CHAPTER II

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The chapter attempts to know (i) current stock of knowledge of the topic of research; (ii) the chronology of the development of knowledge about the subject of investigation; (iii) finding out if there are any gaps in knowledge of the topic of research; (iv) gaps in knowledge discovered by other researchers and the knowledge created by them; (v) chapter attempts to discover if there is a consensus on relevant issues relating to this topic; (v) review of literature is undertaken with a view to discover appropriate and fruitful direction for this investigation. Attempt has also been made to draw clues from the existing literature that has been reviewed.

The review of 142 studies in the chapter revealed that the topic of research is almost virgin. The index prepared on the basis of review has a value of 23.51 which justifies the claim of the topic taken for investigation needed in-dept research.

2.1 Review of Literature

1. Importance of review of literature may be described as follows:

2. The most important role of review of literature is the identification of gap in existing knowledge about the topic of investigation.

3. But supplementary function is to expose the depth of this gap in knowledge relating to the area of research. Depth of the studies displays either total or partial gap.

4. Third function of review of literature is to enable the scholar to justify the selection of topic and the contribution that the study makes to the existing stock of knowledge and enhancement of the understanding to the problem.

5. Investigator becomes familiar with the theoretical/policy framework, nature and sources of data used, methods and models employed and findings of the different studies. This may be helpful in appropriate choice of theoretical framework, the type of data base and methods and models to be used. This may enable the scholars to supplement or even substitute the work done by
others. Besides, the understanding and knowledge of the scholar of the specific subject is enhanced.

6. The fifth function facilitates highlighting of the nature and magnitude of investigator’s own contribution.

The studies to be reviewed may be classified into two categories:

1. General studies, which do not relate directly to the topic of research. But such studies furnish an understanding of the area of research investigation. The investigation under this study relates to international trade of India. Therefore all studies in this field will constitute a general category of literature for review. Review of such studies also provides the context of the study and it enables the scholar to evaluate the importance of the particular pieces of research already done by predecessors.

2. Second category of the studies is that which directly or indirectly relate to the topic of investigation. The studies, which I have access to suggest that no research has been done so far, which evaluate the output and employment effect of exchange rate fluctuations. From this viewpoint, this piece of research may be considered to be an exploration in virgin territory. However a couple of studies have examined interrelations between trade and exchange rate, and relation between explanatory/determining factors such as interest rate, fiscal deficit etc. and rate of exchange. But the focus is generally more policy than the quantification of the degree and direction of consequences of exchange rate fluctuations for the countries involved in trade. From this viewpoint, this study may be treated as an attempt to fill up an important gap identified in the existing stock of knowledge.

The brief review of selected studies is outlined here under:

2.2 General Studies-Theoretical Paradigm

The analysis of international trade concentrates on the following basic theoretical, policy and empirical aspects: (i) Analysis of causes and consequences of international trade; (ii) Pattern and direction of trade and its conformity with the
predictions of theory; (iii) Trade, growth and welfare gains of trade through favourable terms of trade; (iv) Package of policy instruments in operation.

Adam Smith laid down the foundation of formal theoretical analysis of international trade; he postulated an absolute cost advantage in the production of certain goods in a country to induce its export to other countries. David Ricardo (1817) refined and modified Smith’s theory; he propounded the comparative rather than absolute cost advantage to underlie the occurrence of international trade between any two countries at any point in time. It predicts that a country should specialize in the production and export of such goods in the production of which its comparative/relative advantage is greater. The positive layer of the theory also points out that even an inefficient country will gain by engaging in international trade due to differences in the comparative costs of imported and exported goods between the countries. It also predicts the direction and pattern of trade since it stipulates that each country will export such goods which it produces at relatively lower cost and which it can sell to other countries relatively cheaper.

The normative layer of the theory deals with the advantages of free trade over protected or restrictive trade practices and policies. In many cases, the normative layer of the theory runs counter to such practices as dumping, export subsidies, high tariff walls against imports, or quota restrictions. It also diverges from the erstwhile Indian policy of substitution of imports by domestic production irrespective of cost or quality considerations. Similarly, one may encounter partially free and partially restrictive trade practices and policies which are supported by arguments which highlight the benefits of such policy relative to the trade under conditions of autarchy (Neary, 1996).

The theory has the following limitations: (i) It assumes that unit cost of production is independent of scale of production, or factor proportions required in the production of export and import goods. (ii) It also overlooks to explain the causes of the observed or perceived differences between comparative costs and scale of production.

Hecksher (1919) and Ohlin (1932) independently developed the theory of factor endowment which overcomes these limitations of the theory. They highlighted
the differences in the factor endowment of the countries as the basic factor from which comparative advantage arises in cost of production and trade. The theory predicts that a capital abundant and labour scarce country tends to specialize in the exports of good (s) the production of which is more capital and less labour intensive. Obviously, the factor of abundant supply will be cheaper relatively to the scarce factor in factor market. Empirical evaluation of the validity of the theory by Leontief resulted in paradoxical finding that US, a capital rich and labour scarce country, exported labour intensive goods. This inspired empirical investigation of Leontief’s thesis across the globe. But the findings remained, by and large, inconclusive in so far as findings confirmed the validity of Heckscher-Ohlin thesis for countries like India while for some other countries findings are not so conclusive. So, most of the economists still prefer the theoretical framework of comparative advantage along with Heckscher-Ohlin theory with the inclusion of more than two factors to analyze the pattern of trade among the countries (See, for Example, Bhardwaj, R. and Bhagwati, J., 1967, Prasad, K.N., 1967, This tan Raa and Devesh Chakravarti, 2007).

Possibility of **Factor Reversal** and its consequent impact on pattern of trade was highlighted by B.S. Minhas. This theme has been extended both theoretically and empirically by recent work of Shri Prakash, Sonia Dheer and Amit Sharma (2011) and Shri Prakash and Sonia Dheer (2012). Shri Prakash and Sonia Dheer have also examined the technological feasibility and economic viability of export led growth strategy/hypothesis for Indian economy (2012a, 2012b).

The traditional theories do not explain the empirically observed pattern of trade among the developed countries with similar development levels and factor endowment. Pattern of trade among these countries is explained by differentiated traded products based on super specialization (Cf. Neary, 1996). The theories do not explain the pattern of developing countries with the rest of the world which attempt to transform the structure of their economies by heavy and basic goods centric rapid industrialization, which makes their pattern of trade diverge from the prediction of theory. Shri Prakash, Amit Sharma and Sonia Dhir (2011) adopted the dynamic setting of growth to allow the change in technology and factor endowment and their impact on pattern of trade on the one hand, and the impact of pattern of trade
divergent from the factor endowment, which is deliberately adopted for the realization of objectives of long run growth, especially the self reliant, and self-sustained strategy of growth on the other.

None of the above theories links the pattern of trade either to balance of trade, or to balance of payments, terms of trade, and the sources of growth of trade in general and growth of exports and export earnings over a period of time in particular. The theories also do not deal with the relation between exchange rate and prices of export goods in international market and its effect on export earnings.

2.3 Exchange Rate and its Price Effect

Exchange rate is the price of one currency expressed in other country’s (ies) currency (ies). The nominal exchange rate is generally defined as the amount of foreign currency that may be obtained per unit of domestic currency in the exchange market at the given point in time. Exchange rate relates to the specific time domain as it fluctuates with time (Cf. Llevellyn, David T., 1996).

The effective and real exchange rates are distinguished from the nominal exchange rate. Effective exchange rate refers to the value of a currency in the basket of selected currencies. The effective exchange rate is an index of weighted average of the units of a designated set of foreign currencies that may be acquired per unit of the domestic currency. Rate of change in effective exchange rate is a weighted average of change in the nominal rate in currencies in the chosen basket.

The real exchange rate refers to the units of domestic currency in constant domestic prices (adjusted for domestic inflation rate) per unit of the foreign currency in constant prices of the country of the foreign currency. Alternatively, in a situation in which nominal/effective exchange rate changes from time to time, the real exchange rate refers to the nominal/effective exchange rate adjusted for changes in the relative prices in the countries of the currencies under consideration. For example, if the nominal value of a currency falls by 15% and domestic prices are 5% more than the prices of its competitors, then the real exchange rate will be 10%.

Exchanged rate in constant domestic prices yields the price of domestic exports in foreign currency. Therefore, the change in exchange rate in an inflation free
state affects the price of domestic exports in foreign currency, which directly affects demand for domestic exports in international markets. Similarly exchange rate in constant foreign currency prices affects the prices of imports, and hence, the demand for imports in the domestic market.

Flow theory of exchange rate deals with the effects of changes in exchange rate on the pattern of international flows of goods and services which reflect the consequences of price effect of movements of exchange rate on demand for traded goods. The portfolio theory, as against the flow theory of exchange rate, deals with the conditions required to be satisfied for assets/ wealth holders’ equilibrium state of portfolio. Monetary theory of exchange rate is one of the variants of this approach.

The rate at which knowledge is growing makes it extremely difficult to undertake comprehensive review. The task is further complicated by the fact that (i) number of journals is exponentially increasing and, (ii) resource constraint and rising cost of publication also limit the availability in individual libraries. Within these constraints, I have tried to access as many studies as possible.

Biswajit Maitra, (2010) prepared a monetary model of exchange rate determination and explained that the domestic monetary policy influences the value of national currency. The result of test of co-integration of regression model explains that exchange rate and monetary supply are co-integrated greatly. VEC Model’s result reveals that the money supplies with even seven and nine month lagged money supplies cause depreciation in exchange rate. Thus, this study treats exchange rate as a purely monetary phenomenon but finds the exchange rate to be trade neutral. Variance decomposition and intervention analysis shows consistency between money supply and variation of exchange rate. There are such other elements of exchange rate determination as international interest rates and inflation. But the author overlooks not only several non-monetary variables but real factors also. Co-variation of two or more variables is not a sufficient condition to infer a casual relation between variables of the system.

Bergstrand, Jeffrey H (1983) examines the exchange rate between 2 currencies and highlights multiple roles of one currency in many financial assets’ prices which respond almost instantaneously to unanticipated macroeconomic disturbances. He
also compares and contrast alternative definitions of volatility of exchange rate. Various measures of exchange rate volatility are also presented. He shows that exchange rate volatility increased from 1980 to 1982. However, since then both exchange rate volatility and volatility of other assets’ prices has declined. Exchange rates, other financial asset prices, and prices of commodities are viewed as vents for macroeconomic disturbances. If exchange rates were fixed, macroeconomic disturbances would be dispersed through a smaller number of channels. The solution to excessive volatility is to eliminate the sources of disturbances and not to fix exchange rates. This is an interesting study.

Calvo and Reinhart, (2002), define the exchange rate regime in terms of a matrix combining volatility in exchange rate, foreign exchange reserves and interest rate. In their study period 1979-1999, it has been observed that the exchange rate of Indian rupee exhibits very low flexibility. It means it did not show much fluctuation.

Claudio Paival, (2006), investigates the factors behind the significant improvement in Brazil’s external accounts and wide fluctuations of the real exchange rate since the floating of the real in 1999. Particular attention is devoted to the strong appreciation of the real from 2003–05.

Econometric estimates of behavioural equilibrium exchange rate (BEER) model for Brazil show that most of this appreciation was an equilibrium response to improved economic fundamentals.

D O Olayungbo and T O Akinbobola, (2011), analyzed the relationship between exchange rates (nominal and real) and foreign exchange reserves for Nigeria. They used quarterly data between the period of 1970:Q1 to 2006:Q4. The unit root, cointegration test and the Granger causality test were used. The Results indicate that there is both short run and long run relationship between foreign reserve and nominal exchange rate. There is also a faster adjustment of foreign exchange reserve to change in nominal exchange rate than change in real exchange rate.

Liu (2007) examines the role of currency derivatives listed on the CME and PHLX between 1982 and 1997 for predicting exchange rate. But this study does not offer any explanation of either the causes of changes in exchange rate.
nor does it explain the impact of change in exchange rate on other variables of the system.

Sangeeta Yadav (2008) examined impact of trade liberalization on export growth. Author used Constant Elasticity of Transformation (CET) Function for four Indian crops, namely, rice, pulses, wheat and tea. Supply side response of the four crops reveals that trade liberalization of agricultural trade would give rise to advantage in relative prices without a significant and corresponding increase in production and exports.

Mitra H Suthar, (2010), examined the relation between the capital movements and the forward exchange rate by using the Covered Interest Parity model. His results reveal that, if sufficient care is maintained in forecasting, the interest yield differentials alone can provide sufficiently accurate forward rates as well as the forecasts of the exchange rate. But this falls short of analyzing the determinants of exchange rate.

Ponniah Sivarajah (2010) developed a multi-market model to study alternative policy for increasing exports of coconut products from Sri Lanka. Author explained that export earnings and government tax revenue increases with decline in exchange rate of Sri Lanka currency. But we think that this policy of devaluation is not suitable for long run as it affects economy as a whole. The policy amounts to regular devaluation of the national currency. Devaluation offers a solution to over pricing of a currency and it is not a long run instrument for export promotion. Export promotion via lower prices through devaluation can not succeed if the exports are price inelastic and domestic capacity to produce to exportable surpluses is not commensurate with acceleration of exports.

Patnaik I (2004) shows that the Indian rupee is not pegged to the US dollar, and the volatility in the exchange rate has been low. The finding is not surprising. External value of Indian rupee is expressed in US $ and a basket of 10 hard currencies. Rupee value is also expressed in Euro. All these currencies need not move in the same direction in unison with each other at the same time. When US $ was in doldrums during economic slowdown in 2008, Euro and other hard currencies were in
a relatively strong position. Now in the midst of European debt crises, Euro is sliding down the scale, while dollar is getting strength.

2.4 Studies Indirectly Related to Investigation

Sok Heng Lay, Makoto Kakinaka and Koji Kotani (2012) examined effect of dollarization on Cambodian economy and they focus on the study of a highly dollarised economy. The author tests whether dollarisation helps stabilise the exchange rates. The application of GARCH model suggests that dollarisation induces the depreciation of the Cambodian riel as well as intensifies exchange rate variability. The result is consistent with the argument that dollarization is one of the crucial causes of exchange arte instability. Dollarisation in Cambodia could be a constraint on poverty reduction since it tends to affect the living standard of the poor, who earn the income in the riel, through the depreciation of the currency and intensified volatility of exchange rates.

Bhargava and Malhotra, (2007) examine the relationship between the trading activity and exchange rate volatility. They studied some encouraging results. But they examined the relation at a surface level.

Chee-Wooi Hooy, (2010), examined the impact of exchange rate volatility on world and intra-trade flows of SAARC countries. The author explained that long run steady state equilibrium among exports, income, price differential and exchange rate volatility in Bangladesh, India, Pakistan and Sri Lanka. Exchange rate affected exports but it does not influence all the South Asian countries. This study lends credence to this fact that exchange rate volatility induces intra region-trade flows among South Asian countries. But how much is trade diversion and how much is it trade creation/contraction under exchange rate fluctuations remains unanswered.

Saubarna Pal, (2011), examine whether India’s liberalization had any effect on the long run relationship between the real exchange rates of India and Japan vis-à-vis dollar. The result of Johansen method of cointegration shows a substantial change in relationship among these two real exchange rates before and after India’s liberalization of 1911.
Gifford, William C., and O'Brien, Padric K. J. (1984) explain that floating exchange rates may have great effect upon a US taxpayer's tax base and its foreign tax credit. Internal Revenue Service (IRS) Revenue Ruling 84-143 deals with the computation of the foreign tax credit by a US commercial bank with dollar loans to Mexican residents. The official exchange rate must be used for the gross loans, and the free market rate applies where the taxpayer has the option to use or actually uses the free exchange rate to purchase the pesos used to satisfy the withholding tax obligations. In IRS Letter Ruling 8440017, the taxpayer purchased Country X currency, loaned the currency to foreign subsidiaries operating in Country X, and was repaid, with interest, in Country X currency. The IRS held that the taxpayer note holder realized foreign currency losses, which resulted from the rising US dollar during the period of the loans, upon repayment of the loans. This study highlights the complex nature of relationships of exchange rate in diverse areas and multiple economic facets which are directly or indirectly related to trade. But the study is confined only to receipt and repayment of loans under special arrangements between two or more countries.

According to Manish Kumar (2010), movements in exchange rate are challenging, as they exhibit high volatility, complexity and noise. Most traditional models cannot forecast exchange rates, with significantly higher accuracy, than a random walk model. Hence, author used a non-linear model called artificial neural network (ANN) to forecast short term (daily weekly) movements of United States Dollar (USD)/Japanese Yen (JPY). ANN’s out-of-sample performance is benchmarked against the traditional Autoregressive Integrated Moving Average (ARIMA) model. Performance of both models is rigorously evaluated using three different penalty-based criteria: Directional Accuracy (DA), Correct Upward (CU), and Correct Downward (CD) trends and two non-penalty-based criteria: mean square error (MSE), and normalized mean square error (NMSE). Moreover, the robustness of the two models is tested for different sampling periods. Empirical result show that NN performs better than ARIMA and delivered consistent results across all periods of study. This supports ANN’s robustness and also the fact that it can be used to formulate strategy for trading in USD/JPY.
Harinam Singh and Mohd. Muzammil (2010) examined the relationship between money supply and exchange rate, inflation and exchange rate, and GDP and exchange rate in India. They measured effective exchange rates in terms of SDR. The result of correlation analysis shows that GDP is strongly related to the exchange rate of Indian rupee per unit of US Dollar, Pound, Sterling and SDR. The correlation between money supply and exchange rate is also found to be very strong. But an increase in money supply led to a rise in inflation during the yearly changes in reforms. In the later years, there was more stability in price together with rising GDP. From 1993-1994 to 2006-2007, inflation increased faster than the depreciation of Indian rupee.

Sami, Massood V. and Clemenz, Claude (1988) evaluated the impact of exchange rate fluctuations on the ability of OPEC to stabilize the oil market. Two periods were investigated, when the oil market was at the brink of instability - the end of 1979 and 1985. The study focused on 5 major consuming European countries - France, Germany, Italy, Japan, and the UK. The results indicated that fluctuation in the foreign exchange market has been an important destabilizing factor in the oil market; however, it was not the only major contributing factor for the rise and fall in oil consumption in the 2 periods under consideration. Other factors such as non-OPEC supplies, responses of governments of oil importing countries, nominal prices, and the overall economic situation also affected the oil market. When oil prices were under pressure either upwards in 1979 or downwards in 1985, the role of US dollar was quite noticeable through its effect on demand for oil in Europe and Japan. In 1979, it created a marginal increase in demand for oil, while in 1985; it led to a substantial fall in demand. This study is important from the view point of destabilizing/stabilizing influence of exchange rate fluctuations on import bills and commodity markets.

The exchange rate volatility is often said to have a negative impact on trade (Ethier, 1973, and Grier and Smallwood, 2007) because of uncertainty in terms of trade, which affect both the volume and variability of trade flows (Barkoulas, 2002). Though, uncertainty can be reduced by hedging in the forward markets risk-averse exporters, who hedge against this risk, will find themselves incurring more cost, siphoning their profits and discouraging trade {Dominguez and Tesar, 2001}. But it is
critical for traders to determine when and how much foreign exchange they should hedge.

Singh, J.P. and Konya, L. (2006) studied the relationship between the Indian gross domestic product (GDP), exports and imports from 1950-51 to 2003-04. They took a logical step to investigate the same issue for two major sectors of the Indian economy: agriculture and manufacturing. In both of these sectors, there is Granger causality between GDP and total exports and imports. In particular, agricultural component of GDP leads to rise in imports, and exports of agricultural goods results in increase in agricultural component of GDP. These two variables jointly influence the third one. These results are sensitive to model specification. As regards manufacturing, there is a two-way causality between manufacturing GDP and exports, imports also affect manufacturing component of GDP, manufacturing component of GDP and imports jointly raise exports and exports and imports jointly raise manufacturing GDP, but manufacturing GDP and exports do not seem to cause imports. Finally, there is also some evidence for manufacturing GDP causing imports, but this result is also sensitive to model specification.

Aruna Kumar Dash and V. Narasimah (2010) examine the impact of exchange rate on domestic prices in Indian context. The study used a vector auto-regression model using six endogenous variables for an analysis of mechanism of impact of exchange rate shocks on domestic prices by examining the impulse response and variance decomposition analysis. The impulse response function shows the degree of pass-through of each shock to domestic inflation. This study suggests that exchange rate effect on domestic prices is low during the study period. An exchange rate shock does, therefore, have little impact on domestic prices.

Policy related studies are also considered to directly relate to the theme of the study in view of the fact that different policy regimes allow differential degrees of volatility of exchange rate in the market.

Jeromin Zettelmeyer’s paper is a survey of research relating to exchange rate policy regime. The policy regime may be broadly classified in two categories: Extreme Floats or Extreme Hard Pegs. The third option lies between these two, which is defined as middle options, but middle options may have several variants. The main
variants are soft pegs which permits (i) limited floats, (ii) bands; it permits floats within pre determined range and crawling pegs. Under this regime, the pegs themselves slowly float.

The middle option, according to Barryeichengreen is difficult to sustain over a long period of time and it is more likely to end up in crises than is the case with either of the two extremes. But during the seventies and eighties, the opinion was different on the following counts: national economies often face the choice between flexibility and commitment to stabilization under inflationary pressure and competitiveness or insulation from monetary shocks or protection against real shocks. Such choices suggested the middle path between hard pegs and free floats. As against this, the other propositions postulated floating exchange rate to be better than the hard pegs for emerging market economies. This postulation suggested hard pegs only under exceptional circumstances. This view was propagated for currency union and currency board supported by consensus which are likely to be non feasible for emerging market economies. Others suggested that intermediate solutions are generally better than corner solutions and free floats were of questionable validity for emerging markets, especially Latin America. This combine with other factors led to curtaining of fluctuations of exchange rate even though official float was acceptable. IMF has also been supporting intermediate regime.

Fisher (2001) sharply differs from bipolar view in two respects (i) such developing countries as are not favoured by high international capital flows may find intermediate options attractive, (ii) flexible arrangement by incorporation crawling bands with wide ranges is also supported.

Massson (2000) used Markov Chain transition probabilities between three policy regimes of hard pegs, free floats and intermediate regimes for various periods and numerous sets of countries. He finds that intermediate regime will survive in steady state or these may disappear over a long period of time. What is steady state?

Some attempts have been made to relate exchange rate regime to inflationary pressure and volatility of national output under pegs. These studies also do not touch the main area of concern of this thesis.
Dr. Vanita Tripathi and Ms. Namita Narang (2012) examine the dynamic relationship (long run as well as short run) among oil price, exchange rate and aggregate stock prices in India, one of the fastest growing emerging markets in the world.

In this paper author calculated descriptive statistics, which shows that median is significantly greater than mean, while median and median coincide if the distribution is normal. But authors fail to furnish any interpretation of the results they have reported. This is not acceptable in a research paper. Authors also used regression analysis, which does not capture indirect component of total effect of determinants, technology effect and the quantum of change in FI by the change in exchange rate.

Exchange rate affects the stock market in two ways; (i) health of the stock market, and (ii) the health of the macro-economic fundamentals, which are a factor in making India an attractive destination for foreign investment. But exchange rate fluctuations affect the magnitude of foreign investment in rupee terms which, in its turn, exercises influence on equity prices, especially the stocks which absorb FI; it also affects the state of the market as a whole. However, a recent study by Shri Prakash and Chitra Bhatia Arora (2013) highlight the fact that FII does not affect equity prices of 10 companies. They have used daily equity prices in distributed lag model which takes cognisance of adaption of expectations of operators in the light of the state of the market and its emerging configuration.

2.5 Directly Related Studies

MarilyneHuchet-Bourdon and Jane Korinek (2011) have examined the impact of exchange rates on bilateral trade in three vast economies - China, the Euro Area and the United States. Trade deficits and surpluses are sometimes attributed to intentionally maintain low or high exchange rate. This is especially relevant for China, who has been under tremendous pressure from US to allow its currency to float in the market. Its currency is highly under-valued currently which leads to growth of its exports which is not in alignment with other macro fundamentals. Impact of exchange rate on trade has been debated to some extent but the existing empirical literature does not suggest an unequivocally clear picture of the impacts of changes in exchange rates on trade. The impact of exchange rate volatility on trade also does not get any support from an unequivocal theoretical cause-effect
relationship. This study examines the impact of exchange rates and their volatility on trade flows in China, the Euro area and the United States in two broadly defined sectors- agriculture on the one hand, and manufacturing and mining on the other. However, degree and direction of change in exchange rate associated with volatility has not been specified. If we assume that the changes in exchange rate follow normal distribution, then quantum of change in the rate of exchange beyond \((M+\sigma)\) may be defined as volatile. No such test has been used. It finds that exchange rate volatility impacts trade flows only slightly. Exchange rate levels, on the other hand, affect trade in both agriculture and manufacturing and mining sectors but do not explain the trade imbalances in the three countries examined. Above findings do not facilitate identification of the range of changes in exchange rate that are likely to affect trade to an extent which is different from zero statistically.

Willem Thorbecke (2011) in his paper examines how exchange rates affect East Asian trade. The cited evidence indicates that exports produced within regional production networks depend on exchange rates throughout the region, while labour-intensive exports depend on exchange rates in the exporting country. These results make sense since the majority of the value-added of processed exports come from imported parts and components, while most of the value-added of labour-intensive exports comes from the domestic economy. But the author did not use any statistical method and model. Therefore, the author fails to test the statistical significance of the results. All the results are based on secondary data.

Kazunobu Hayakawa and Fukunari Kimura, (2008), investigated the relationship between exchange rate volatility and trade. (Mention model and findings)

Hway-Boon Ong, Yin-JianYoong, Siew-Ling Lim and Gee-Kok Tong, (2009) examined the impact of real exchange rate volatility, real gross domestic product and bilateral real exchange rate on Thailand’s exports to its main trading partners, Japan and the US. Thailand’s real export is negatively related with Thailand-Japan bilateral exchange rate. The authors suggest that Thailand should reduce its exchange rate misalignments and diversify its export portfolio away from the US. Consequently, it is observed that the convenience between real exchange rate and trade flow suggest an effective planning and manage the exchange rate risk. This study suggests the use of real rather than nominal role in order to move away from money illusion.
This study comes nearest to the proposed study in thrust, though it also falls short of our study.

Dukhabandhu Sahoo and Bimal Kishore Sahoo (2010) examined trade and exchange rate policy of India. According them, devaluation of Indian rupee enhanced its trade balance in reform period 1991, but increasing inflation rate reduced its impact. Hence, author suggested that India should reduce inflation rate so that the impact of devaluation will be more prominent on the trade balance. In our view, currencies are devalued as a part of policy once in a while. It cannot offer solution to the problem of balance of payments for ever. So the results may be taken with certain reservations. Effect of devaluation depends more on behaviour of demand in export markets in response to reduction in prices rather than domestic inflation rate. Lower cost of production which depends on factor productivity offers the solution to the problem of demand inducement by lower relative prices of exports. In case the demand is price inelastic as is the case with the Indian exports. But isolation of inflation effect on balance of trade from devaluation effect was done by the analysis of balances in inflation adjusted prices.