


ANALYZING CAUSES OF INTERNATIONAL TRADE SHOCKS

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ARTICLE INFO	<u>ABSTRACT</u>
<p>Article history:</p> <p>Received 04 October 2022</p> <p>Accepted 23 December 2022</p>	<p>ABSTRACT</p> <p>Purpose: This research aims to analyze the impact of trade shocks on overall international trade relations.</p>
<p>Keywords:</p> <p>International Trade; Trade Shocks; Economic Indicators.</p> <div data-bbox="172 853 480 1093" style="text-align: center;">  </div>	<p>The theoretical framework: of this paper comes from the fact that in recent years, the global economy has witnessed many trade shocks, whether caused by trade disputes between major economies, military disputes, or just crises in the supply of crude oil.</p> <p>Methodology: The research relied on the analytical descriptive method.</p> <p>Findings: The research concluded with a set of conclusions, the most prominent of which was that trade shocks do not necessarily result from the requirements of the traditional economic cycle or emergency or exceptional international economic conditions only, but they often occur as a result of economic and trade policies adopted by different countries. The severity of the shock and its time duration depend on the nature of the exported goods, or imported, and the trade shocks, with their positive and negative effects, exceed the state's trade balance to be reflected on all other economic variables such as gross domestic product, income, employment, commodity prices, interest rate, exchange rate, and cash reserves.</p> <p>Research practical and social implications: The practical and social effects desired from this research are to study the different forms of trade shocks and their economic dimensions over different timescales in a way that makes governments more able to anticipate them and neutralize their negative effects and avoid them, with many of them adopting a policy of trade openness.</p> <p>Originality/value: The research has great value in light of the risks posed by fluctuations in macro indicators with various trade crises in terms of temporary and permanent shocks or favorable and adverse shocks that are less studied in other previous studies.</p> <p>Doi: https://doi.org/10.26668/businessreview/2022.v7i6.1119</p>

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ANÁLISE DAS CAUSAS DOS CHOQUES DO COMÉRCIO INTERNACIONAL

RESUMO

Objetivo: Esta pesquisa tem como objetivo analisar o impacto dos choques comerciais sobre as relações comerciais internacionais em geral.

A estrutura teórica: deste trabalho vem do fato de que, nos últimos anos, a economia global tem testemunhado muitos choques comerciais, sejam causados por disputas comerciais entre grandes economias, disputas militares, ou apenas crises no fornecimento de oi bruto.

Metodologia: A pesquisa se baseou no método analítico descritivo.

Descobertas: A pesquisa concluiu com um conjunto de conclusões, a mais proeminente das quais foi que os choques comerciais não resultam necessariamente das exigências do ciclo econômico tradicional ou somente das condições econômicas internacionais de emergência ou excepcionais, mas frequentemente ocorrem como resultado de políticas econômicas e comerciais adotadas por diferentes países. A gravidade do choque e sua duração dependem da natureza dos bens exportados ou importados, e os choques comerciais, com seus efeitos positivos e negativos, excedem a balança comercial do Estado para se refletir em todas as outras variáveis econômicas, tais como produto interno bruto, renda, emprego, preços de commodities, taxa de juros, taxa de câmbio e reservas de caixa.

Pesquisar as implicações práticas e sociais: Os efeitos práticos e sociais desejados por esta pesquisa são estudar as diferentes formas de choques comerciais e suas dimensões econômicas em diferentes escalas de tempo, de forma a tornar os governos mais capazes de antecipá-los e neutralizar seus efeitos negativos e evitá-los, sendo que muitos deles adotam uma política de abertura comercial.

Originalidade/valor: A pesquisa tem grande valor à luz dos riscos colocados pelas flutuações nos macro indicadores com várias crises comerciais em termos de choques temporários e permanentes ou choques favoráveis e adversos que são menos estudados em outros estudos anteriores.

Palavras-chave: Comércio Internacional, Choques Comerciais, Indicadores Econômicos.

ANÁLISIS DE LAS CAUSAS DE LAS PERTURBACIONES DEL COMERCIO INTERNACIONAL

RESUMEN

Propósito: Esta investigación pretende analizar el impacto de los shocks comerciales en el conjunto de las relaciones comerciales internacionales.

El marco teórico de: este trabajo proviene del hecho de que, en los últimos años, la economía mundial ha sido testigo de numerosos shocks comerciales, ya sea causados por disputas comerciales entre las principales economías, disputas militares o simplemente crisis en el suministro de crudo.

Metodología: La investigación se basó en el método descriptivo analítico.

Resultados: La investigación concluyó con un conjunto de conclusiones, la más destacada de las cuales fue que los choques comerciales no necesariamente resultan únicamente de los requerimientos del ciclo económico tradicional o de condiciones económicas internacionales de emergencia o excepcionales, sino que a menudo ocurren como resultado de las políticas económicas y comerciales adoptadas por los diferentes países. La gravedad del choque y su duración en el tiempo dependen de la naturaleza de las mercancías exportadas, o importadas, y los choques comerciales, con sus efectos positivos y negativos, superan la balanza comercial del Estado para reflejarse en todas las demás variables económicas, como el producto interior bruto, la renta, el empleo, los precios de los productos básicos, el tipo de interés, el tipo de cambio y las reservas de efectivo.

Investigar los efectos prácticos y sociales: Los efectos prácticos y sociales que se desean obtener de esta investigación son el estudio de las diferentes formas de choques comerciales y sus dimensiones económicas en diferentes escalas de tiempo, de manera que los gobiernos sean más capaces de anticiparse a ellos y neutralizar sus efectos negativos y evitarlos, adoptando muchos de ellos una política de apertura comercial.

Originalidad/valor: La investigación tiene un gran valor a la luz de los riesgos que suponen las fluctuaciones de los indicadores macro con diversas crisis comerciales en términos de shocks temporales y permanentes o de shocks favorables y adversos menos estudiados en otros estudios previos.

Palabras clave: Comercio Internacional, Choques Comerciales, Indicadores Económicos.

INTRODUCTION

Background: The economic openness to the outside world is an indication of the development of the country's economy, and also one of the obstacles to economic development as a result of the imbalance in the structure of foreign trade. One of the developed countries is a result of dependence on the export of raw materials, and the second is an internal reason that blames the economic policies of governments for being unable to deal with trade shocks. Perhaps the most important trade shocks are the change in the values of exports and imports with the outside world. Quarterly countries are often exposed to trade shocks as a result of a change in global demand for their exports. These shocks may be favorable or adverse and the duration of their occurrence is temporary or permanent. In the direction of the favorable shock, it is witnessing an economic recovery, and a contraction occurs in the case of adverse shocks, which leads to a decline in those variables and an increase in the degree of tension. Economists and economic policymakers in the world are interested in understanding the causes of macroeconomic volatility and how it can be reduced, as trade shocks explain nearly half of the fluctuations in aggregate output.

The *importance and Justification of the research* derive from the fact that it came in an important period in which the global economy witnessed many favorable and adverse trade shocks as a result of the concentration of its exports on one commodity or a particular economy, and this is what imposes on economic policymakers to reduce its negative effects and to show its clear impact on macroeconomic variables. *The objective* of the research is to identify the different forms of trade shocks, how they interact with the country's economy affected by them, the size of the impact of trade shocks on the economy, and identify transmission channels for the local economy, in addition to identifying straight and dynamic measurement models which all reflects the *Necessary for this research* to provide an accurate analysis of the different forms of trade shocks and their varying dimensions between economies. *The theoretical framework* of this paper comes from the fact that in recent years, the global economy has witnessed many trade shocks, whether caused by trade disputes between major economies, military disputes, or just crises in the supply of crude oil, and all of this calls for more analysis of its causes, roots, and future dimensions. *The research problem* is what are trade shocks and how is a country's economy affected by them? What are the channels of transmission to the local economy? Straight and dynamic scaling models, how big is the impact of trade shocks? *The research hypothesis* stems from the exposure of the global economy to many trade shocks during the recent period, which have different effects on many macroeconomic variables.

LITERATURE AND BACKGROUND REVIEW

The study of Ayhan and Riezman aimed to determine the role of trade shocks in explaining macroeconomic fluctuations in African countries. The study was applied to (22) African countries exporting non-oil commodities using a quantitative, stochastic, multi-sector model (simultaneous equations model) for the period (1970-1990). He concluded that trade shocks play an important role in driving macroeconomic volatility in African economies. The results indicate that trade shocks represent approximately (45%) of the economic fluctuations in the total output, that fluctuations in global interest rates have a slight impact on the African economy, and that financial shocks play only a secondary role. It was also found that adverse trade shocks lead to Long-term recessions, and also find that sensitivity analysis indicates that the most significant impact of trade shocks is on investment (Kose & Riezman, 2001).

The study (Broda, 2004) aimed to determine the appropriate exchange rate system in the event of negative trade shocks by applying it to a sample of (74) countries for the period (1973-1996) using the Autoregressive Model (VAR), and the research found that the response to shocks is different and depends on the exchange rate system. The followed, as it was found that the response of growth in the GDP and the time course of the real exchange rate differs significantly from the monetary systems followed, in the event of an adverse trade shock, countries that rely on a fixed exchange rate system will suffer a great loss and the exchange rate will gradually decline as a result of the decline in prices As for countries that depend on the flexible exchange rate system, their loss is less in the event of an adverse trade shock, as it was found that shocks in the rate of trade explain (30%) of the fluctuations that occur in real GDP in fixed exchange systems and about (30 %) of real exchange rate fluctuations in countries with flexible regimes. The study recommends that flexible drainage systems are more capable than fixed drainage systems of reducing.

The study (Ngwudiobu, 2017) aimed to estimate the impact of terms of trade shocks on selected macroeconomic variables in Nigeria (output, exchange rate, inflation), and quarterly data from (1986) to the last quarter of (2014) were used by applying a conditional generalized autoregressive model. Conventional GARCH heterogeneity. This study assumes that terms of trade shocks have different effects on macroeconomic variables. This study concluded that the reason for the adverse shocks to the rates of trade exchange in Nigeria is due to the low prices of exported local products, the high prices of imported foreign products in international markets, and the weakness of the manufacturing sectors in Nigeria. The study recommends that countries that suffer from permanent adverse shocks in terms of trade should be very careful and not resort to external borrowing to finance deficits in which shocks can be created as a result of

reduced consumption.

MATERIAL AND METHODOLOGY OF ECONOMIC ROOTING OF TRADE SHOCKS

Material and methodology for Economic shocks

Economic history shows that the economy does not grow in a coordinated manner. Years of economic expansion and prosperity come after years of stagnation and depression, in which the gross domestic product declines, the real profits of the country decline, and unemployment rates rise, as the crisis reaches its lowest point and then the economy begins to recover, and this economic expansion and then decline towards stagnation is known as the economic cycle or what is called the business cycle, which is a swing that affects the gross national product, income, unemployment and other variables, which usually lasts for some time, and which is characterized by the expansion and contraction of most economic sectors that are in the capitalist economy (Samuelson & D.Nordhaus, 1998).

At the beginning of the twentieth century, economists began to realize the importance of impulse response functions (motives) and propagation mechanisms to explain the fluctuations of the business cycle. Moving random variables are time series characterized by sequences of ups and downs that are very similar to the time series of economic cycles ("Slutzky, Eugen," 1937). So did the economist (Frisch) expanded this researcher in his published paper "Problems of Diffusion and Push in a Dynamic Economy", which revolutionized business cycles, as he distinguishes between the mechanisms of payment and diffusion, in which he clarified that the motives (incentives) are the external causes of shocks, and the mechanisms of diffusion are the internal causes that The shocks spread within the economy and deepen the severity of the economic cycle, so he showed that the decline in credit (credit) before each shock is the effective tool for spreading shocks, and this model concluded that fluctuations in economic variables are caused by small shocks with a white noise * that affect the economy by Through a complex dynamic diffusion system, this model indicates that some random shocks led to an increase in output above the normal level of the economy, and that all fluctuations in macroeconomic variables will return to normal in a cyclical manner and this fluctuation in economic activity will gradually shrink and eventually disappear (Frisch, 1933).

From the forties to the seventies of the twentieth century, research emphasized the shocks of monetary and fiscal policy (internal shocks), which were identified through broad econometric models. Aggregate supply shocks entered the economic literature in the mid-

seventies and early eighties of the last century as a result of the rise in oil prices. (Ramey et al., 2016). The neo-classical economists argue that business cycles represent the best response to the economy due to production disruptions, and there is no need for government intervention to counter these fluctuations, while Keynesian economists argue that prices and wages are slowly returning to equilibrium and that these fluctuations may prompt the economy to intervene by the state to mitigate these fluctuations in business cycles. through monetary and fiscal policies (William Boyes & Michael Melvin, 2016). The (Sims, 1980) study entitled (Macroeconomics and Reality) revolutionized the identification of shocks and the analysis of their effects on the economic variables that are driven by the impulse response functions by introducing the Autoregressive Vector Model (VARs) linking the innovations of a linear system and macroeconomic shocks, as it became easy to talk about functions Impulse response and calculating shocks using components analysis of variance to predict residuals. The second important innovation by economists (Kydland & Prescott, 2008) is to expand inquiry beyond demand shocks and expand research into real shocks such as technological shocks, as well as the economist (Hamilton, 1983) to expand the search for real shocks (oil price shocks).

Although there is no absolute consensus among economists about the definition of shock, there are four features of the event that define the concept of economic shock and distinguish it from other events, which are the following (Gürtler, 2020):

Short-term: It is a short-term event that results in instability and equilibrium due to additional costs in the case of adverse shocks or temporary profits that were not expected by producers in the case of favorable shocks. As for changes in the long run, they are not considered economic shocks because the economy has enough time to adapt. For example, an industry that Disappears overnight is a shock, while an industry that fades over several decades is not.

Degree of comprehensiveness: Economists mean that the event is broad and affects the entire economy, as individual industries or geographical areas can suffer from local or regional economic shocks, but the more local the event, the less likely it will meet the definition.

Unexpected: An economic shock is an event that was neither planned nor expected, so it causes unexpected changes in the economy, as the prices of goods in the market are priced according to expected events, and consumers, companies, and investors spend according to what they expect to happen in the future.

Many economists argue that an economic shock must come from outside the economy such as weather, political turmoil, or war, but an event like the 2008 global financial crisis would not be considered an economic shock because the crisis originated from within the economy, i.e. a series of financial decisions, and some oppose Other economists have this

characteristic and say that an economic shock does not need to be exogenous. Few economists would argue that increasing foreign trade can be a means to more domestic wealth, but it can also be a source of insecurity for those who still need to adjust to a more open economy. Economic policymakers have long recognized that The increase in foreign trade has both positive and negative sides, and they discussed for a long time the measures that should be taken in this regard, especially concerning compensating the losers. Its roots appeared in the early seventies, but its acceleration in recent years coincided with the availability of large new sources of employment in developing countries in particular and with the spread of Trade and investment agreements between developing and developed countries.

Trade shocks are severe and unaccounted-for fluctuations in the terms of trade between a country and the outside world (Izurieta et al., 2009). It is also that they are sudden and unexpected changes that occur in the rates of external trade exchange, and these changes are in exports or imports, and they may be favorable (rise in export prices or decrease in import prices or both), or adverse shock (low export prices and increase in import prices or both), and these shocks may be temporary, and the government intervenes in addressing them by taking financial measures that limit these negative shocks, and they may be permanent (Jääskelä & Smith, 2011). Trade shocks are also net profits or losses from international trade resulting from changes in international prices and in the volume of goods and services that are traded internationally, that is, it relates to shifts in global markets outside the influence of individual countries, as trade shocks decompose into price and volume effects, and that net profits from Trade is equal to export earnings minus import expenditures and changes in it are affected by both price and volume effects. Therefore, the analysis of trade shocks requires estimating three components:

1. Effect of change in international prices of exported and imported goods.
2. The effect of the change in the volume (quantities) of exports demanded by the rest of the world.
3. The effect of the change in the volume of imports required from the rest of the world.

The first point is called the trade shock. For example, if export prices rise and import prices drop in the country, the economy may be exposed to a positive trade shock, and the rate of trade exchange increases. But if export prices decrease and import prices rise, the country will suffer from a negative trade shock that affects the rate of trade exchange. Combining points (2) and (3) in one category is considered a trade shock because the world's economic policymakers tend to interpret changes in export demand from the rest of the world as an external event (real shock), while The change in the demand for imports is an internal matter

(internal shock) to the income and behavior of the local economy that can be directly affected by the government's trade policy (Cripps & Vos, 2010). The researcher defines trade shocks as an influential and unexpected external event that is caused by nature or human intervention, and it is in the form of an increase in exports or a decrease in imports in the case of favorable shocks, and the opposite occurs in the case of adverse shocks

Mendoza found that trade openness can improve economic growth and industrial development, but this openness is one of the channels of transmission of trade shocks, and these shocks usually cause cases of deflation in developing countries, while in developed countries they cause a severe decrease in global demand (UNCTAD, 2013). Trade shocks against a country may not only disrupt the growth of the economy, but also lead to its instability, and the effects of these shocks have been widely documented, for example (Mendoza) (1995) and Cos (2002) that the terms of trade shocks represent on a large scale. At least half of the volatility of production is in developing countries, while Barrow (1996) documented that the continuous deterioration in a country's terms of trade can have a significant and negative impact on growth, and recent empirical evidence shows that terms of trade shocks are not only caused by changes in economic growth, But also with changes in borrowing installments and debt crises (Eicher et al., 2008). Trade shocks pose a greater challenge in export-dependent countries, especially those that export more traditional raw materials and the contradiction between East Asian countries and other regions (South America and Central America), the share of primary and manufactured goods focused on resources and technology has decreased in exports. The totality of East Asia from (76%) in (1980) to (35%) in (2005), and the share of China alone decreased from (93%) in (1985) to (44%) in (2005), and it was Other regions are less successful in transforming their production structure for exports, as primary commodities and industrial goods for South and Central American countries constitute (78%) of their exports for the year (2005) after they constituted (90%) in (1983) (DESA, 2008).

In addition, (Cashin and Pattillo) (2000) indicated that most researchers believe that adaptation to trade shocks can be done through two conservative approaches, the first is by saving during a favorable trade shock, and the second by avoiding irreversible obligations such as Interest on loans, which are costly in a period of uncertainty about the future (Jacquet et al., 2018). (Broda) pointed out that developing countries suffer from many shocks in the rates of trade exchange because they have small economies that are open to the outside world, and this indicates that they cannot have an impact on the relative supply and demand in the world, and therefore have little or no effect on The prices of their exports, and this makes trade shocks in developing countries to a large extent external, and since developing countries find it difficult

to escape from trade shocks and their impact on macroeconomic volatility, it becomes necessary for these countries to take the necessary measures (Broda, 2004). “Rees” pointed out that producers are unable to determine whether the terms of trade shocks are permanent or temporary which leads to greater volatility in the overall economy than would be the case if they had complete information about the timing and extent of these trade shocks (Rees, 2013).

Sources of Trade Shocks

Trade shocks take the form of shocks that occur in exports, such as negative shocks, such as a decrease in demand for exports or a decrease in their prices, or sometimes restrictions on the volume of exports, or maybe import shocks such as an increase in the prices of imported goods. We will address the most important sources of trade shocks:

1. Change in export shocks: Exports are goods and services produced inside the country and sold abroad, as these exports contribute to creating incomes for the national economy but do not form part of internal consumption or investment expenditures (Borio, 2012). And the export shock is the external demand for domestic goods and products, and this change is either in export prices or placing restrictions on the number of exports in developing countries more than in advanced industrial countries, and exposure to shocks that occur in export prices can be reduced by diversifying the country’s exports as well as through Use the forward selling method, ie long-term sales contracts or the use of sovereign funds.

The growth rate in developed countries affects the exports of developing countries in two ways, the first is through the change in commodity prices. On the contrary, the recession in the industrialized countries generally reduces the prices of basic commodities, and despite the growth of manufactured exports from some developing countries, most developing countries are still exporters of raw materials and importers of manufactured goods, and therefore the negative impact of the recession in industrialized countries on Commodity prices represent an adverse shock to the exports of developing countries (Paul Krugman, 1988). The second aspect is through trade cycles, as prices change according to the change in demand and supply of goods. In the event of a decrease in demand for manufactured goods, their prices will decrease, but this decline is not sufficient to balance the market unlike primary goods, and for this reason fluctuations in export prices for basic commodities are reflected in The rate of trade exchange, and that the difference in the rate of trade exchange between countries reflects the basic differences in the structure of their exports, and the increase in the concentration of the export structure means greater risk and greater fluctuations in the price of the exported product,

which leads to increased fluctuations in the rate of trade exchange and vice versa, and the effect of fluctuations in the exchange rate depends Trade on the trade structure and the role of exports in the economy, and extreme fluctuations in the rate of trade exchange and income are more common in developing countries because of their dependence on a single commodity or a limited number of exported primary commodities.

2. Import shocks: The concept of imports usually refers to the spending of the country's citizens on goods and services produced outside its borders, as it contributes to the decline and leakage of the income stream and domestic spending abroad, while the import shock is the sudden change in the prices of imported commodities, and one of the most important sources of trade shocks for importing countries For these commodities, the shock of high oil prices was one of the most impactful shocks on oil-importing countries in the seventies and eighties of the last century, and changes in exchange rates in industrialized countries are one of the important factors affecting export and import prices in developing countries, and the direction of this effect depends on the currency in which It is carried out by the prices of exports and imports, when the price of the dollar rises against other European currencies, the prices of exported and imported goods for developing countries decrease when they are floated in dollars and increase when they float in European currencies, that is, the effect of exchange rates on the prices of exports and imports will not be equal. These countries are declining less than their exports (Paul Krugman, 1988).

The net effect of trade external shocks on commodity markets can be identified through changes in the rate of trade exchange. When the rate of trade exchange decreases, this means | That the state must pay additional quantities of a certain amount of exports to obtain a smaller amount of imports, and to compensate for this decrease, the state must increase the quantities of its exports to obtain the same amount of imports that it was obtaining before, or reduce the volume of its imports or increase the rate of borrowing from abroad To fill this gap, but in this case the country will become more vulnerable to the shocks of international capital markets, and the instability in the rates of trade exchange in developing countries affects their overall economic performance, and that many of these countries are exposed to shocks of the rate of trade, whether these shocks are favorable or adverse, which exposes those countries to some financial problems, and in the case of favorable shocks, if the government saves the increase in output as a result of the shock, it will not be exposed to the Dutch disease (Gylfason, 2001). But the main problem lies in the difficulty of determining the duration of this shock's survival, and trade shocks lead to an imbalance in the general budget, so econometric models show that public

spending increases in response to favorable shocks, as Combes and Saadi explained that the government increases current and capital spending during a favorable shock, but it decreases its current spending during the adverse shock, and this leads to a decrease in public investment and a deficit in the general budget (Combes & Saadi-Sedik, 2006).

The results of most studies show that export shocks have a greater and more stable effect on the economy than import shocks. The fact of this is that the share of exports of commodities is much higher than the share of imports of basic commodities. In addition, shocks of global economic activity that reflect unexpected changes in output Global is a common shift in the export of basic commodities and import prices, when global economic activity increases, there is an increase in demand for all commodities, which leads to a simultaneous rise in the prices of exports and imports, but it can reflect a slight change in the rate of trade as a result of the economy's response asymmetrically to changes in Export and import prices (Di Pace & Görtz, 2021).

RESULTS AND DISCUSSION (TYPES OF TRADE SHOCKS)

Trade shocks have direct and indirect economic effects, and their direct impact is on the income of both the public and private sectors, while their indirect impact reverberates throughout the economy and can affect production, investment, macroeconomic balances, debt and poverty, and the course and size of this impact depends on the nature of the shock. Its size, duration, the structure of the economy, and degree of diversification. Trade shocks consist of several types. We will address the most important types of these shocks, namely:

In terms of the duration of the effect, it is divided into temporary shocks and permanent shocks

First: Temporary shocks: These shocks occur temporarily when the economy is exposed to a sudden change in the relative prices of the country in question and then fade away after a short period, as these shocks can have an impact on some macroeconomic variables, in a study by Spatafors and Warner found Temporary favorable trade shocks have a positive effect on investment because countries import more than their capital needs, and also these shocks have a positive effect on consumption and have no effect on savings, while they harm foreign trade and the current account, and there is a positive effect on output in the main categories. For non-traded goods, but the effect of the Dutch disease is largely absent in this type of shock, agriculture and industry do not shrink in their response to increased oil prices (Spatafora & Warner, 1999). In the case of adverse temporary shocks (negative) and a temporary

deterioration in the terms of trade for a short period, the shock and its negative impact on growth and poverty rates can be mitigated by providing the necessary sources of liquidity while maintaining imports and government spending at their normal levels (DESA, 2008; 21).

In the Rees study, it is noted that the economy's response to temporary positive trade shocks is one standard deviation. When producers have incomplete information about the continuation of these shocks, this shock initially leads to an increase in terms of trade by about (1.3%), and then rates of trade decrease Trade exchange and stabilized after several years at its original level, which increased the shock of domestic commodity prices relative to the price of consumer and investment goods. Employment is two years from the occurrence of the favorable shock below the original level, and this reflects the fact that the increase in the terms of trade makes families in the economy richer, in contrast, the investment boom is more stable and it takes five years for the investment to return to its initial level, and consumption responds also positively to the shock before gradually returning to the general trend, and this response to the terms of trade increases the wealth of the local population and this would This leads to an increase in their consumption, so the response of the economy under incomplete information must be compared with its response under complete information. Full information (that is, individuals, governments, and investors are not aware of the duration of the shock), that is, with complete information, investors and producers realize that the shock is temporary and offer production to benefit from the temporary rise in export prices. The terms of trade will be short-lived, and therefore the expected increase in their wealth will be less than if they expect the terms of trade to be constantly higher, and the second reason is that producers trust that the price of a domestically produced consumer good will decrease in the future relative to the price of the imported good, and the rate of interest The real will be higher under complete information than it is under incomplete information, and the increase in investment to be less under full information (Rees, 2013; 22).

Second: Permanent shocks: By moving to the permanent exchange rate shocks that last for a long time and increase by 0.2%, the effect resulting from this shock accumulates over time until it finally settles at a rate of (1%) above the original level, and by focusing on the case of lack of information, the output and investment both increase after the shock, but the expansion in the output is initially small and accumulates over time, and the investment response is the opposite, as it is large at the beginning and then decreases gradually, and in principle, consumption responds slightly to the shock, but then increases over time, and since the prosperity of Investment is greater than the increase in the terms of trade, the trade balance of the economy decreases for some time after the shock, although it eventually increases as long

as the investment boom ends.

In the case of complete information, it is noted that both employment and GDP decline after the shock and return to their original level after two years, and the response of the output is largely the same, and on the contrary, the investment boom is greater in the case of complete information and this reflects the fact that when economic units are Confident that the terms of trade will increase in the future, they will want to make long-term investments and that the economic units will increase consumption more in light of the completeness of the information and their response will be stronger for consumption and investment, while their response will be weaker to the output and an initial decline in the trade balance(Rees, 2013), In the case of incomplete information, the output increases after the shock, and this increase is small and then expands over time. As for investment, it increases after the permanent shock, and its response is significant at the beginning and then decreases after that. This increase in investment is the opposite of the gross national product, while The initial increase in consumption is small and then expands over time. As for the trade balance, it initially decreases after the shock as a result of increased investment and an increase in demand for capital goods and then increases in the end as a result of increased investment.

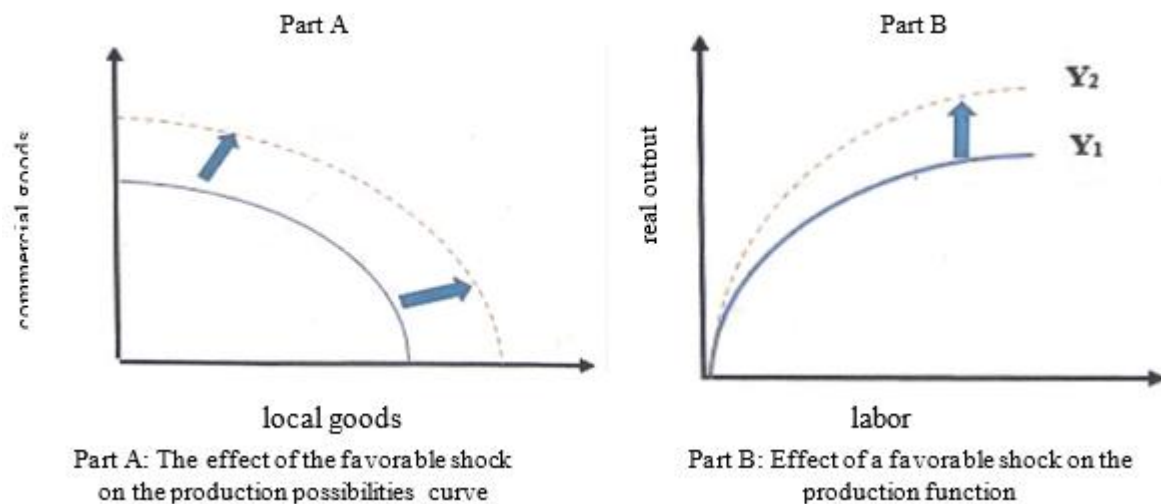
In terms of the type of impact is divided into favorable and adverse shocks

First: Favorable (positive) shocks: It means a sudden positive increase in exports or a sudden negative decrease in imports or both. In the event the economy is exposed to a positive shock in the rate of trade exchange, the effects are neutral in terms of the income distribution, meaning that every factor its productivity would benefit from a positive shock because there are no changes in the relative profits of workers among domestically produced goods, and in this type of shock when demand continues to increase as international prices increase, a positive term of trade shock does not cause distributional differences between different social and economic groups (Although these effects may appear if the effects do not occur in spending on non-tradable goods simultaneously), and this result is from the shock strength of a change in the hypothesis of the typical consumer. The profits of workers will not continue if the consumption demand is not characterized by elasticity. For example, if the demand for manufactured (non-tradable) goods has high-income elasticity, the share of spending on This commodity will rise when a favorable shock occurs in export prices, which increases the gains for skilled workers, and in such an economy, after a positive shock in the price of agricultural commodities (trade commodities), the worker in manufactured goods can obtain greater benefits in income (Spatafora & Warner, 1999; 26). Favorable trade shocks are similar to

productivity shocks because they help the economy to increase consumption sustainably without any corresponding increase in the prices of production factors. Temporary favorable trade shocks lead to an increase in net exports and an improvement in the current account, as opposed to permanent shocks (Rees, 2013; 2).

Many economic studies indicated that favorable shocks are among the factors that help in achieving self-growth, and the diversity of those shocks between the discovery of a new natural resource or a rise in export prices, or a decrease in import prices, as the favorable shocks can be illustrated through the graph (1) Which shows the effect of the discovery of natural resources or technological improvement in the productive sector or the increase in export prices on the production possibilities curve and the production function (Topalova, 2004)

Figure 1: Effect of a favorable trade shock on the production possibilities curve and the production function



Topalova, P. (2004). Trade Liberalization and Firm Productivity: The Case of India. IMF Working Papers, 04(28), 1. <https://doi.org/10.5089/9781451844696.001>

It is noted in part (A) of Figure (1) the production possibilities curve, as it is assumed that in the event of a favorable shock its source will be the discovery of a new resource, the increase in the flow of foreign capital into the economy, or the increase in export earnings, the production possibilities curve will shift outward (higher), i.e. There is a strong direct relationship between the positive trade integrity and the production possibilities curve, and this relationship appears clearly upon the increase in the value of exports or the decrease in the value of imports. As for part (B), it is noted that the effect of the favorable trade shock is negative and positive on the real output, i.e. a positive shock Its source is an increase in exports, for example, it will work to shift the real output curve upwards to (Y2)(Topalova, 2004)

Second: Adverse (negative) shocks: Negative shocks mean a sudden drop in exports or

a sudden rise in imports or both, as the deterioration of the rates of trade exchange led to a relative decrease in the price of exportable commodities to imported ones, thus affecting spending and affecting the movement of resources. The decrease in export prices as a result of a decrease in the global market prices for export commodities leads to a decrease in the local wealth and thus a decrease in the demand for commercial and non-commercial goods. Trade items to non-tradable goods will fall and the real exchange rate will fall, thus reducing the terms of trade shock to the marginal product of a worker in the export sector and shifting resources away from the tradable sector (Funke et al., 2008). But in some countries, the period of recovery in growth in gross output may follow a negative trade exchange shock, and in other countries, it is not. There are some cases, such as Bangladesh (1980) that experienced a negative trade exchange shock accompanied by an improvement in income growth, and in Saudi Arabia, the shock of the negative terms of trade (1986) led to a slow boom in the growth rate of the country's economy, which suggests that the stagnation effects of the terms of trade shock are not inevitable (Aiyar et al., 2013).

As adverse trade shocks have short and long-term effects, the shock must be mitigated in the short term by increasing financing and borrowing from donors such as the International Monetary Fund and also mitigating the severity of economic policies, especially fiscal policy, to increase the fiscal deficit to address these shocks to maintain economic activity and the provision of financing for structural policies to control the effects of the shock in the long run, and if the negative shock is permanent, the demand for goods with high-income elasticity will change less than the demand for other goods, causing a change in relative prices. Also, if the negative shock is temporary, economic producers can benefit from savings or borrowing to maintain their level of consumption unchanged, then no differences in demand for goods will be observed (ESCC-UN, 2008; 20), and the exchange rate shocks Negativity directly reduces real income and the resources available for investment to consume, and evidence of the negative effects of terms of trade shocks on growth The economy is strong as well, and it is of particular importance to discover the secondary effects of negative shocks, which are measured by the effect of shocks on the rate of trade exchange and on the growth of the gross domestic product, which is very large (Bevan et al., 1993).

Some adverse trade shocks, such as a drop in the world price of one of the main exported commodities, or a rise in the price of imported commodities, as happened in the seventies, resulted from the rise in international oil prices for importing countries, which led to higher production costs, lower production, an increase in the general level of prices, and an increase in unemployment rates, The effect of adverse trade shocks on the production possibilities curve as

well as on the production function can be illustrated in Figure (2) as follows:

Figure 2: The effect of an adverse trade shock on the production possibilities curve and the production function

Topalova, P. (2004). Trade Liberalization and Firm Productivity: The Case of India. IMF Working Papers, 04(28), 1. <https://doi.org/10.5089/9781451844696.001>

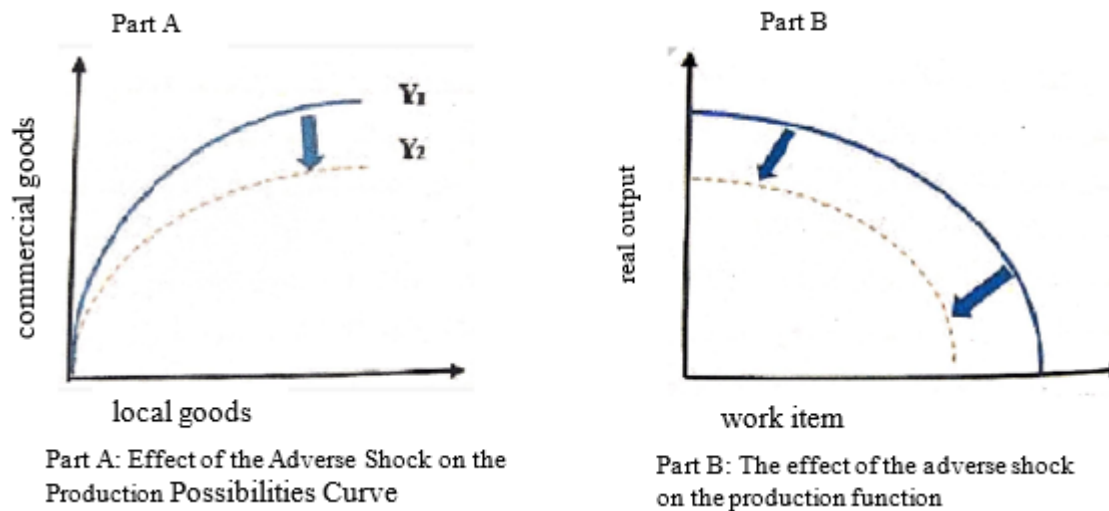


Figure (2) in Part A Effect of (negative) adverse trade shocks on the production possibilities curve, as the adverse trade shock whose source is a decrease in the value of exports or an increase in the value of imports decreases the production possibilities curve and moves inward (down), ie There is a regressive relationship between the adverse shocks and the production possibilities curve. As part (B) shows the impact of the adverse trade shock on the production function, it is noted that the decrease in one of the main sources of income such as export revenues as a result of the drop in oil prices for the quarter countries that depend heavily on oil in their exports leads To decrease the production function and move down from (Y) to (Y2) (Jääskelä & Smith, 2011).

CONCLUSION

POLICY FINDINGS

Trade shocks do not occur as a result of the requirements of the economic cycle or emergency or exceptional international economic conditions only, but they often occur as a result of economic and trade policies, whether they are studied with a specific goal or not sufficiently studied. The probability of a particular economy being exposed to trade shocks increases with the increase in the policy of trade openness. The shock is intensified upon it if it suffers from mono-export or its dwindling and its failure to achieve growth and its subjection

to the fluctuations of the global market due to the weakness of the productive apparatus and its competitiveness against the expansion of imports. The severity of the shock depends on the nature of the exported or imported goods, industrial, raw, or consumer, and tracing its positive or negative impact depends on the importance of the commodity, its value, and the amount of the source or importer of it. In rentier countries such as Iraq, the positive impact of the oil shock can turn into a shock with a negative impact if we exclude oil exports, or if there is any deviation toward the decrease in global demand for oil or an increase in the supply of it, which leads to a decrease in its prices and thus a decrease in its revenues.

Trade shocks do not have positive or negative effects on the country's trade balance only and its production capabilities but on all other economic variables such as gross domestic product, income, employment, commodity prices, interest rate, exchange rate, and cash reserves. The trade shocks that the developing countries have been exposed to, and the positive ones in the export sector, have not provided a basis for development strategies, combating unemployment, or reducing poverty. The limitations of the study are in presenting a philosophical framework for analyzing the different forms of trade crises and their causes, with a general review of the institutional frameworks that cause them, away from presenting contemporary experiences of trade crises.

RECOMMENDATIONS

Adopting a balanced and deliberate policy of trade openness that is not based on dependence on a specific sector, by directing the revenues of any sector towards a productive investment that increases the contribution of other sectors, especially those directed towards exports. Strengthening the productive apparatus and increasing its flexibility in responding to the requirements of trade exchange, developing production and technical efficiency, supporting local productive sectors, and activating the contribution of the private sector and medium and small enterprises. Getting rid of the state of the single rentier economy that depends on one commodity and moving to a diversified economy that takes advantage of the advantages of trade openness to develop other economic sectors and the infrastructure on which they are based. Adopting a package of integrated economic policies consistent with each other, ensuring sustainable growth, and overcoming obstacles that appear during unfavorable conditions for the growth of the economy and the private sector.

Establishing a center for monitoring, forecasting, and analyzing international economic crises and ways to avoid or mitigate them. It will serve as a warning device, open to the specialized institutions and institutes in the countries of the world and the international

economic and financial institutions, and what it requires from specialists in this regard, to develop studies, reports, and provide the advice needed by those concerned. Drawing the country's economic and trade policies to avoid the harmful effects of any trade shock that might occur. Benefiting from the positive effects of any trade shock that serves the economy in its various sectors. This corresponds to taking everything necessary to enhance the immunity of sectors affected by the effects of negative trade shocks. As a suggestion for future work, this study can be employed as a basis for building on it in providing a more in-depth analysis of the contrast of the impact of trade crises with the nature of economies and their disparity between those developing and developed economies and those characterized by their sectoral diversity and rentier economy.

REFERENCES

- Aiyar, S., Duval, R. A., Puy, D., Wu, Y., & Zhang, L. (2013). Growth Slowdowns and the Middle-Income Trap. *IMF Working Papers*, 13(71), 1. <https://doi.org/10.5089/9781484330647.001>
- Bevan, D., Collier, P., & Gunning, J. W. (1993). Trade shocks in developing countries. Consequences and policy responses. *European Economic Review*, 37(2–3), 557–565. [https://doi.org/10.1016/0014-2921\(93\)90045-C](https://doi.org/10.1016/0014-2921(93)90045-C)
- Borio, C. (2012). The financial cycle and macroeconomics: What have we learned? In BIS Working Papers (Issue 395).
- Broda, C. (2004). Terms of trade and exchange rate regimes in developing countries. *Journal of International Economics*, 63(1), 31–58. [https://doi.org/10.1016/S0022-1996\(03\)00043-6](https://doi.org/10.1016/S0022-1996(03)00043-6)
- Combes, J. L., & Saadi-Sedik, T. (2006). How does trade openness influence budget deficits in developing countries? *Journal of Development Studies*, 42(8), 1401–1416. <https://doi.org/10.1080/00220380600930762>
- Cripps, F., & Vos, R. (2010). Global Policy Model Technical Description of GPM.
- DESA. (2008). World Economic and Social Survey 2008: Overcoming Economic Insecurity (Issue August).
- Eicher, T. S., Schubert, S. F., & Turnovsky, S. J. (2008). Dynamic effects of terms of trade shocks: The impact on debt and growth. *Journal of International Money and Finance*, 27(6), 876–896. <https://doi.org/10.1016/j.jimonfin.2007.04.015>
- Funke, N., Eleonora Granziera, & Imam, P. (2008). Terms of Trade Shocks and Economic Recovery. *IMF Working Papers*, 08(36), 1. <https://doi.org/10.5089/9781451868982.001>
- ESCC-UN. (2008). Committee for Development Policy Report on the tenth session (17-20 March 2008) (Issue s-13)
- Frisch, R. (1933). Frisch, Rangar. C, 2, 171–205
- Gürtler, M. (2020). The Effect of the Covid-19 Shock on Trade Exploring the Role of Global Value Chains. University of Groningen.

- Gylfason, T. (2001). Lessons from the Dutch Disease: Causes, treatment, and Cures. Agosto, 28. <http://hhi.hi.is/sites/hhi.hi.is/files/W-series/2001/w0106.pdf>
- Hamilton, J. D. (1983). Oil and the macroeconomy since world war II. *Journal of Political Economy*, 91(2), 228–248. <https://doi.org/10.1086/261140>
- Izurieta, A., Vos, R., & Desa, U. (2009). Measuring the impact of the global shocks on trade balances via price and demand effects. *World Economic Vulnerability Monitor (WEVUM)*, i. http://www.un.org/en/development/desa/policy/publications/wevm/monitor_note.pdf
- Jääskelä, J., & Smith, P. (2011). DISCUSSION Terms of Trade Shocks : What are They and What Do They Do ?
- Jacquet, P., Atlani, A., & Lissner, M. (2018). Policy responses to terms of trade shocks. *Revue d'Economie Du Developpement*, 26(2), 51–82. <https://doi.org/10.3917/edd.322.0051>
- Kose, M. A., & Riezman, R. (2001). Trade shocks and macroeconomic fluctuations in Africa. *Journal of Development Economics*, 65(1), 55–80. [https://doi.org/10.1016/S0304-3878\(01\)00127-4](https://doi.org/10.1016/S0304-3878(01)00127-4)
- Kydland, F. E., & Prescott, E. C. (2008). Time to Build and Aggregate Fluctuations. *Econometrica*, 50(6), 1345–1370.
- Ngwudiobu, I. M. (2017). The Impact of Terms of Trade Shocks on the Volatility of Selected Macroeconomic Variables in Nigeria By Department of Economics. March.
- Paul Krugman. (1988). FINANCING VS. FORGIVING A DEBT OVERHANG. In NBER Working Paper Series (No. 2486; Issue 2486).
- Ramey, V. A., Elliott, G., Francis, N., Giannoni, M., Hall, R., Krishnamurthy, A., Mertens, K., Romer, C., Romer, D., Stock, J., Taylor, J., Uhlig, H., & Watson, M. (2016). Ramey NBER2016 Macroeconomic shock Handbook chapter. NBER Working Paper Series, 21978, 1–128.
- Rees, D. (2013). Terms of Trade Shocks and Incomplete Information. Discussion Paper.
- Samuelson, P. a ., & D.Nordhaus, W. (1998). *Economics* (16Th Edition). McGraw-Hill.
- Sims, C. A. (1980). Macroeconomics and Reality. *Econometrica*, 48(1), 1. <https://doi.org/10.2307/1912017>
- Slutzky, Eugen. (1937). *Econometrica*, 5(2), 105–146.
- Spatafora, N., & Warner, A. M. (1999). Macroeconomic Effects of Terms-of-Trade Shocks: The Case of Oil-Exporting Countries. World Bank Policy Research Working Paper, WP/99/134.
- Topalova, P. (2004). Trade Liberalization and Firm Productivity: The Case of India. *IMF Working Papers*, 04(28), 1. <https://doi.org/10.5089/9781451844696.001>
- UNCTAD. (2013). TRADE AND DEVELOPMENT REPORT, 2013. In secretariat of the UNCTAD (Issue September). <https://doi.org/10.4337/9781847201812.00007>
- William Boyes, & Michael Melvin. (2016). *Macroeconomics*, Tenth Edition. 1–26.