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Topic:- Optimum Currency Area: An Empirical Analysis of Euro Zone and Non Euro Countries

ABSTRACT

The idea of reshaping the international monetary arrangement has always centred around the theoretical and empirical debate over the wisdom of currency unions. A wide range of views have been expressed about the usefulness of research into the subject. The theory of optimum currency areas has evolved amidst the debate of "costs versus benefits" of using a common currency. It is these benefits and costs arising from single currency adoption that we try to explore in this study. More specifically, we attempt to find out the trade implications of the euro adoption on European Union economies. We also analyze whether the euro currency union has led tothe synchronization of business cycles of the Eurozone and Non-Eurozone countries.

This thesis consists of six related chapters. Chapter 1 provides an overview about the research statement and highlights researchable issues along with their relevance in the context of applicable economies. The research design is elaborated widely along with objectives and major hypotheses of this study.In chapter 2, a detailed review of literature is provided. It relates to the state of knowledge on the optimum currency area and provides a systematic and chronological review of the related empirical literature. This chapter also provides an overview on the importance of gravity model in the contexts of regional trade integration and monetary arrangements. The next three chapters form the empirical structure of the study.

In chapter 3, we examine the trade implications of the euro adoptionbetween European Union (EU) countries under gravity framework. For this purpose, the study applies gravity model on the panel data set of 29 EU countriesspanning the time period 1994-2011and using a large set of economic indicators. The most important result of our analysis is that the Euro adoption has yielded positive and significant impacts on bilateral trade flows of sample EU countries. Empirically, the bilateral trade and exports have increased by 20.81% and 18.57%, respectively, when both trading countries belong to the Eurozone. This effect is larger than the one obtained when only one of the two trading partners uses euro as its currency. Another important result is that exchange rate volatility shows a positive impact on trade flows. The estimated results also suggest the existence of simultaneous export and import trade flows of comparable sizes on the same lines of production i.e., the sample countries reject Heckscher-Ohlin theory in favour of New Trade theories. Some other findings related to gravity variables have also been discussed and analysed.

In chapter 4, we examine short-term and long-term impactsof the euro adoption on bilateral trade flows from a different perspective. Such an analysis also helps us in further exploring the impact of exchange rate volatility on trade flows. For this purpose, a generalized gravity model is usedthat controls for all kinds of time-varying and time-invariant observable and unobservable country characteristics by separately incorporating country-specific effects, time effects, and country-pair effects. Employing instrumental variable techniques of Hausman and Taylor (1981) estimator and Arellano and Bond (1991) difference GMM (Generalized Method of Moments) estimator, the study finds that bilateral trade increases by about 7% to 17% when both countries belong to the Eurozone and by about 6% to 13% when only the reporting country or the partner country uses the euro as its currency. Also, based on the dynamic GMM panel analysis, the study showed the presence of "persistence effect" in trade flows. This, in turn, raised the long-run euro impact on bilateral trade flows to about 39%. Last, based on the estimated results of both chapters 3 and 4, the study concludes that the effect of exchange rate variability on bilateral trade flows is very ambiguous as there appears to be no clear patterns of exchange rate volatility on trade flows.

In chapter 5, the study examines the possible interactions among trade, industrial dissimilarity and FDI by analyzing business cycle co-movements of 30 Eurozone and non-Eurozone countries (including 15 Eurozone economies) using a panel data set covering the period 1990 through 2009. The study relies on both the single-equation and simultaneous equation models. It is shown that the error component three-stage least squares (EC3SLS) estimates from simultaneous equations model with panel data are superior to the estimates obtained from single equation models with panel data. The results reveal that bilateral trade intensity, specialization-in-production, and FDI play vital role in the business cycle synchronization of the Eurozone and non-Eurozone economies. It is found that both the trade and similar industrial structure havedirect as well as indirect impact on output correlation of sample economies. FDI exhibits only an indirect impact on the business cycle synchronization of economies via trade and similarity in industrial structure. Furthermore, the findings based on our sample indicate that trade and FDI complement each other, i.e., more FDI encourages more trade and *vice-versa*. In addition to this, the estimated results also confirm the "endogeneity hypothesis" of optimum currency area theory i.e., countries should not be much concerned with *ex ante* lack of business cycle correlation when deciding whether to enter into a currency union or not. Last, the findings also point out that monetary policy closeness has insignificant role in case of the Eurozone economies but serves an important and independent source of shock transmission across the non-Eurozone countries.

Finally, chapter 6 summarizes the research findings from the empirical analysis and provides suggestions for policy implication. Further avenues of research in this area have also been briefly explored towards the end.