The Effect of Oil Price on the Current Account Balance of Energy-Importing Countries (the Case of India)

A Research Proposal Presented to

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by

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Abstract

The dependence of a country's current account balance on different external shocks draws attention to the necessity of the balance of payments modelling and its forecasting. India's current account balance is susceptible to oil price fluctuations and recently changed terms of trade between Russia and India could provide India with cheaper oil imports and a lower current account deficit. The existing literature lacks in-depth research on the possible effects of oil price on India's balance of payments and its sub-components. The study addresses this research gap by modelling the balance of payments anticipating several scenarios of new trade conditions in order to identify those terms under which India's current account deficit may become surplus. To analyze separate components of the balance of payments (oil imports; exports of oil products, machinery and organic chemicals), several regression models will be constructed. The results can be applicable to various spheres of foreign trade between countries.

Keywords: oil prices, current account balance, balance of payments forecast

Introduction

One of the most important indicators enabling the characterization of the economic state of the country is the balance of payments. “The balance of payments is a statistical statement that summarizes transactions between residents and nonresidents during a period” (IMF, 2009). The balance of payments consists of three accounts: the current account, the capital account and the financial account. The current account is almost always a deficit or a surplus, while it is quite sensitive to market conditions of exports and imports of goods or services with a considerable share of the country’s trade balance.

In recent years, India has had the current account deficit due to dependence on imported energy resources (particularly, oil). Amid European sanctions against Russia, the share of Russian oil exports to Europe has significantly decreased. Therefore, in order to conquer new markets, Russia provides oil price discounts to existing buyers, including India. The new terms of trade could help India reduce its current account deficit and ensure a more stable balance of payments.

In the recent past, scholars have given considerable attention to modelling the balance of payments of oil-importing countries based on changes in trade terms (Huntington, 2015; Jlassi, 2015). These forecasts allow determining the direction of a country’s fiscal, monetary and foreign policy in order to provide its economic sustainability. Nevertheless, there are few studies that have investigated the influence of oil price changes on India’s current account balance by modelling the balance of payments (Garg & Prabheesh, 2017; Goyal & Kumar, 2018). Moreover, this strand of literature gives no attention to the sub-components of the balance of payments. In order to address this gap, the parts of the balance of payments will be based on the exogenous oil price in this study.

The purpose of this research is to assess the impact of an oil price on India's current account by modelling its balance of payments. This study aims to address the following question: under what conditions can India's current account deficit turn to surplus?

Literature Review

The balance of payments is an important macroeconomic indicator that characterizes the economic situation of the country. Despite the fact that the state has an influence on the balance of payments through public policy, its sustainability largely depends on external factors. The current account balance, one of the three components of the balance of payments, is affected by market conditions for exports and imports, especially when some goods or services account for a large share of a country's trade balance. For example, the current account balance of energy-importing countries tends to be quite sensitive to energy price fluctuations. Therefore, oil price shock could hinder a state's economic sustainability.

Over the past two centuries, the theoretical framework of the balance of payments has aroused heated debate among scholars (Michener, 1984; Polak, 2001; Stern, 1973). According to these studies, there are four main approaches to determining the balance of payments: the elasticity approach (Robinson, 1937), the absorption or the Keynesian approach (Alexander, 1959; Polak, 2001), the monetary approach (Johnson, 1972), and the intertemporal approach (Obstfeld & Rogoff, 1995). Each of the first three frameworks has a main effective tool for ensuring the current account balance. For example, Robinson (1937) argues that changes in the exchange rate allow adjusting the foreign trade balance. At the same time, other researchers suggest that exchange rate policy can be just a complementary tool to fiscal (Alexander, 1959) or monetary policy (Frenkel & Johnson, 1976). Finally, the intertemporal approach considers the balance of payments from the long-term perspective and assigns the main explanations of its imbalance to the ratio of savings and investment in

the country (Obstfeld & Rogoff, 1995). This study will be based on the latter theoretical framework as it is assumed to be the most consistent one.

A number of studies have been found that focus on the relationship between oil price shocks and current account balances (Bayraktar, Taha, & Yildiz, 2016; Gershon, Ezenwa, & Osabohien, 2019; Goyal & Kumar, 2018; Obstfeld, 1980; Schubert, 2014; Varlik & Berument, 2020). Using the intertemporal approach, these studies suggest that in the long run deterioration of terms of trade caused by oil price rise has almost no effect on the current account balance. Despite this, explanations of such insensitivity are controversial.

According to Schubert (2014), leveling the effects of an oil shock is achieved by falling consumption and increased savings confirming the J-curve movement of the current account balance. Likewise, Cardi (2007) indicates that an oil price shock might lead to a similar decrease in real income and spending resulting in no impact on the current account balance in the long-term perspective. At the same time, Varlik and Berument (2020) emphasize the importance of taking into account sub-components of the current account balance and a country's internal production structure. The major conclusion that can be drawn from this study is that the recovery of the current account deficit depends on the share of energy-intensive industries in the country's exports. Thus, the adjustment of the current account balance correlates positively with the exports of non-tradable sub-components. Similarly, in their study on India's current account balance, Fayaz and Kaur (2016) assume that boosting invisible trade may ensure a positive impact on current account deficit.

Another strand of literature focusing on India's economy, which is limited, examines this subject in more depth (Behera & Yadav, 2019; Dhar & Rao, 2014; Garg & Prabheesh, 2017). A study by Goyal and Kumar (2018) does investigate the effect of oil price shocks directly in India. They find that the current account balance deteriorates just after an increase in oil price but then recovers after shock damping, which is in line with the intertemporal

approach. From this study, it can be also inferred that in the present study India's twin deficit should be taken into account, because oil price affects both fiscal budget and the current account balance, which, in turn, are also interconnected. Moreover, Behera and Yadav (2019) suggest that India's current account deficit is financed mainly through short-term capital inflows, which takes an increasing toll on sustainability of India's economy during oil price shocks.

Overall, few studies to date have examined the relationship between an oil price shock and the current account balance in India in order to make any forecasts. Furthermore, the available research overlooks sub-components of the balance of payments and their sensitivity to oil prices. This research aims to close this gap in the literature by assessing the impact of oil price on India's current account balance and other sub-components by modelling its balance of payments. This study focuses on dealing with the following question: What terms of trade can enable India's current account deficit become surplus? The main variable will be the oil price, which will be set exogenously, and components of the balance of payments will be modelled based on it.

Methods

With this aim in mind, a quantitative analysis based on the modelling of India's balance of payments using quarterly data from 1991Q1 to 2022Q4 will be employed. The sample period is limited by data availability. All variables will be obtained from the RBI database and TradeMap. The independent variable will be the oil price, which will be set depending on various scenarios for the development of trade relations between Russia and India. Dependent variables will be different sub-components of the balance of payments which are thought to be more sensitive to oil price fluctuations (oil imports; exports of oil products, machinery and organic chemicals). Regression models will be built for these

variables. Also, for this purpose, several other independent variables will be used in this study.

Analyzing several parts of the balance of payments independently will allow us to answer the research question more precisely (Pilnik & Shaikhutdinova, 2017; Varlik & Berument, 2020) because the price of oil has an ambiguous effect on India's economic activity. There can be several scenarios due to the price drop: increasing volumes of oil imports and increasing exports of energy-intensive products, just increasing volumes of oil imports or keeping oil import volumes at the same level (not all of them lead to the current account deficit reduction).

Furthermore, several possible scenarios will be modelled and analyzed in order to find the oil price range which makes it possible for India to have the current account surplus. The scope of the research is limited due to the fact that it is impossible to take into account the impact of the oil price on all spheres of India's economy. Moreover, there are always side effects that affect the terms of trade and, accordingly, the current account balance. They will not be employed in the model because of its possible overloading, which may reduce the quality of forecasting.

Expected Outcomes

This study is expected to extend the strand of literature dedicated to India's balance of payments sensitivity to variable trade conditions, possibly shedding light on the sustainability of the balance of payments in different scenarios.

The research design implemented in this paper may be of use to companies that analyze foreign trade between countries. It may enable analysts to assess the impact of changes in terms of trade on the export and import of particular goods or services and the overall balance of payments as well. This model can also be used by agencies to predict the

consequences of different economic shocks for countries, in which the balance of payments largely depends on export or import of specific product groups or services. The findings may not only be applicable to energy trade but to all industries. Moreover, the results can contribute to a deeper understanding of changes in the global market and an opportunity for international companies to occupy a new niche.

Finally, this research might have important implications for further studies in relative spheres. Future researchers may take into account the possible side effects of the changes in trade conditions other than the oil price fluctuations while modelling the balance of payments to provide deeper insights.

The current study will be presented to the faculty committee of World Economy at the National Research University Higher School of Economics. It can be useful for future students or current teachers that are interested in foreign trade research. This paper can also be submitted for Student Research Paper Competition.

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