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ISSN 2581-4931　　Strides - A Student's Journal of Shri Ram College of Commerce

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STRIDES – A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE
ISSN 2581-4931 (PRINT)

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The college appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the college has taken the initiative to launch a new Journal named 'Strides – A Students' Journal of Shri Ram College of Commerce'.

ABOUT THE JOURNAL

It is a double blind reviewed bi-annual Journal launched exclusively to encourage students to pursue research on the contemporary topics and issues in the area of commerce, economics, management, governance, polices etc. The journal provides an opportunity to the students and faculty of Shri Ram College of Commerce to publish their academic research work.

PUBLICATION POLICY

Shri Ram College of Commerce is committed to upholding the high academic standards. Therefore, the Committee On Publication Ethics (COPE) follows a 3-Stage Selection Process while approving a paper for publication in this Journal. The policy is as follows:

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To maintain high academic standards, academic ethics and academic integrity each research paper received by COPE (Committee On Publication Ethics) is sent for screening of plagiarism on "Turnitin". The committee adheres to the maximum tolerance limit of 25%.

After screening for plagiarism, research papers are sent to the *Referees* (Subject Experts) for double blind review.

Stage-2. Double Blind Review

The journal adheres to a rigorous double-blind review policy. Each research paper received by COPE is sent for review to the *Referee* (Subject Expert). The reports submitted by the *Referees* are sent to the respective students for improvement (if any, suggested by the *Referees*). After reporting all the suggestions recommended by the *Referees*, the revised and improved version of the papers are re-submitted by the students to the COPE.

If a research paper is rejected by the *Referee*, no further proceedings are taken into account. Once rejected by the expert means cannot be published at all.

Stage-3. Approval by Committee on Publication Ethics (COPE)

After double blind review and screening of plagiarism, research papers are submitted for final approval to the Committee on Publication Ethics (COPE). The research papers approved by COPE are finally sent for publication.

Since COPE is the apex authority to take all decisions related to publication of research papers and articles in 'Strides – A Students' Journal of Shri Ram College of Commerce', the decision of COPE is final and binding.

INSTRUCTIONS FOR MANUSCRIPT DRAFT

The following guidelines are to be carefully adhered by the students before final submission of the manuscript. The submitted manuscripts not conforming to the following guidelines are not taken into consideration for any further processing.

Format

Format of the article on the front page should be:

a) Title
b) Name(s) of the student(s) and mentor along with their details
c) Abstract
d) Keywords

Abstract

The abstract should capture the essence of the article and entice the reader. It should typically be of 100 -150 words, and in Italics.

Font type and word limit

The research paper is to be typed on A-4 size paper with single line spacing. The complete length of the paper should not exceed 5000 words including endnotes and references. The font size should be 12 and font style should be Times New Roman.

Referencing style

The Journal adheres to the APA (American Psychological Association) Referencing Style, Sixth Edition. Students must refer to the APA Referencing Guidelines to ensure conformance to this reference style. For further information you may visit the following link - http://www.apastyle.org

Endnotes

Endnotes should be serially arranged at the end of the article well before the references and after conclusion.

Table, Figures, Graphs

The first letter of the caption for table, figure, graph, diagram, picture etc. should be in capital letter and the other words should be in small letter - e.g. Table-1: Demographic Data of Delhi, Figure-1: Pictorial Presentation of Population etc.

MANUSCRIPT SUBMISSION GUIDELINES

Soft Copy: The soft copy of the manuscript should be sent through e-mail to the editor at strides@srcc.du.ac.in and cc to principaloffice@srcc.du.ac.in.

Hard Copy: The hard copy (3-Sets) of the manuscripts should be submitted in the Administrative Office of the College.

Declaration

As part of the submission process, the student and mentor needs to declare that they are submitting original work for the first publication in the Journal and that their work is not being considered for publication elsewhere and has not already been published elsewhere. Again, the paper should not have been presented in any seminar or conference. The scanned copy of duly signed declaration by the students and their respective mentors has to be emailed along with the research paper.

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The student(s) remain the whole and sole author of their respective research papers published in 'Strides – A Students' Journal of Shri Ram College of Commerce' and hold its copyright. Also, the 'author' is wholly and solely responsible for plagiarism caught after publication (if any). The Editor, Referees, Mentors, COPE, SRCC, Printer, Publisher and Printing Press shall not be responsible for any plagiarism.

AWARD

The authors of best three papers from every Issue are awarded – First Prize, Second Prize and Third Prize on the SRCC Annual Day.
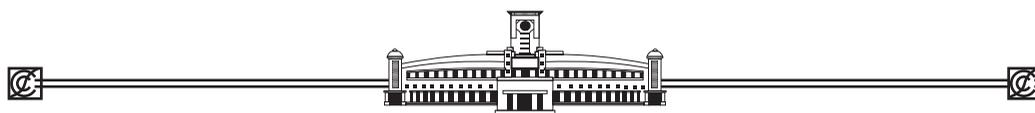
Principal's Message

iv

The mission statement of the college signifying the existence and its road map to the achievement of its vision, reads as:

"To achieve and sustain excellence in teaching and research, enrich local, national and international communities through our research, improve skills of alumni, and to publish academic and educational resources"

To achieve and promote excellence in publications and applied research, the college has taken the initiative to launch a new journal exclusively to publish students' research papers and articles. It will be an add-on to the enriched catalogue of college publications and academic literature.

The Journal has provided an opportunity to the students of our college to focus on research. Since the students were not opened to the research methodologies at the undergraduate level, they were mentored by experienced faculty of our college. Simultaneously, their articles were also reviewed by the referees and tested for plagiarism before publication. After reporting all the suggestions recommended by the referees, the articles were revised and then finally published. The college had successfully released the foundation issue of the Journal **"Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** on the occasion of 91st Annual Day of the College held on 13th April, 2017. The Journal was released by **Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.**

I would like to congratulate the students whose papers are published in this issue of the journal and simultaneously encourage all the students to contribute their research papers and articles for the successive issues of the Journal.

Best wishes for their future endeavors.

Prof. Simrit Kaur
Principal
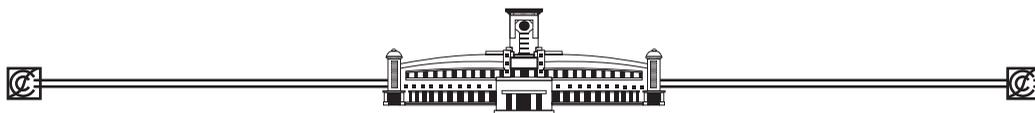
Visit: https://www.srcc.edu/publications/students-publications

Editor's Message

Shri Ram College of Commerce is well known for its academic excellence and dedicated approach towards dissemination of knowledge in the academic world. The college appreciates the role of research in education and is committed to developing an inclination towards research in both faculty and students. In this pursuit, the college has taken the initiative to launch a new Journal named 'Strides - A Students' Journal of Shri Ram College of Commerce' to encourage students to pursue research under the guidance of the faculty of Shri Ram College of Commerce.

It is a bi-annual Journal launched exclusively to publish academic research papers and articles by the students on contemporary topics and issues in the area of commerce, economics, management, governance, policies etc.

In order to maintain the high standards of publication, COPE (Committee On Publication Ethics) has been constituted. The COPE shall be the apex authority to take all the decisions related to the publication of research papers and articles in Strides. The decision of COPE shall be final and binding.

To maintain the high academic standards, academic ethics and academic integrity, a rigorous process of double blind review of research papers is followed along with screening of plagiarism of each manuscript received by the COPE for publication. The research work published in Strides is original and not published or presented at any other public forum.

The foundation issue of the Journal **"Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"** was successfully released on 91st Annual Day of SRCC held on 13th April, 2017 by **Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.**

The successive Issues of 'Strides - A Students' Journal of Shri Ram College of Commerce' shall be bi-annually released.

I congratulate all the students whose research papers are published in this Issue of Strides and express my sincere thanks to their mentors and referees.

Dr. Santosh Kumari
Editor

RESEARCH PAPERS

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Mucharla Sai Pavan Kumar
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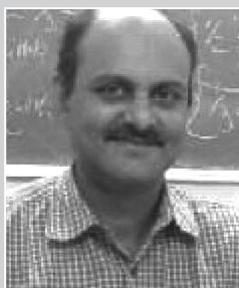
Mentor:
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Assistant Professor
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US – China Trade War and SAARC Nations

Abstract

The paper analyses the impact of the tariff war between US and China on India's trade with SAARC nations by using the vector auto regression (VAR) model and the Granger Causality Test, using time series data from 2009 to 2018. The results indicate that the economic impact of tariff war is insignificant on India's trade with all SAARC nations other than Bhutan. We observe that however insignificant impact might be, there exists a positive impact on all bilateral trades of India with SAARC economies.

Keywords – SAARC Nations, Vector auto regression, Granger Causality, Time series data, positive impact

INTRODUCTION

With the introduction of 1978 economic reforms, China's economy had picked up at a faster rate than a lot of developing countries and emerged as the world's largest manufacturer and major trading power. China's joining in WTO in 2001, enabled it to have free trade with all the countries and the historical savings[1] glut of China enhanced financial outflows to the US. China's potential to produce low-cost products surged the demand

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[1] Savings Glut is a scenario in which desired savings exceeds desired investment. It doesn't mean that there is an increase in savings.

from foreign countries including the USA and the European Union. Economic reforms, low-cost labour and depreciation of Yuan (loosening monetary policy) had contributed to increase in trade imbalance of USA with China.

US President Donald Trump criticized his country's huge deficit with China and attributed it to Country's "unfair" trade practices, such as protectionist measures and infringement of intellectual property rights and patents. Therefore, an investigation was opened by the US Trade Representative (Office of united states trade representative, 2018) and it was found China's trade practices were unreasonable and discriminatory[2]. The structural trade imbalance is the direct reason for provoking trade war by Trump's administration.

According to (Office of USTR, n.d.) US' trade deficit with China is of $419.2 billion in 2018. To counter this trade imbalance, On march 23 2018, President Trump signed an MOU and slapped tariffs of $60 billion on Chinese imports and then on engaged in a tit for tat tariff battle (Breuninger & Tausche, 2019) Since, China and USA are two world's largest economies contributing 12.8 % and 8.5% of global exports and 10.8% and 13.2% of global imports respectively (WTO) and hence the repercussions of this have attracted the attention all through the globe.

The US-China trade war, beginning from March 2018 and extending to present-day is an issue of global concern. It certainly leads to an impact not only on those two countries but also on those which are directly or indirectly involved in trade with them.

With the imposition of tariffs on Chinese electronics, there was an inflation in the US (Kopf, 2019). Similarly, since soya bean was taxed too, the prices went up in China. Clearly, since both these nations have a part to play in payment of the tariffs, there is a direct impact. But, in a world where international trade is an integral part of the global economy, there must certainly be indirect effects on countries involved in trade with these nations. For example, there is an impact of the trade war on bilateral trades between India and SAARC nations. This is because India and SAARC are major trading partners. India occupies almost 70% of the geographical area in SAARC and hence is a key trade partner with almost all these nations. We can clearly see that the in the niche segment of machinery including electronics, Indian exports have gone up by 15.3% from 2017 to 2019. And, countries like Bhutan and Bangladesh have been rapidly importing these commodities in order to keep up with their expanding economies. In a similar way,

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[2] China has followed unfair practices like dumping, discriminatory non-tariff barriers, forced technology transfer, and excessive industrial subsidies.

the exports of Refined petroleum products have increased by almost 34.2% in the mentioned time period and there have been extensive imports in Bangladesh, Sri Lanka and Nepal. This was due to the SAARC Preferential Trade Agreement (SAPTA), giving special preference to certain commodities including refined oil and petroleum products and electronics, by reducing the tariffs. As Chinese electronics were slapped with tariffs, they became less competitive in the USA and also in all the SAARC nations including India. With about 30% share exports to USA, India is likely to have an impact because of the trade war (EximGuru). This leads us to the question, whether there is an identifiable impact on the South Asian Association for Regional Cooperation (SAARC) block nations.

The research paper econometrically analyses the impact using a VAR model and is organized in the following format. Part I includes the review of literature which discusses the research done so far and the lapses. Part II of the paper highlights the research methodology. Part III includes the static and dynamic analyses done to find the impact of the trade war on bilateral trades between India and each of the SAARC nations.

I. REVIEW OF LITERATURE

Since 2018, there have been a number of studies highlighting the impact of US China trade on both major economies and also over the global economy. Itakura (2019) analysed the impact of US-China trade war within the framework of the dynamic computable equilibrium model (CGE) and found that escalation of trade war reduced GDP in China and the USA by −1.41% and −1.35%, respectively and also GVCs[3] played a significant role in determining trade responses. Using deadweight loss and Harberger's triangle, Evans (2019) had shown that the trade war is devastating not just for the US and China, but for the entire global economy.

Apart from all these, there are some pieces of literature figuring the impact of tariff war on EU, BRICS, and ASEAN and soon. By using a vector auto regression model Nidhiprabha (2019) examined the impact on ASEAN countries, especially on the Thai economy and concluded that, with nearly a year of the trade dispute, Thailand's outputs and exports are adversely affected. Also, there is an indirect impact of Trump's tariffs on the global slowdown particularly in Thailand's major trading partners. Misra and Choudhry (2020) evaluated the potential economic effects of the substantial tariff hike by these two major economies on BRICS and ASEAN, particularly on India using vector error correction model found and that

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[3] GVCs refer to the Global Value Chains. They describe the activities involves in the production, supply, distribution and post- sales activities of a good or a service when they have to be coordinated across countries.

the tussle may provide opportunities for India to gain through trade deflection in the short-run or medium run. But, in the long run, further escalation of tariffs will have a negative impact.

Also, there has been substantial research on US-China trade war impact on most of the economies in Latin America (Canuto, 2019), Africa (Kohnert, 2018), EU (Goulard S., 2020), ASEAN, BRICS. Hence, this paper aims to find out the effect of the tariff war between the US and China on India's trade with SAARC countries, using economic intuition and econometric models (VAR model and Granger causality). An in-depth analysis on SAARC countries and not all of the third world representatives has been performed as there has been a lot of research on Sub Saharan Africa, Latin American countries and ASEAN countries. After the South Asian Free Trade Area (SAFTA) agreement among the SAARC countries in 2006, the amount of bilateral trade between India and each of these countries have gone up substantially. Having about $25 billion worth of trade with India, SAARC seemed like a set of countries which would have notable impact of this trade war.

II. RESEARCH METHODOLOGY

In order to analyse the impact of the US China trade war on the SAARC countries, we have taken the data of the Bilateral trade between each of the SAARC countries and India from 2009 to 2018 (Source: UNCOMTRADE)[4]. We did not consider the values before 2009 because the year 2008 was a major crisis[5] for all of the countries involved and would cause a structural break[6] in the time series.

Making India the node, we have seen if the foreign trade is positively or negatively affected in these countries, if at all there is an affect. We have performed analysis at three levels in the paper. The first level includes analysis of the impact on the two nations USA and China. This has been done using the import and export trends between the countries from 2009 to 2019, and also by performing a regression between the volume of imports from China and the inflation rate in the electronic goods market in the USA.

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[4] UNCOMTRADE is the pseudonym for United Nations International Trade Statistics Database. Over 170 reporter countries/areas provide the United Nations Statistics Division (UNSD) with their annual international trade statistics data detailed by commodities/service categories and partner countries. More can be found at: https://unstats.un.org/unsd/tradekb/Knowledgebase/50075/What-is-UN-Comtrade

[5] 2008 crisis is considered as the worst global financial crisis after the great depression of 1920s. This crisis led to a great recession where the house prices plunged lower than they did anytime else.

[6] A structural break is an unexpected change over time in the parameters of regression models, which can lead to huge forecasting errors and unreliability of the model in general. Hence, either corrections are made to normalize the effects of the break or the data from the period is dropped. The proof for same is attached in the appendix A.

The second one includes the static analysis where in, the volumes of bilateral trades between India and SAARC nations, as well as USA and China, before and after the implementation of tariffs at two different points in time, namely May 2018 and July 2019 have been considered. The third one includes the dynamic analysis the VAR model and Granger causality have been used to find a more detangled impact of the trade war on the mentioned bilateral trades.

III. THE ANALYSIS

A. THE IMPACT OF TRADE WAR ON USA AND CHINA

Before analyzing the impact of the trade war on the Indian trade with SAARC nations, by taking a look at the impact it has caused on the countries directly involved in the war, i.e. the USA and China, we try to find the direct impact. To do the same, a relationship between inflation in the electronic goods market in the USA and the number of imports they have from China is found. It is only natural that there will be an impact as these goods are being imposed with substantial tariffs. Since not all of the tariffs are borne by the exporters in China, and the importers, at times, even the consumers have to pay a higher price so that the traders still make profits. The following plot shows the relationship between the Inflation rate in the USA and the volume of imports from China.

Figure 1: Regression Plot between Inflation in the US and Volume of Imports from China.
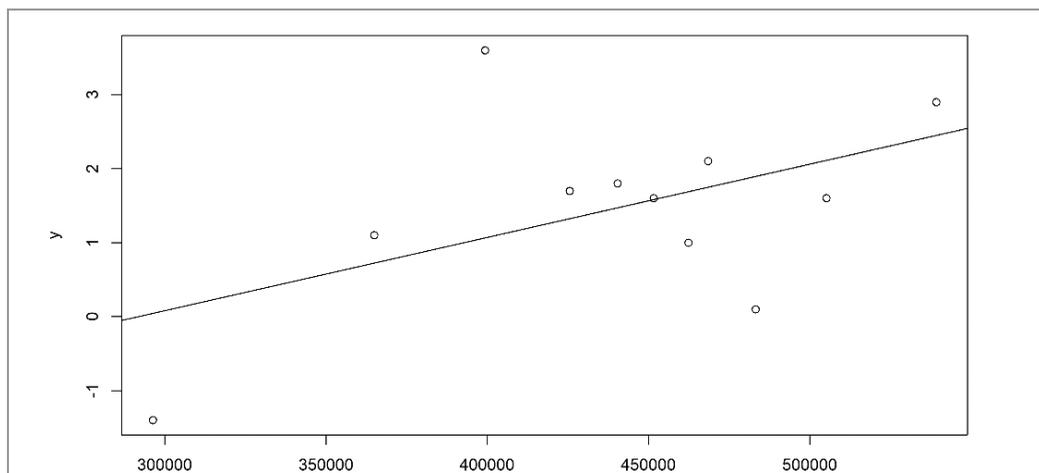
X - axis: Rate of inflation

Y - axis: Value of imports from China

Graph 1 shows that there is positive relationship between the rates of inflation in the US and the value of goods imported from China.

The following is the regression line:

Y= 1245303 + 455259X + Et

Value of imports: Y, Inflation rate: X

The graph indicates that as the value of imports from China increases in the USA, the prices in the USA for those goods also go up. But this does not indicate that there is a one to one causative relationship.

Figure 2: The Imports and Exports Between USA and China
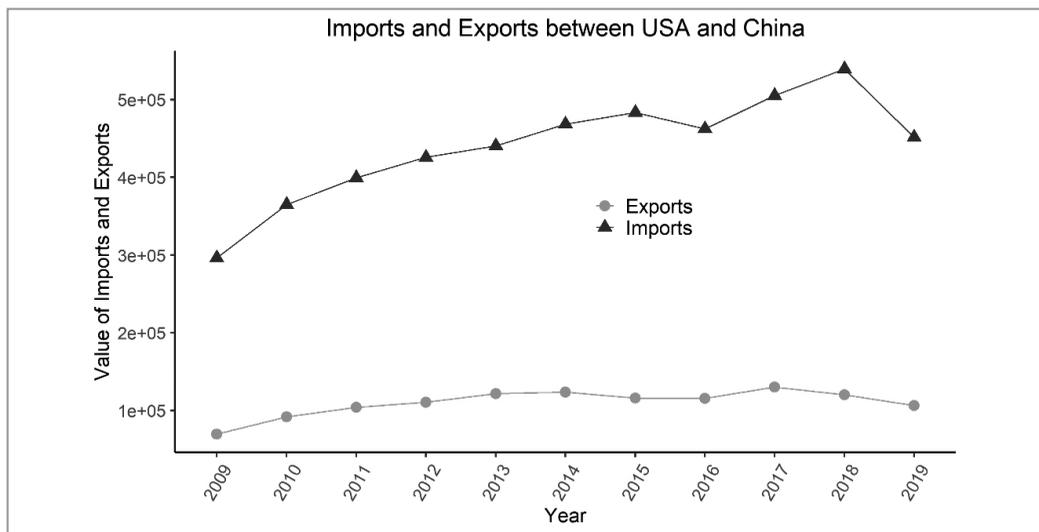
Source: UNCOMTRDADE

Graph 2 shows the import and export trends between USA and China from 2009 to 2019. We can see that the trends in exports and imports, considering the graph are fairly random and hence, this is not conclusive proof that there exists a relationship between the imposition of tariffs and the change in the volume of trade between these countries..

B. STATIC ANALYSIS

Now, the volumes of all bilateral trades between India and SAARC countries, as well as with USA and China to get a cursory view of the impact caused by this war are considered.

To analyze impact on Indian trade with SAARC countries, the USA and China, the static analysis of India's bilateral trades is done by using volumes of trade before and after tariff imposition, by the USA against China. For analyzing the same, two tariff implementation months (July 2018 and May 2019) have been taken and the trade volumes before and after the imposition of tariffs by looking at quarterly data are compared. The following table shows the changes in bilateral trades between India and SAARC nations, USA and China. The charts hereunder show the change in the export and imports captured by these nations.

Table 1: The Changes in the Bilateral Trade between India and SAARC Nations as well as USA and China

Indian Net Exports with the Countries named	Change in Exports Pre and Post tariff imposition (Pre-July 2018 and Post May 2019)	Change in Imports Pre and Post tariff imposition (Pre-July 2018 and Post May 2019)
China	-$0.02 BN	$0.185BN
USA	$0.858 BN	$1.059 BN
Bangladesh	-$0.449BN	$0.085 BN
Afghanistan	-$0.051 BN	$0.030 BN
Sri Lanka	-$0.268 BN	-$0.319BN
Bhutan	$0.004 BN	-$0.011BN
Nepal	-$0.029 BN	$0.083 BN
Pakistan	-$0.267BN	-$0.102BN
Maldives	-$0.012BN	93,077 thousands

Figure 3: The Share of US and Chinese Exports in India's Total Before July 2018
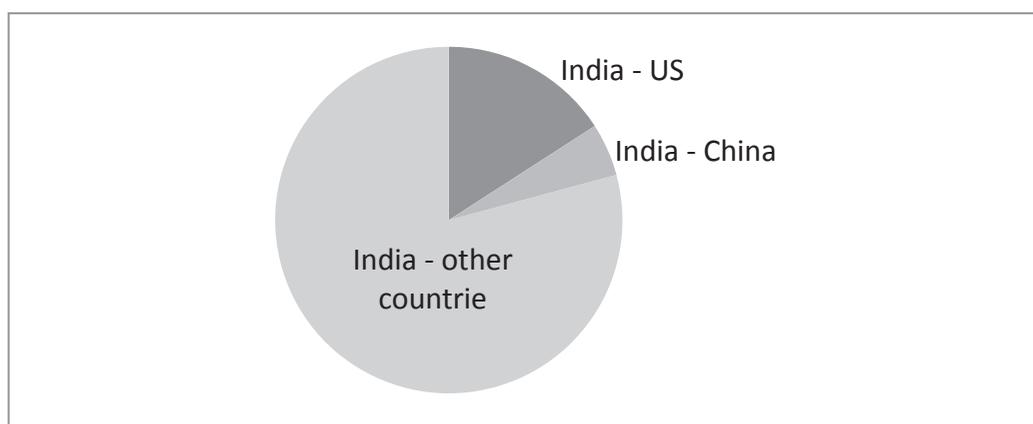
Figure 4: The Share of US and Chinese Exports in India's Total After May 2019

India - US

India - China

India - other
countrie
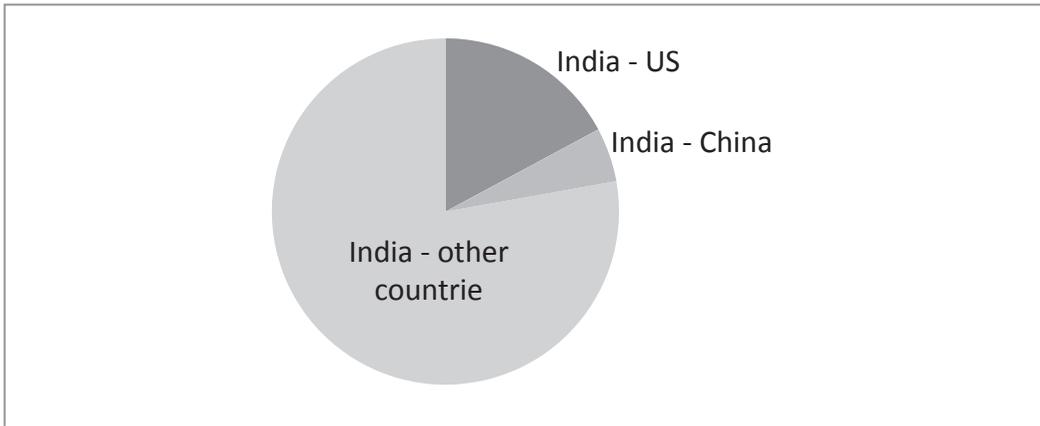
Figure 5: The Share of US and China Imports in India's Total Before July 2018

India - USA 7%

India - China 14%

India - Other
Countries 79%
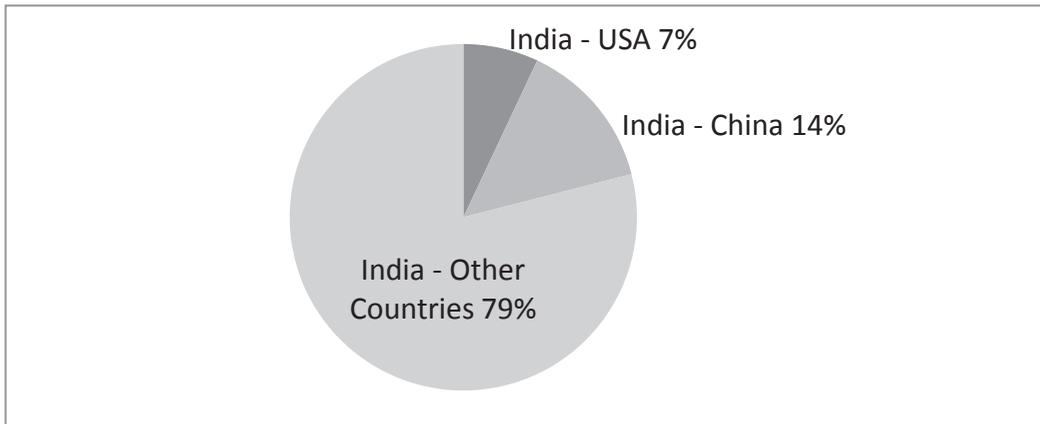
Figure 6: The Share of US and China Imports in India's Total After May 2019

India - USA 7%

India - China 15%

Remaining
78%

Source: UNCOMTRADE
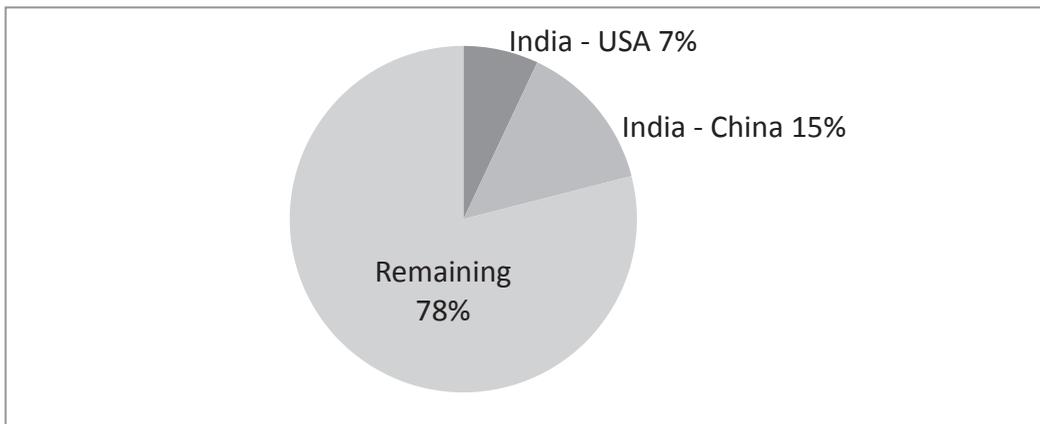
The graphs 3 and 4 show that, the share to China in India's total exports has increased from 16% (pre-July 2018) to 17% (post-May 2019) and the share to the USA has remained almost the same i.e. 5%. The graphs 5 and 6 show the share of imports from China has remained virtually the same. (7%) and that from the USA has risen slightly. (14% pre-July 2018 to 15% post-May 2019).

From the table 1, graphs 3 to 6, it can be inferred that for no country there is size able impact. Since increase or decrease can also be attributed to factors such as the size of the country's GDP, cordiality between few countries, and importantly volatile exchange rate[7] among others, we cannot be specific that the respective change is due to tariff war. There hasn't been any drastic change in the trend of imports and exports of India with SAARC, USA and China. In order to get a more detangled impact of the trade war on SAARC, we move forward to analyzing time series and dynamictrends.

C. DYNAMIC ANALYSIS

In order to find whether there exists an impact of the US-China trade war on SAARC countries or not, and if it does, how prominent it is, just assessing the trade flows is insufficient. Hence, a dynamic analysis using VAR model considering all the SAARC countries apart from Nepal was done. Nepal was excluded as the variable, 'net exports to Nepal from India', has a co-linearity with one of the other variables and hence did not add any significance to the dataset. A trend Vector Auto Regression (VAR) Model has been used to do the analysis. This model rests on the fact that the value of a given variable in time period t, depends not only on its value in the erstwhile time periods or lagged time periods, but also on the other variables which are in the model. Here, the value of net exports to one country depends on the value of net exports in the same country in the previous years and also on that of the value of net exports to other countries it is involved in trade with. The Akaike Information Criterion (AIC) has been used to choose the time lag as 1 period. (1 year in this case).

The above method was used as it estimates the errors for both the risks of over fitting and under fitting values. The estimated coefficients from the model, are found using the natural logarithms of the trends, as the Granger causality can be used only for stationary values and not dynamic trends. Vector Auto Regression (VAR) model is used in order to find if the variables we have chosen

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[7] Exchange rate volatility refers to the ever changing value of currencies of all countries, over time against one another. The test to rule out the possibility of the trade volumes being impacted by the exchange rate volatility is attached in appendix B.

are correlated or not, taking a relationship between the bilateral trade in the past between India and the country and that with other countries too. This model was chosen because it not only helps us analyze the impact of the values of time series based on itself but also on other related time series. It often provides superior forecasts to those from uni-variate time series models and elaborates simultaneous equations models. The coefficients indicated both positive and negative relationships between these trades. But correlation wouldn't imply a causative relationship. Granger causality proves causative relationship. Hence, we found the p - values and conducted the t- test for each of the variables, to find out if the results are significant or not at 1 percent level of significance. The following is the general regression equation we obtain through the VAR model.

$$y_i = y_1.A_1 + y_2.A_2 + y_3.A_3 + y_4.A_4 + y_5A + y_6.A_6 + y_7.A_7 + y_8.A_8 + y_9.A_9 + E_i \ (\ i=1,2...9)$$

Table 2: The List of Explanatory and Explained variables in the Regression Model

Eq	Explained variable	Explanatory variable
1	The total trade between India and SAARC nations as well as USA and China	The total trade in the time periods before the current one (t-1)
2	Bilateral trade between India and China	Bilateral trades between India and all other countries mentioned below including past trends in India
3	Bilateral trade between India and USA	Bilateral trades between India and all other countries mentioned below including past trends in India
4	Bilateral trade between India and Bangladesh	Bilateral trades between India and all other countries mentioned below including past trends in India
5	Bilateral trade between India and Maldives	Bilateral trades between India and all other countries mentioned below including past trends in India
6	Bilateral trade between India and Afghanistan	Bilateral trades between India and all other countries mentioned below including past trends in India

7	Bilateral trade between India and Pakistan	Bilateral trades between India and all other countries mentioned below including past trends in India
8	Bilateral trade between India and Bhutan	Bilateral trades between India and all other countries mentioned below including past trends in India
9	Bilateral trade between India and Sri Lanka	Bilateral trades between India and all other countries mentioned below including past trends in India

The countries: China, USA, Bangladesh, Maldives, Afghanistan, Pakistan, Bhutan, Sri Lanka.

The table below comprises of all the regression coefficients obtained by using a VAR model on the data of the bilateral trades between India and SAARC nations as well as USA and China. The time series is taken from the year 2009 to the year 2018.

Table 3: The Estimated Coefficients using the VAR Model with 1% LOS and max lag 1

Eq	Past lags with India	China	USA	Bangladesh	Maldives	Afghanistan	Pakistan	Bhutan	Sri Lanka
eq 1	5.14053	-5.2518	-4.722	2.1288	-1548	-107.989	27.08402	- 51.2604	-23.2984
eq 2	-10.4571	10.17	4.189	-2.7515	3020	141.641	-61.22	95.686	52.89542
eq 3	5.14053	-5.2518	-4.722	2.1288	-1548	-107.989	27.08	-51.26	-23.2984
eq 4	-0.92314	0.7868	-0.544	1.1078	258.3	11.9288	-5.439	16.285	4.26444
eq 5	-0.24277	0.2656	-0.482	0.6466	77.18	3.87234	-1.55	13.768	1.946633
eq 6	0.06211	-0.063	-0.005	-0.0123	-18.78	-1.1354	0.412	-0.8977	-0.31758
eq 7	0.190733	-0.1857	-0.022	-0.014	-57.86	-2.75371	1.215	-3.2235	-0.94885
eq 8	0.150651	-0.198	0.2034	-0.2726	-60.24	-1.1452	1.029722	- 0.78278	-0.49164
eq 9	0.049453	-0.0448	0.03	-0.0468	-11.58	-1.0657	0.268303	- 1.09103	-0.26206

To interpret the results of the estimation using our VAR model, the Granger Causality has been used. Granger Causality rests on the foundation that regression simply focuses on the correlation between the variables but doesn't necessarily imply a causative relationship. In order to test if the values of a time series help in predicting the values of another time series, this comes into the picture. It is assumed that the post hoc fallacy (If event X has occurred before event Y, X might have caused Y) holds true. The above table represents the values obtained from the VAR estimation. Considering the Granger Causality, we have first the values which are significant according to the T-test. (We have used 1% LOS). The following are the p- values for each y_i for all i = 1,2,3,4,5,6,7,8.

Table 4: The P-values with 1% LOS

Y	p value
1	0.0453
2	0.01947
3	0.03714
4	0.2109
5	0.0548
6	0.0343
7	0.00007673
8	0.0744

From Table 4, it can be noted that only for the variable y_7, Bhutan, there is a statistically significant Granger causality, as the p-value < 1%. Their top import commodities are oil and fuels, machinery and electrical appliances, vehicles and the same from China are electronic equipment, machinery, nuclear reactors etc. (Trading economics, n.d.). The rise in Indian exports to Bhutan can be attributed to the imposition of 25% tariffs on machinery and electronic goods by the USA. (Factbox: Next rounds of Trump's tariffs on Chinese goods to hit consumers, 2019) Justifying the same, according to the annual report of the department of commerce, 2018-19, there had been 38.29% and 18.09% growth in Indian exports of electronic items and machinery respectively (Annual report 2018-19). This shows that commodities of one country when imposed with tariffs, (China) enable countries like Bhutan to shift to other countries like India to meet their increasing demand. This may have also occurred due to the decrease in the production of the electronic goods in China due to reduced demand for exports, as these goods now render more expensive relatively, in the USA.

Supplementing the reasons, the BJP led government in its tenure from 2014 announced the neighbourhood first policy trying to keep cordial ties with Bhutan and almost around 80% of the imports in Bhutan are from India. Hence, the slightly positive effect of the US-China trade war on India caused a rise in exports to Bhutan i.e., from about 80% in 2013 to 84% in 2018 (Embassy of India, n.d.)

We can see that the next sizeable impact is on the bilateral trade between India and USA. From the volumes of trade, we can see that India has an increase of over 3 million dollars in the net exports.(Foreign trade, n.d.)The probable reason for this is that imports from China are more expensive than before for the traders in USA as the tariffs are borne partially even by them. This gives India an opportunity to capture the market in USA. India's top ten exports include electronics and machinery at about 6.3% and the volume of exports of electronics and machinery has gone up. It only seems natural that the exports to USA must have increased as China fell short in the area and India, partially captured that market in the USA. The Indo-US trade agreement and seemingly cordial relations between India and USA also add on this.

With the other countries, there hasn't been significant impact in the trade volumes over the years and hence we can safely conclude the trade war did not create a notable advantages or disadvantages. Binding all these SAARC countries along with the countries in the trade war, we can see that the overall impact has also not been very significant as p-value turned out to be 0.04378. Leaving aside US and China and considering the SAARC countries, we can see that the p-value is 0.07685 which is also insignificant.

CONCLUSION

This study discusses the impact of the US-China trade war on the directly involved countries and its spillover effect on the third world countries, precisely focusing on Indian bilateral trade with the SAARC nations. To encapsulate, though US-China trade war may provide some opportunities for countries like India, through the supply side, appropriating the same can depend on various factors such as the size of the economy with which India is trading, share of Indian trade with the countries and also the commodities that India export or import from them.

In 2018, out of total world exports, Indian exports contributed 1.67% collectively. From graph 7 we can see that only 8% of Indian total exports are to SAARC nations (0.13% of world exports). Hence, there isn't a sizeable impact on Indian exports to these countries, unless commodities subjected to imposition of tariffs are a major part of the bilateral trade, as in the case of Bhutan.

Figure 7: Share of Concerned Countries in India's Total Exports (2018)
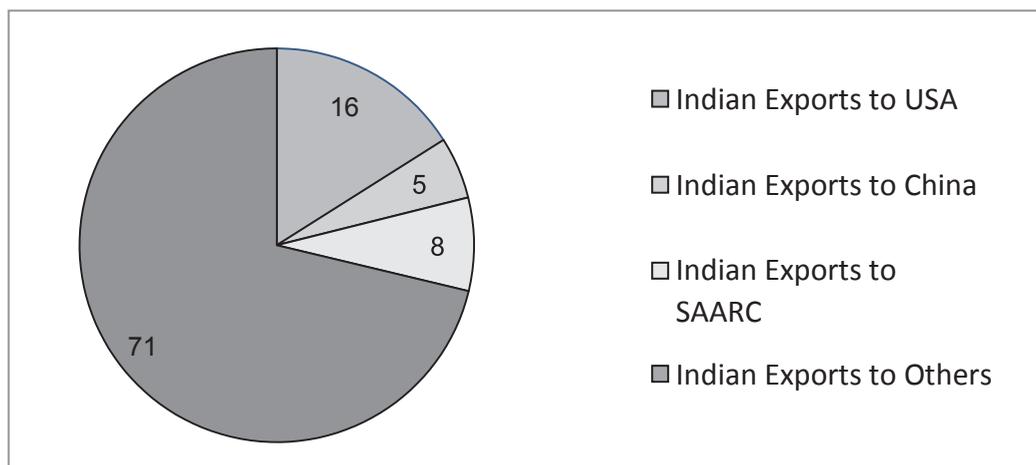
As we come down to the United States, India is slowly trying to capture the market gap created due to lesser imports from China after the trade war.

About 61% of India's exports were from mineral fuels, precious metals, organic chemicals, machinery, iron, steel, cotton, and clothing. Hence the goods directly impacted by trade war didn't contribute much to bilateral trades with the SAARC countries, rendering the impact of this trade war almost negligent.

APPENDIX

(A) The F-test was conducted considering the data from the year 2001 to the year 2018. (At 1% LOS)

H0: There is no structural change in the bilateral trade

H1: There is a structural change in the date

From the test, p value is < 2.2e-16, meaning that the null hypothesis is false. Hence, there is a structural change. We find that the breaks are at the 3rd and 8th observations in the data, referring to the years 2003 and 2008.

(B) The following is the equation: **log(India) = A + B_i log X_i + E_i**

where Bi represents the estimates for each country and Xi represents the countries.

Names of the countries have been used instead of the "change in the value of the currency of the country named".

Eg: India, here means, the change in the value of Indian Rupee.

	Estimate	Std. Error	Pr(>|t|)
Intercept	-2.3367	0.5511	0.0514
USA	3.297	6.788	0.08322
China	0.2049	0.2221	0.4536
Sri Lanka	0.1036	0.4047	0.8219
Pakistan	0.0434	0.2259	0.8654
Afghanistan	0.4426	0.3192	0.2999
Bangladesh	0.4583	0.1541	0.0948
Maldives	1.1089	0.3378	0.0816

None of these have a p value less than 0.01. Residual standard error: 0.124

Adjusted R-squared: 0.1405

p-value: 0.2679

This means that the impact of the volatile exchange is statistically insignificant on the trade.

Table 5: Indian Net Exports to China, USA, Nepal from 2009 to 2018

Year	China*	USA	Nepal
2018	($57,229,380,334)	$18,945,673,937	$6,904,364,371
2017	($59,427,517,358)	$21,931,920,008	$5,104,487,217
2016	($51,567,030,333)	$21,597,233,165	$4,140,909,174
2015	($52,027,847,949)	$19,849,051,925	$2,705,569,204
2014	($44,796,295,788)	$22,245,012,609	$3,632,674,095
2013	($35,218,618,309)	$19,356,391,356	$2,799,511,002
2012	($39,411,138,813)	$13,065,244,614	$2,279,721,413
2011	($38,765,239,103)	$10,345,160,060	$2,051,695,643
2010	($23,809,124,508)	$4,491,154,710	$1,399,215,264
2009	($20,243,318,196)	$3,129,776,770	$911,024,768

*The red numbers, in the brackets, show negative trade balance.

Table 6: Indian Net Exports to
Bangladesh, Maldives, Afghanistan from 2009 to 2018

Year	Bangladesh	Maldives	Afghanistan
2018	$7,850,561,513	$199,234,116	$18,401,205
2017	$6,618,523,784	$205,769,112	$120,890,423
2016	$4,991,694,791	$173,900,515	$190,699,582
2015	$4,881,619,075	$161,765,133	$216,538,706
2014	$5,737,955,823	$135,137,090	$199,155,030
2013	$5,463,198,419	$120,158,833	$300,333,409
2012	$4,369,365,119	$114,230,173	$395,876,600
2011	$2,826,390,089	$100,317,312	$384,455,051
2010	$2,658,678,437	$68,117,928	$248,900,130
2009	$1,942,953,557	$105,952,747	$351,077,597

Table7: Indian Net Exports to
Pakistan, Bhutan and Sri Lanka from 2009 to 2018

Year	Pakistan	Bhutan*	Sri Lanka
2018	$1,798,898,195	$399,797,164	$3,343,497,295
2017	$1,320,006,572	$194,685,945	$3,749,762,085
2016	$1,131,502,002	$246,882,547	$3,485,980,901
2015	$1,507,127,958	$180,200,410	$4,652,233,768
2014	$1,640,092,751	$56,019,927	$5,842,961,149
2013	$1,797,251,246	$24,602,676	$4,238,672,043
2012	$1,133,019,614	$1,485,886	$3,147,667,233
2011	$1,326,020,320	$13,398,696	$3,734,059,355
2010	$1,915,061,708	($26,475,673)	$2,787,001,211
2009	$1,183,652,675	($32,414,639)	$1,395,833,435

* The red numbers, in the brackets, show negative trade balance.

Table 8: The exchange rates of currencies of the considered nations against the rupee taken on 31 May every year

Year	China	USA	Bangladesh	Maldives	Afghanistan	Pakistan	Bhutan	Sri Lanka	India
2011	0.13	0.022	1.65	0.28	0.96	1.89	1	2.44	1
2012	0.11	0.017	1.43	0.26	0.86	1.69	1	2.34	1
2013	0.09	0.016	1.31	0.25	0.98	1.62	1	2.15	1
2014	0.1	0.0157	1.27	0.256	0.95	1.69	1	2.14	1
2015	0.09	0.015	1.65	0.227	0.91	1.59	1	2.1	1
2016	0.1	0.0146	1.16	0.236	1.02	1.54	1	2.17	1
2017	0.09	0.0152	1.29	0.24	1.055	1.66	1	2.38	1
2018	0.08	0.013	1.16	0.21	1.07	1.86	1	2.31	1
2019	0.1	0.014	1.17	0.214	1.14	2.36	1	2.53	1

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HISTORY OF THE JOURNAL

The idea to launch this Journal was discussed in December 2016 by the former Officiating Principal, **Dr. R. P. Rustagi** with **Dr. Santosh Kumari,** the Editor of the Journal. Since the idea appealed to **Dr. Santosh Kumari**, she took the initiative to contribute to SRCC by creating this new academic research Journal and took the responsibility for its Creation, Registration, License and ISSN (International Standard Serial Number) etc. along with *Editorship*. Therefore, **Dr. Santosh Kumari, Assistant Professor in the Department of Commerce, Shri Ram College of Commerce** was appointed as the Editor of the Journal vide. Office Order – SRCC/AD-158/2017 dated March 14, 2017. She meticulously worked hard in creating the concept and developing the structure of the Journal. She introduced the concept of COPE (Committee On Publication Ethics) to maintain the high academic standards of publication.

On behalf of SRCC, **Dr. Santosh Kumari** made every effort in seeking License from Deputy Commissioner of Police (Licensing), Delhi to register the Journal at "The Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India". The paper work for seeking license started under the former Officiating Principal, **Dr. R.P. Rustagi** on March 27, 2017. The foundation Issue of the Journal "**Strides – A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17**" was successfully released on the 91st Annual Day of SRCC held on April 13, 2017 by **Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India**. The title of the Journal got verified and approved by the Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India on April 21, 2017. On September 1, 2017, **Prof. Simrit Kaur** joined SRCC as Principal and signed each and every legal document required for further processing and supported **Dr. Santosh Kumari**.

On December 18, 2017, the College got the license "**License No. - DCP / LIC No. F. 2 (S / 37) Press / 2017**" to publish 'Strides – A Students' Journal of Shri Ram College of Commerce'. Due to change of Printing Press, the License got updated on March 09, 2018. On April 26, 2018, the SRCC Staff Council unanimously appointed **Dr. Santosh Kumari as the 'Editor of Strides'** for the next two academic years.

On April 27, 2018 (The Foundation Day of the College), **Dr. Santosh Kumari** submitted the application for the registration of the Journal. On May 04, 2018, the SRCC received the '**Certificate of Registration**' for **"Strides – A Students' Journal of Shri Ram College of Commerce"** and got the **Registration No. DELENG/2018/75093** dated May 04, 2018. *On behalf of Shri Ram College of Commerce, it was a moment of pride for Dr. Santosh Kumari to receive the 'Certificate of Registration' on May 04, 2018 at the Office of Registrar of Newspapers for India, Ministry of Information and Broadcasting, Government of India (website - www.rni.nic.in).*

On May 07, 2018, **Dr. Santosh Kumari** submitted the application for seeking ISSN (International Standard Serial Number) at "ISSN National Centre – India, National Science Library, NISCAIR (National Institute of Science Communication and Information Resources). Weblink - http://nsl.niscair.res.in/ISSNPROCESS/issn.jsp". Finally, the College received the International Standard Serial Number "**ISSN 2581-4931 (Print)**" **on June 01, 2018.**

We are proud that this journal is an add-on to the enriched catalogue of SRCC's publications and academic literature.

STRIDES - A STUDENTS' JOURNAL OF SHRI RAM COLLEGE OF COMMERCE
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RELEASE OF FOUNDATION ISSUE OF STRIDES

Foundation Issue of the Journal *"Strides - A Students' Journal of Shri Ram College of Commerce, Volume 1, Issue 1, 2016-17"* was successfully released on the 91st Annual Day held on April 13, 2017 by Shri Prakash Javadekar, Honb'le Union Minister of Human Resource Development, Government of India.

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