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INDIA'S EXPORT POTENTIAL WITH NON-ASEAN RCEP NATIONS-AN EMPIRICAL ESTIMATION

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ABSTRACT

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In November 2019, India decided to pull out from the Regional Comprehensive Economic Partnership (RCEP), initiated in 2012 to create a common trade block comprising 10 ASEAN nations along with Australia, China, India, Japan, Korea P R, and New Zealand. India already has free trade agreement (FTA) with ASEAN nations. In this backdrop, it becomes quite interesting to know about India's export potential with Non-ASEAN RCEP nations. Since India has significant scope in export of services, this paper aims to assess India's merchandise export potential with Non-ASEAN RCEP countries, viz. Australia, China, Japan, Korea P R, and New Zealand. The gravity model of international trade is employed to estimate India's merchandise export potential with these nations. Panel data on India's merchandise exports, spanning from 2005 to 2018, have been employed and results are based on pooled effects, random effects and fixed effect methods of OLS estimation. The study shows that India seems to have merchandise export potential with China only, while no merchandise export potential seems to exist with Australia, Japan, Korea and New Zealand. The finding of this research would be useful for academics, industry experts and government policy makers.

KEYWORDS: *Gravity Model, Export Potential, ASEAN, RCEP, India*

***JEL Classification*: F1, F12, O24**

I. INTRODUCTION

November 4, 2019 shall go down as an historic milestone for India's audacious decision to stay away from the Regional Comprehensive Economic Partnership (*RCEP).* Some experts, in addition to the government, have maintained that the reason for the walkout is India's adverse trade balance. However, many critics view this as a protectionist step. Though the disagreement has been on trade in services, main concern has been trade deficit with Non ASEAN RCEP nations, particularly China. Table 1 shows the trade statistics of India with these nations for 2018-19. It is clearly evident that India has trade deficit with all these nations. China alone accounts for more than 60% of total trade deficit with these countries.

Table 1
India's Trade, 2018-19 (Millions of U.S. $)

Country	Exports	Imports	Trade Balance
Australia	3520.44	13131.21	-9610.77
China	16749.59	70319.55	-53569.96
Japan	4861.73	12772.64	-7910.91
Korea P R	4705.07	16758.76	-12053.69
New Zealand	379.87	630.78	-250.91
Total	30216.70	113612.94	-83396.24

Source: http://commerce.app.gov.in/eidb

In 2010, when ASEAN-India trade agreement was signed, the service sector- which is India's forte- was not included in the agreement, and it took the negotiating parties another five years to hammer out a deal on services and investment. India's trade deficit with ASEAN members has widened over the years.

India's trade experience with ASEAN nations was a point worth considering in not joining the RCEP. There were

several reasons why India has been disenchanted with the terms of the RCEP agreement, one of which is that RCEP participating countries had not been coming adequately to trade in services, especially in areas of India's interest involving the movement of professionals. India withdrew from the largest ever free trade agreement, the Regional Comprehensive Economic Partnership after a horde of stake holders, including farmers' organisations, trade unions, and industry associations spoke in one voice on the hostile implications of the agreement.

India's agriculture is largely subsistence based and tormented by low levels of modern technology, packaging, processing and storage facilities. By opening it up to competition from much more advanced agriculture producers in Australia, New Zealand and Japan would have led to an economic and social crisis in India. The Indian government's decision safeguards vulnerable section of the economy, as well as medium and big industries, from facing competition for the time being.

India has three FTAs with the members of ASEAN, Korea and Japan, which were projected to increase India's exports. Since Indian Enterprises lack competitiveness exports did not increase, but imports from the partner countries expanded, leading to the losing of domestic manufacturing.

India had raised concern of increasing trade deficit with China. In 2018, China started exporting goods via Hong Kong, in an attempt to make cosmetic change to balance of trade situation with India. This would be a violation of rules of origin provisions, if a fair free trade mechanism comes into force.

If trade in services has been in RCEP agreement at the same level as agreement on trade in merchandise, there is no doubt that India would have benefitted a lot on trade services with RCEP countries. Unfortunately this could not happen. Now the question is: had India benefitted on merchandise export front if it has been in RCEP? This question can probably be answered if we assess the trade potential for India in merchandise export with Non-ASEAN RCEP countries. Hence, the study of export potential with these countries becomes interesting. This is the main objective of this paper.

Remainder of the paper is organised as follows: In the next section, a brief review of literature on the application of gravity model to international trade flows is carried put. In section three, an outline of the approach, methodology and data sample for estimation of the gravity model is presented. Results are presented in section four. In section five, India's trade potential with Non-ASEAN RCEP countries has been analysed. Concluding remarks are made in the section six. Data descriptive statistics is given in Appendix 1.

II. REVIEW OF LITERATURE

There are various models of applied research to study the bilateral trade patterns and relationship among the countries. One such model namely- gravity model of international trade is quite popular. It can be used both for aggregate bilateral trade and for product level trade. Christie (2002), Hassan (2001), Batra (2006), Oguledo and Macphee (1994), Pradhan (2006) and some others are the popular studies which have tried to examine trade potential, trade determinants, direction of trade and trade enhancing impact between countries. The gravity model of trade has been used both with cross section as well as panel data.

Christie (2002) paper estimates a classical gravity model for trade on aggregate trade volumes between OECD and transition economies. The results are used to analyse and make projections on trade flows into and out of Southeast European countries following scenarios on potential GDP level and possible membership of institutions. Alternative variables are also tested, namely transport times instead of geographical distance, and GDP in PPP instead of nominal. The striking feature that emerges in the study is that in Southeast Europe flows are of extreme values, in some cases far below, but in others far above, as shown by classical gravity model of trade.

Hassan (2001) study estimates a gravity model of international trade to examine whether intra-SAARC trade is lower or higher than what is predicted by an economic model. This gives an idea about the structure of comparative advantage in the SAARC countries that helps to explain why intra-SAARC trade is low and how trade among them can be increased. It also helps to understand the possibility of trade creation and trade diversion effect resulting from South Asian Preferential Trading Arrangements among SAARC countries. The results suggest that SAARC member countries are yet to achieve trade-creating benefits. It has been suggested that appropriate policies need to be formulated for more regional integration. Liberalization of trade in SAARC countries offers significant gains for all the economies in the region. It would be better to liberalize border trade and strengthen bilateral trade relations through the removal of tariff and nontariff barriers in the general framework of South Asian Preferential Trading Arrangements.

Batra (2004) paper attempts to estimate India's trade potential with 153 countries. The study uses an augmented gravity model to first analyse the world trade flows and the coefficients thus obtained are used to predict trade potential for India. The gravity model has been estimated using the OLS techniques with cross section data for the year 2000. The variables have been in the log form. The gravity equation fits the data and delivers precise and plausible income and distance elasticities and estimates for other geographical and historical characteristics. All the three of the traditional gravity effects are intuitive reasonable. The study also shows that historical and cultural similarities also impact positively upon bilateral trade.

In Oguledo and Macphee (1994) study Gravity Models are used to estimate trade flows from 162 countries into 11 major European importing countries for 1976, counting the EC as one. The main theories underlying gravity models are reviewed and a new gravity model is derived from a linear expenditure system. In this model both tariffs and dummy variables for discriminatory arrangements are incorporated. Price variables are also plainly included in the model. The study finds tariff and the dummy variables statistically significant and this indicates that previous gravity model studies which used dummies to estimate the trade benefits of preferential tariffs may not have precisely estimated the effects of the preferences. The price variables generally have also been found to be statistically significant.

Pradhan (2006) study estimates the magnitude of India's export potential to the six-member Gulf Cooperation Council (GCC) countries, namely- Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). The study has used an augmented gravity model to analyse India's world export flows and the coefficients thus obtained are incorporated to predict India's export potential to the six-member GCC countries. This model has been estimated using the ordinary least square (OLS) technique with panel data. A

work horse gravity model has been developed to estimate India's trade flows with 150 countries. The workhorse (augmented) gravity model shows that the magnitude of India's export potential is highest with Oman, followed by Qatar, Bahrain, and Kuwait. Moreover, when the regional trading (RTA) dummy is replaced with the value of one, i.e., presuming there is an RTA; the results show sharp increase in the magnitude of India's export potential to Oman, Qatar, Bahrain and Kuwait.

Sharma and Chua (2010) study draws some light on the economic integration and intra-regional trade in the ASEAN countries, namely Indonesia, Malaysia, Philippines, Singapore and Thailand. To accomplish this purpose, a gravity model is estimated for each of the five ASEAN countries based on the data from 1980 to 1995. The study reveals that the trade in ASEAN countries increases with the size of the economy. The ASEAN integration scheme has not increased intra-ASEAN trade, but an increase in trade occurred with members of a wider APEC group.

Wani and Dhami (2016) study covering 22 years from 1995 to 2016 has analysed the trade potential of India against BRCS economies (Brazil, Russia, China and South Africa). The gravity model has been employed. The study has used panel data. The extraneous variable is bilateral trade between pair of countries. Whereas, independent variables include GDP, GDP per capita, population, distance and regional trading agreements. OLS estimation has been employed to derive the results. The results show that considerable trade potential exists for India on individual basis.

Ahmed and Kaur (2019) study estimates India's trade potential with the Arctic Council countries using an augmented gravity trade model. They employ panel data of merchandise exports for the period 2005-17 and use pooled effects, random effects, fixed effects and first difference effects methods to derive the results. The finding reveals that in both basic as well as augmented model estimation and with either fixed effect or first difference effects, India has the potential to increase its exports to all the eight countries. However, the results are different in cases of using pooled and random effects.

III. DATA SOURCES AND METHODOLOGY

The gravity model is a very popular econometric model in international trade. The model has a lineage that goes back to Tinbergen (1962) and Poyhonen (1963) and is specified as given in equation (1) below:

$$X_{ijt} = C\frac{Y_{it}Y_{jt}}{T_{ijt}}$$

Where,

X_{ijt}: Exports (or trade) from country i to country j

C: Constant,

Y: Gross Domestic Product (GDP) of partner country and

T_{ijt}: Trade cost between country i and country j (distance, adjacency and policy factor etc.)

Exports or trade between two countries depends on their economic masses and negatively related to trade costs between them. The basic model also includes population and is specified as given in equation (2) below:

$$\ln(X_{ijt}) = \alpha + \beta_1 \ln(Y_{jt}) + \beta_2 \ln(P_{jt}) + \beta_3 \ln(D_{ijt}) + e$$

Where,

X_{ijt}: Exports (or trade) from country i to country j

α: Constant,

Y: Gross Domestic Product (GDP) of partner country,

P: Population of partner company, and

D_{ijt}: Trade cost between country i and country j (distance, adjacency and policy factor etc.)

In addition to the basic gravity model equation, we estimate an augmented gravity model equation to first analyse international trade flows and then estimate the trade potential for India with Non-ASEAN RCEP countries. Augmented gravity model of trade accounts for other factors that may include trade levels, dummy variables. The augmented gravity model in this study is specified as given in equation (3) below:

$$\ln(X_{ijt}) = \alpha + \beta_1 \ln(Y_{jt}) + \beta_2 \ln(P_{jt}) + \beta_3 \ln(D_{ijt}) + \beta_4 (CL_{ij}) + \beta_5 (CC_{ij}) + \beta_6 (G_{ij}) + e$$

Where, CC: Common Colonizer of country i and country j,

CL: Common Language, and

G: Member of G-20 Group

Distance between country i and country j is measured "as crow flies" technically called the great-circle distance measured between two latitude-longitude combinations. More distance means more transportation cost in doing trade.

Common language dummy variable is used to assess the effect of common language on trade between countries. Dummy value is one when the two countries share a common language, otherwise it is zero. Common language is expected to reduce transaction costs as speaking the same language helps in facilitating trade negotiations.

Colonial links have been used to know the effect of shared history on trade between the countries. Shared history is expected to reduce transaction costs caused by cultural differences. Value of common colony dummy is one if two countries i and j have been colonies of same colonizer, otherwise it is zero.

G20 group is another dummy variable included in this study. The value of dummy is equal to one if both the countries i and j are member of G20 group, otherwise it is zero. The inclusion of G20 is significant as the group has larger say in global economic governance and if both the countries i and j are members of this, it can be expected that more trade would take place between them. The relevant data have been obtained from website of G20.

Dependent variable represents the flow of merchandise exports from India, country i to country j. Data on merchandise exports from India to the countries have been taken from IMF's Direction of Trade Statistics. Data on GDP and population of countries have been collected World Bank's World Economic Indicators. Data for exports and GDP are measured in millions of U.S. Dollar. Distance between the capitals of i and j is measured as distance between two latitude and longitude combinations. Data on distance, common languages, and common colonizers have been collected from CEPII, France data set.

For the estimation purpose, two step estimation strategy has been used to explore India's trade potential with Non-ASEAN RCEP member countries. In the first stage, equation 2 (for basic model) and equation 3 (for augmented model) have been estimated by using pooled effects, random effects and fixed effects methods with the panel data for 2005-18.

The dependent variable is merchandise exports from country i (India) to country j (Australia, China, Japan, Korea P R, and New Zealand). Independent variables are GDP, population of country j, and Distance between country i and country j. All values are in natural logarithmic form. Three dummy variables namely, common colony, common language and membership of G20 group are employed as independent variables in the augmented model. In the second stage, the coefficients estimated in the first stage have been employed to compute predicted bilateral merchandise exports for 2018from India to Non-ASEAN RCEP member countries. Then, predicted values are analysed and evaluated with the actual merchandise export values to explore India's trade latency with Non-ASEAN RCEP member countries. For analysis purpose, P/A ratio (ratio of predicted export value to actual export value) has been employed.

The expected signs of explanatory variables in the model are shown in table 2. The more distance between two countries is expected to mitigate trade between them due to increasing transportation cost. On the other side, GDP, population, Common language, common colony and membership of G20 group are expected to enhance the trade volume between two countries.

Table 2
Expected Sign of Explanatory Variables

Explanatory variable	Expected sign
GDP	+
Population	+
Distance	-
Common colony	+
Common language	+
G20	+

IV. EMPIRICAL RESULTS

All estimates have been checked for heteroscedasticity. The panel data with pooled effects, random effects and fixed effects have been used for OLS estimation. Pooled effects regression is normal OLS regression carries out on entire panel data. Random effects model has been used to include time invariant variables that influence dependent variable. Fixed effects model has been used to ascertain the impact of time varying variables.

The regression results for basic gravity trade model with pooled effects, random effects and fixed effects estimation are given in Table 3.

Table 3
Estimation Using Basic Gravity Model

Var	Pooled effects estimation			Random effects estimation			Fixed effects estimation		
	coeff	t-value	p-value	coeff	z-value	p-value	coeff	t-value	p-value
α	9.8930	2.62	0.010	2.5515	0.25	0.804	-77.406	-3.58	0.001
Ln(Y)	0.7801	10.39	0.000	1.3111	11.74	0.000	0.9027	6.76	0.000
Ln(P)	-0.1319	-1.67	0.099	-0.2393	-1.21	0.225	4.0315	3.14	0.002
Ln(D)	-1.2547	-4.16	0.000	-0.7604	-0.92	0.357	0	Omitted*	
	R^2: 0.88			R^2: 0.92			R^2: 0.91		
	F(3,86)=203.49, (0.000)			Wald chi2(3)=213.8, (0.000)			F(3,86)=203.49, (0.000)		

Note: Omitted because of collinearity.

In case of basic gravity trade model, after putting the parameter values, the regression equation with pooled effects is as given below:

$$\ln(X_{ijt}) = 9.8930 + 0.7801\ln(Y_{jt}) - 0.1319\ln(P_{jt}) - 1.2547\ln(D_{ijt})$$

In case of basic gravity trade model, after putting the parameter values, the regression equation with random effects is as given below:

$$\ln(X_{ijt}) = 2.5515 + 1.3111\ln(Y_{jt}) - 0.2393\ln(P_{jt}) - 0.7604\ln(D_{ijt})$$

In case of basic gravity trade model, after putting the parameter values, the regression equation with pooled effects is as given below:

$$\ln(X_{ijt}) = -77.4060 + 0.9027\ln(Y_{jt}) + 4.035\ln(P_{jt})$$

The sign of GDP of trading partner is as expected in model with pooled effects, random effects and fixed effects estimation. The sign of distance is also as per expectations in pooled effects and random effects methods. Distance variable has been omitted in fixed effect estimation due to co-linearity. However, sign of population of trading partner is not as per expectations in case of pooled effects and random effects methods.

The regression results of augmented gravity trade model with pooled effects, random effects and fixed effects estimation are given in Table 4.

Table 4
Estimation Using Augmented Gravity Model

Var	Pooled effects estimation			Random effects estimation			Fixed effects estimation		
	Coeff	t-value	p-value	Coeff	z-value	p-value	coeff	t-value	p-value
α	-256.32	-3.06	0.003	-256.31	-3.06		-77.41	-3.58	0.001
Ln(Y)	0.9027	6.76	0.000	0.9027	6.76	0.002	0.9027	6.76	0.000
Ln(P)	4.0315	3.14	0.002	4.0315	3.14	0.000	4.0315	3.14	0.002
Ln(D)	19.8558	2.87	0.005	19.8558	2.87	0.004	0	Omitted*	
CL	9.2285	3.56	0.001	9.2285	3.56	0.000	0	Omitted*	
CC	-7.4514	-2.90	0.005	-7.4514	-2.90	0.004	0	Omitted*	
G	3.1031	2.20	0.030	3.1031	2.20	0.028	0	Omitted*	
	$R^2 = 0.93$			$R^2 = 1.00$			$R^2 = 0.91$		
	F(6,83)=180.49, (0.000)			Wald chi2(6) = 1082.9, (0.000)			F(2,83)=97.21, (0.000)		

Note: Omitted because of collinearity.

In case of augmented gravity trade model, after putting the parameter values, the regression equation with pooled effects is as given below:

$$\ln(X_{ijt}) = -256.3154 + 0.9027\ln(Y_{jt}) + 4.0315\ln(P_{jt}) + 19.8558\ln(D_{ijt}) + 9.2285(CL_{ij}) - 7.4514(CC_{ij}) + 3.1031(G_{ij})$$

In case of augmented gravity trade model, after putting the parameter values, the regression equation with random effects is as given below:

$$\ln(X_{ijt}) = -256.3154 + 0.9027\ln(Y_{jt}) + 4.0315\ln(P_{jt}) + 19.8558\ln(D_{ijt}) + 9.2285(CL_{ij}) - 7.4514(CC_{ij}) + 3.1031(G_{ij})$$

In case of augmented gravity trade model, after putting the parameter values, the regression equation with fixed effects is as given below:

$$\ln(X_{ijt}) = -77.4060 + 0.9027\ln(Y_{jt}) + 4.0315\ln(P_{jt})$$

The sign of GDP of trading partner is as expected in model with pooled effects, random effects and fixed effects estimation. The sign of population is not as per the theoretical expectations in pooled effects, random effects and fixed effects methods of estimation. The signs of distance, common colony are not as per the theoretical expectations in pooled effects and random effects methods of estimation. However, signs ofcommon language and G20 group are as per expectations in case of pooled effects and random effects methods of estimation. Distance, common language, common colony and G20 group variables have been omitted in fixed effect estimation due to co-linearity.

Hausman test has been performed to test the hypothesis that regressors and individual effects are not correlated. The results are given in table 5. As p-value > 0.05, the hypothesis that individual random effects are exogenous is not rejected. This implies that random effects regression equation is consistent.

Table 5
Hausman Test: Random – Fixed

Var	(b)	(B)	Diff (b-B)
	Random	Fixed	
Lngdp	0.9026837	0.9026837	-1.09e-10
Lnpop	4.031544	4.31544	1.40e-09
$Chi^2(2) = 0.00$, $p(chi^2) = 1.000$			

H_0: difference in coefficient is not systematic is not rejected.

V. ANALYSIS

Having estimated the gravity trade model for bilateral trade flows, we proceed to estimate trade potential for India. In this section the model estimates from previous section are used to predict India's trade with Non-ASEAN RCEP countries. Incorporating the estimates of parameters in regression equations and putting the values of independent variables, predicted values of merchandise exports from India to partner country (P) for 2018 are calculated. The ratio of trade potential (P) as predicted by the model and actual trade (A) i.e. (P/A) is then used to analyse the future direction of trade for India. If the value of P/A exceeds one, the implication is there exists trade potential with the respective country.

(1) Basic Gravity model

The India's trade potential ratios (P/A) for basic gravity trade model with pooled effects, random effects and fixed effects estimation are given in Table 6.

Table 6
India's Export Potential with Non-ASEAN RCEP Countries
Basic Gravity Model

Country	Pooled effects	Random effects	Fixed effects
	P/A	P/A	P/A
Australia	0.404819	0.581883	0.015539
China	0.76401	1.124988	294373.6
Japan	0.977884	1.594818	26.02077
Korea P R	0.600619	0.648194	0.251401
New Zealand	0.606082	0.655195	0

The pooled effects method estimation shows that India has no merchandise exports potential with Non ASEAN RCEP countries. According to random effects method, India has merchandise export potential with China and Japan, while no merchandise export potential in case of Australia, Korea and New Zealand. The results delivered by random effects estimation are also supported by fixed effects method estimation.

Hausman test reveals that random effects method estimation is consistent. However, parameter coefficients are more as per theoretical expectations in case of fixed effects method estimation. Either way, India seems to have merchandise export potentials China and Japan only. While no merchandise export potential seem to exist with Australia, Korea and New Zealand.

(2) Augmented Gravity Model

The India's trade potential ratios (P/A) for augmented gravity trade model with pooled effects, random effects and fixed effects estimation are given in Table 7.

Table 7
India's Export Potential with Non-ASEAN RCEP Countries
Augmented Gravity Model

Country	Pooled effect	Random effect	Fixed effect
	P/A	P/A	P/A
Australia	0.970957	0.970957	0.015539
China	1.43287	1.43287	294373.6
Japan	0.721288	0.721288	26.02077
Korea P R	0.889735	0.889735	0.251401
New Zealand	1.235106	1.235106	0

The trade potential estimation results of augmented gravity model also somehow support the results of basic gravity model. Polled effects method estimation shows merchandise exports potential for India with China and New Zealand. There seems no merchandise export potential for India with Australia, Japan, and Korea. The results of pooled effects method estimation are supported by random effects method estimation. However, the results of fixed effects method of estimation are different from the results of pooled and random effects methods of estimation. Here, merchandise exports potential seems to exist in case of China and Japan only.

The results of trade potential estimation with basic gravity model by having fixed effects are same as shown by augmented gravity model with fixed effects estimation, the reason is that four variables, viz. distance, common colony, common language and G20 group are removed due to collinearity.

In brief, India seems to have limited merchandise export potential with China only. While no merchandise export potential seems to exist with Australia, Japan, Korea and New Zealand.

Differences and concerns over some provisions in the agreement- involving equitable market access, the rules of origin, dispute settlement mechanism and sensitivities of domestic industries- prompted India to pull out of the RCEP. India can enhance its export potential by taking following steps:

i. By making domestic industries globally competitive.
ii. By introducing modern technologies in agriculture sector and it sub sector -dairy products.
iii. By bringing trade in services negotiations, equitable market access, fair trade and dispute settlement provisions in the agreement.

VI. CONCLUSION

Since the withdrawal of India from RCEP, the study of India's trade potential (particularly merchandise exports) to Non-ASEAN RCEP countries has become significant. Apart from other reasons, the disagreement on trade in services has been the reason behind the withdrawal. If trade in services has been in RCEP agreement at the same level as agreement trade in merchandise, there is no doubt that India would have benefitted a lot on trade in services with RCEP countries. Unfortunately this could not happen.

The analysis of trade potential based on basic gravity model of trade shows there is limited scope for merchandise export to Non-ASEAN RCEP countries. The pooled effects method estimation shows that India has no merchandise exports potential with Non ASEAN RCEP countries. According to random effects method, India has merchandise export potential with China and Japan, while there exists no merchandise export potential in case of Australia, Korea and New Zealand. The results delivered by random effects method estimation are also supported by fixed effects method estimation.

The trade potential estimation results of augmented gravity model also somehow support the results of basic gravity model. The pooled effects method estimation shows that India seems to have merchandise exports potential with China and New Zealand. There seems no merchandise export potential for India with Australia, Japan, and Korea. The results of pooled effects method estimation are also supported

by random effects method estimation. However, the results of fixed effects method of estimation are different from the results of pooled and random effects methods of estimation. Here, merchandise exports potential seems to exist in case of China and Japan only.

The estimation and analysis of trade potential seems to show some evidence of limited merchandise export potential for India only with China.

On joining the RCEP, India would have had to make the sharpest tariff reductions to zero as other parties were bellowing for. A report by the government own organisation Niti Yayog had made it clear that the trade concessions made by other 15 members would not boost India's exports to the region by any significant degree. Higher IPR standards would have curved access to seeds to farmers. Provisions of RCEP would have seriously obstructed access to less expensive generic versions of drugs domestically and also affected the exports of generic medicine from India.

Resultantly, the withdrawal of India is justified in view of limited merchandise export potential, some vulnerable sections of the economy and disagreement on trade in services in the RCEP agreement. India should try to make its industry globally competitive and reform agriculture sector by introducing modern technology. It might also help India clinch a better deal as informal negotiation channels are still open. There is scope for further detailed study in this area.

Appendix 1
Descriptive Statistics

Variable	Mean	S.D.	Minimum	Maximum
Y: Exports (Mn U.S.$)	3793.33	4242.9	62.57	17439.99
X1: GDP (U.S. $)	2718193	3099277.5	53872	13608151
X2: Population	307425504	518057867.9	3880500	1392730000
X3: Distance (Km.)	6971.8	3173.6	3782	12656
X4: G20	0.80	0.402	0	1
X5: Comcol	0.40	0.493	0	1
X6: Comlang	0.60	0.493	0	1

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