policies to provide loans and funds in order to successfully help attain their production capacity efficiently. Adding to that the government could provide technology at a subsidised rate and cut down the price of fuel used in the production of goods and services. MSMEs face a huge problem of the availability of raw material due to its absolute scarcity and high cost of raw material. As a solution to this, the government should set up fair priced raw material outlets in every industrial zone in the country to provide materials at a reasonable cost.

## LIMITATIONS

- Limited Access to Data
- Lack of data provided by the NSIC
- Insufficient number of observations
- Incomplete information provided by the data sources
- Our study is based on Time Series data which should be stationary. Due to the unavailability of sufficient data, the observations are changing. As a result, the error terms are changing, so, in our study the time series data is not stationary.

## DATA SOURCES

- Handbook of Statistics on Indian Economy (RBI Website)
- <https://dbie.rbi.org.in/DBIE/dbie.rbi?site=home>
- Annual Reports of MSME
- <https://msme.gov.in/>
- <https://msme.gov.in/relatedlinks/annual-report-ministry-micro-small-and-medium-enterprises>

## REFERENCES

- [1]. <http://sersc.org/journals/index.php/IJAST/article/view/22320>
- [2]. <https://www.jri.co.jp/en/MediaLibrary/file/>
- [3]. [https://www.bimtech.ac.in/Uploads/image/1682imguf\\_TomJacob\\_BSP\\_rev1.pdf](https://www.bimtech.ac.in/Uploads/image/1682imguf_TomJacob_BSP_rev1.pdf)
- [4]. <https://www.mdpi.com/949766>
- [5]. <https://journals.sagepub.com/doi/full/10.1177/0972150920945687>
- [6]. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3912748](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3912748)



[7]. <https://journals.sagepub.com/doi/abs/10.1177/00194662211062417>