JMEE

Journal of Marketing and Emerging Economics

| e-ISSN: 2792-4009 | www.openaccessjournals.eu | Volume: 3 Issue: 3

Measuring the Environmental Impact and its Reflection on the Balance of Payments in Iraq

Dr. Ahmed Iyad Ibrahim
Mustansiriya University, College of Administration and Economics, Department of Economics, Baghdad, Iraq. Email: mahmadayad1980@uomustansiriyah.edu.iq

Dr. Iqbal Hashem Mutashar
Mustansiriya University, College of Administration and Economics, Department of Economics, Baghdad, Iraq. Email: dr.eqbalhashem2017@gmail.com

Abstract

This research aims to study the effects Environmental pollution resulting from economic activities with high carbon content is calculated within the environmentally adjusted balance of payments account as the effects of the pollution are reflected in the form of environmental diseases or epidemics and sudden changes in the climate, in addition to the impact of these emissions on the desertification of the soil surface. As a result of acid rain and all of these problems and concerns, many countries around the world were forced to sign the Kyoto Protocol, which aims to stabilize pollution levels at levels and then agree on them globally in an attempt to reduce the effects of environmental damage, so we had to factor these costs in. The balance of payments is used to determine the amount of change that will occur in the prices of internationally traded commodities if these countries are unable to produce and export products with low pollution content, and the policies used to reduce this pollution require costs that must be reflected in the prices of traded commodities. As a result, the purpose of this study was to determine the amount of change that will occur in the prices of traded commodities if the climate agreement is implemented using the concept of the ecological footprint.

Keywords: *Environmental pollution, economic activities, payment account, diseases, epidemics.*

INTRODUCTION

Historical trade has proven that economies oriented toward the outside have achieved results that are more efficient and capable and less likely to waste resources, which enables them to grow faster. to improve the well-being of the citizens of developing countries and the export of goods to and from the world because it is the one that controls the numbers on the direction of the impact of the activities of domestic and foreign policy because foreign trade indicators reflect the level of development of the country and the structural structure of the local economy as well as the level of

development of the country's economy and the policies followed in various economic sectors and its location. The field of trade exchange with other countries (Sayed Ahmed, 200, p. 13)

Research problem :

The research problem is represented by adjusting the balance of payments to include the costs of pollution associated with the production and export of internationally traded commodities. Its manufacturing produces less pollution.

Research hypothesis:

The study is based on the hypothesis that introducing environmental pollution costs associated with the production process of traded commodities will lead to fundamental changes in the balance of payments situation.

Research goal:

This research aims to identify the changes that may occur if the project is completed. Procedures in the agreement, countries define the policies they will follow, each according to its own circumstances, and thus define the basic frameworks for trade policy decisions.

Research Importance:

This research is of great importance because it sheds light on the effects of environmental damage associated with production processes, especially since these effects began to appear in the current period due to sudden changes in the climate, the aging of the soil surface, pollution of ocean surfaces, and the spread of diseases and epidemics. Therefore, we had to include these effects in our study in particular. For countries whose economy depends on foreign trade, because these pollutants associated with the production process are outside the control of those countries, any measure that would reduce these effects must be reflected in serious changes in the prices of imported goods. Therefore, this research came about for three reasons:

1. The amount of pollution costs associated with manufacturing operations

2. Determining the amount of changes that may occur in the prices of imported goods as a policy to limit pollution at the global level.

3. Determine the country whose production, especially for export, has a low carbon content, and therefore its price policy will be acceptable and can be relied upon in the future in trading operations.

JMEE
Journal of Marketing and Emerging Economics
| e-ISSN: 2792-4009 | www.openaccessjournals.eu | Volume: 3 Issue: 3

CHAPTER 1: CONCEPTS, TASKS, ELEMENTS, AND EFFECTS

1.Balance of Payments Concept

The "balance of payments" is defined as an organized record or a comprehensive statement of account of all economic transactions that take place between residents of the country and residents of other countries during a period of usually one year (Al-Ta'i 1999, 136).

It is defined as a record of all economic transactions between the country's population and the rest of the world in a certain period of time (a year), and it includes all visible and invisible external transactions of a country, that is, a summary of the financial operations that take place during a certain period of time between a country and various foreign countries (Baalbek 1991, 37).

The Balance of Payments is also known as a basic and coordinated statement of all economic transactions that take place between citizens and local governments and institutions of a country and citizens and governments of foreign institutions. year (Nama 2007: 55).

That is, the balance of payments is concerned with recording all the economic operations carried out by any country or its local institutions with the outside world, and there are those who define it as a record of all transactions that take place between a specific country and other countries during a specific period, usually a year (Ahlam 2015: 30).

The balance of trade, on the other hand, is a regular record of transactions related to goods exchanged between residents in the rest of the world in a specific period (usually a year), and it is part of a larger record that includes the exchange of services and money (the balance of payments), implying that international exchange is an urgent necessity. It is the main engine of economic growth through the contribution of exports and imports of capital, intermediate, and raw commodities, an effective contribution to the growth and development of economic activity, as well as its positive impact on the production process in the local market (Behnam, 2001, p. 172).

International trade can be defined as a set of economic relations that exist between mutual countries (Al-Jassim 1967, p. 216).

Or they represent the most important types of economic relations in which countries exchange goods and services in the form of exports and imports (Jawed 2013: Issue 17).

It is worth noting that there are conditions under which this exchange is regulated, meaning the balance of the relationship between import prices and export prices in relation to a specific quantity of imported and exported commodities, so the terms of the trade exchange are good if import prices fall and export prices remain the same, and vice versa, the terms of the trade exchange are bad. when import prices rise and export prices remain the same.

The decrease in import prices (with exports remaining unchanged) leads to the recovery of the economy, so it can obtain a larger quantity of imports for the same quantity of exports. As for when the prices of imported commodities rise and the export prices remain the same, the country faces the difficult choice of importing smaller quantities. In exchange for the same exported quantity of domestic commodities, but with high prices of imported commodities and low export prices, the country's loss will be greater than if export prices remained constant.

This means that international trade emerges from the various exchanges and transactions that occur between entities. An international economic system, seeking to achieve a balance between the two sides of liabilities and assets, is one of the goals of trade (Al-Jassim 1967: p. 226).

2.Balance of Payments Tasks

2.1. Provide detailed information on money demand and money supply.

2.2. Data Balance of Payments (John 200, p. 59)

refers to the country's ability and potential to become a "trading" partner. If a country faces a major difficulty in the balance of payments, it may not be able to expand its imports from the outside world. Instead, it imposes measures to restrict imports and limit capital outflows in order to improve the state of the balance of payments. On the other hand, a country that enjoys a large surplus in the balance of payments is likely to expand imports and provide marketing opportunities for foreign companies, reducing the possibility of imposing restrictions on foreign exchange (2) and Wikipedia. 3: Balance of payments Data can be used to evaluate the country's economic performance in international competition.

3. Balance of Payments Components

The balance in the usual sense includes two parties, and since the payment transactions are maintained by means of a double entry account that always shows "parallel accounts of payments," and these accounts always keep regular records of all economic transactions (visible and invisible) of a country with all other countries for a specific period of time, in the balance of payment accounts, all receipts from abroad are recorded as "credit," and all payments abroad are recorded as "debit." Every transaction that leads to gaining a foreign currency records a "positive" item (a "credit" balance), and in return, every transaction that leads to spending a foreign currency records a "negative" item (a "debit" balance). For example, "the sources of state funds such as exports, loan receipts, or foreign investment flows into the national economy, interest receipts, and financial stocks derived from the country's investments abroad" (that is, all paragraphs that give an increase in inward payments) are the credit balance.

As for imports that require foreign currency spending through commercial deals that give rise to payments going outside the national economy, its paragraphs are imports, investments made by

foreign countries through local residents, and interest payments and financial shares that the country offers on investments made by foreign investors; recorded with a negative sign, they are the items of the debit balance (which led to outflow payments).

As a result of the sum of both sides of the credit and debit accounts, a certain balance appears. If the exports are greater than the value of imports, the balance is positive (called the "winning trade balance"), but if the value of imports is greater than the value of exports, the balance is negative (it is called the "losing trade balance").

4. The Economic Impact of the Trade Balance

When all components of the balance of payments accounts are included, their sum must be zero, with no total surplus or deficit, and although the balance of payments accounts will always balance when they include all types of payments, imbalance is possible for the individual elements of the balance of payments. Payments such as the current account, the capital account that excludes the central bank's reserve account, or a combination of the two A disparity in the latter amount could result in surplus countries amassing wealth while deficit countries become increasingly indebted. The economic impact is divided into two types:

A: The surplus economic effect on the balance of payments:

The trade balance is of great importance because of its positive and negative balance, although it is only part of the balance of payments. If the sources exceed a certain amount, the trade balance surplus is a specific amount.

Funds (such as export goods and bonds sold) uses of funds (such as paying for imported goods and paying for foreign bonds purchased) with this amount.

Positive balance expresses healthy economic factors because it refers to "the vast production capacity that is in excess of the internal needs and also refers to the competitive capacity of the exported commodities," which means efficiency in production in terms of cost, quality, and conformity in tastes with foreign markets and competing with commodities. Similarities with other countries include the surplus country obtaining foreign currency in addition to domestic currency.

B: The economic impact of the deficit in the trade balance:

The deficit in the trade balance reveals weaknesses in the economy of a country and expresses the failure of the productive capacities to meet its needs, which forces it to import, and the continuation of the deficit in the trade balance depletes the country's reserves of foreign currencies, which leads to a rise in the percentage of external debt as well as a depreciation of the currency's patriotism and its purchasing power, which causes an economic crisis. Undesirable social

JMEE
Journal of Marketing and Emerging Economics
| e-ISSN: 2792-4009 | www.openaccessjournals.eu | Volume: 3 Issue: 3

If a country imports more than it exports (suffers a deficit in its trade balance), its trade balance will be in deficit, but the deficit must be balanced in other ways, such as with money earned from its foreign investments, by decreasing its currency reserves, or by receiving loans from other countries.

It is said that there is a negative deficit in the balance of payments if the sources of funds are less than the uses of funds.

Both the surplus and deficit in the balance of payments are accompanied by the accumulation (or decline) of foreign exchange reserves by the central bank.

CHAPTER 2: EMISSIONS EMBODIED IN TRADE (EET)

proven link within the recent studies of climate policies and the reduction of pollution. In addition to "discovering the extent of transformation or transmission of carbon pollution between trading countries and the impact of these pollutants and their costs on the balance of payments situation, as it includes a process," our analysis can provide the best understanding of the separation of environmental effects between domestic consumption and global production. Trading Pollution costs are in the form of traded goods, and this revised system works to inventory emissions by following up on the trading process rather than reducing those pollutions, thus holding countries whose pollution rates exceed the percentages specified in the Kyoto Agreement (the Iraqi climate facts) accountable by lowering the prices of their commodities or goods exported, each according to the damage costs involved in imports of goods and services or exports of goods and services. In export and import prices based on the amount of pollution values violated by the agreement, those pollutions associated with the product intended for export or import that include pollution are included.

This calculation is complicated because of the need to calculate the production systems in each country and at the sectoral level and link them to the levels of consumption through the trade exchange system by following the method of environmental input and output analysis (AIO). While adopting the method (MRIO), a multiregional input-output model that determines the local CO2 emissions in each country within the trading process, one of its disadvantages is that it does not depend on the assessment of imports required for reciprocal trade, which determines the internal and external emissions for both parties involved in the trading process.

But the difference in the second method is to define the mediator, as the EET model, for which we are at the height of a quantitative analysis of global climate policies, explains, as it requires an analysis of locally produced carbon dioxide emissions, which are traded internationally in the form of exported and imported commodities.

JMEE
Journal of Marketing and Emerging Economics
| e-ISSN: 2792-4009 | www.openaccessjournals.eu | Volume: 3 Issue: 3

$$f_r = F_r (I - A_{rr})^{-1} (y_{rr} + \sum_s e_{rs}) \ldots\ldots(1)$$

where:

Fr : CO2 emissions vector per industrial unit produced

Arr: production requirements

Yrr: Locally produced and consumed products.

Ers: reciprocal exports from area r to area s

And that the total pollutants in the unity matrix are represented or expressed as the sum of the traded emissions represented by the exchanged commodities.

In the MRIO model, there is an integrated multiple-input-output model that represents the average and final consumption analysis, which assumes implicitly in the analysis of inputs and outputs that it is equal to the correct one to represent the requirements involved in the installation of domestic demand for local production.

The assumption of linearity for the analysis of inputs and outputs in the IOA allows that it is always "one equal to the universe of local production dependent on local demand." Therefore, equation No. 1 can be written in the following form:

$$f_{rr} = F_R (I - A_{rr})^{-1} y_{rr} \quad \ldots\ldots\ldots\ldots \quad (2)$$

The emissions model of trade from country (r) to country (s).

$$= F_R (I - A_{rr})^{-1} e_{rs} \quad \ldots\ldots\ldots\ldots\ldots \quad (3) \quad f_{rs}$$

The total emissions that occur in the country are the result of emissions caused by irresponsible economic activities, or pollution caused by total economic activities, which are still frequently ignored and only considered in developing countries. Towards the positive effects, which are determinants of imaginary and unreal economic growth, because in any case it cannot give a true picture of the economic and social conditions of such countries, which were the cause of high temperatures, reckless irrigation systems, pollution of seas, rivers, and oceans, deterioration of the soil surface as a result of acid rain, and the spread of diseases and epidemics (see Ahmed Iyad's 2019 thesis), the limit could include the sum of those emissions.

and the total emissions included in EEE exports from region r to the trading regions

JMEE
Journal of Marketing and Emerging Economics
| e-ISSN: 2792-4009 | www.openaccessjournals.eu | Volume: 3 Issue: 3

$$f_r^e = \sum_s f_{rs} \quad \ldots\ldots\ldots\ldots\ldots \quad (4)$$

The total emissions included in imports (EEI) can be obtained from country s to country r.

$$f_r^m = \sum_s f_{rs} \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (5)$$

Therefore ,the balance of trade that includes emissions can be formulated

$$f_{r=} f_{r-}^e f_r^m \quad \ldots\ldots \text{(glenp peters and edgarg hertwich ,p1402-1403)} \quad (6)$$

CHAPTER 3: THE APPLIED SIDE

There are two other measures that can be relied upon in calculating the environmental effects generated through the international trading process to reassess the balance of payments and determine the position of the trade balance more accurately, especially those related to the concept of the ecological footprint of the effects conveyed through the trading process, and therefore they must be taken when taken. Consider the price rearrangement of traded commodities and the environmental emissions involved in the international trade model.

Emissions embodied in domestic production + emissions included in imports - Emissions included in exports

which necessitates calculating both emissions associated with local production and those associated with imported goods minus "emissions associated with exported goods," which includes, directly or indirectly, the amount of damage effects associated with local consumption.

Therefore, the following equation can be adopted:

Emissions included in imports - Emissions included in exports

(nations conference of european statisticians p.54)

Although the description of these accounts is clear, the application of such accounts is associated with many methodological problems and requires a lot of data.

which we propose linking that restriction to the ecological footprint to link changes in the balance of payments to the value of CO2 damage costs resulting from the practice of activities with

a high carbon content contrary to the ratios agreed upon within the Kyoto Agreement. As a result, it was decided to adjust Iraq's trade balance by using Iran and Turkey as case studies and to determine trade trends that Iraq must follow in the future, because this model, on which we have relied to assess the rates of pollution transmitted through total trade, can determine the trading countries' responsibility in exporting high carbon content production, which will be reflected by raising the prices of their exports as environment.

And by calculating the relative weight of exports and imports from both countries in the traditional GDP and then re-evaluating it with the GDPP, the adjusted output of the countries in question can be used to obtain the proportions of each of the emissions included in the form of exported and imported commodities.

After we obtain the amount of emissions included in imports and subtract from it emissions included in exports, we divide the adjusted trade balance by the GDP of each country to obtain the changes that must occur in prices (increase or decrease) as compensation for environmental damage arising from global demand as well as a future policy required at the global level in the event of implementation of the climate agreement.

Therefore, this model, which we have developed, has the ability to calculate the amount of damages caused within the concept of the ecological footprint, as well as enable us to take the decision to stand on the real conditions as things will lead to them from the accumulation of environmental damage and calculate those damages, which puts decisions in the hands of the decision maker.

Table 1. The Effects of CO2 on the Balance of Payments Situation

Iraq exports to	
Turkey	1774264000
Iran	17,167,000.00
imports from Iraq	
Turkey	11679194000
Iran	60042827000
Iraq's traditional balance of payments	
with Turkey	9904930000-
with Iran	60025660000-
gdp	
Iraq	23464837047743
Iran	306380324020801
Turkey	94318591538610

JMEE
Journal of Marketing and Emerging Economics
| e-ISSN: 2792-4009 | www.openaccessjournals.eu | Volume: 3 Issue: 3

Co2 costs offending keto	
Iraq	4814844340
Iran	18432102160
Turkey	308,651,390.00
gdpp	
Iraq	23460022203403
Iran	306361891918641
Turkey	94318282887220
The percentage of Iraq's imports from gdp for each of	
Iran	0.019597481
Turkey	0.012382706
The ratio of Iraq's exports from gdp to each of	
Iran	0.0007316
Turkey	0.007561374
Emissions included in imports	
Iran	6003921477221
Turkey	1167915578061
Emissions included in exports	
Iran	1716347743

The table is from the researcher's work.

1: Iraq's exports and imports to and from Turkey and Iran

2: World Integrated Trade Solution (WITS) data on export (https://wits.worldbank.org)

3: National Accounts—United Nations GDP www.unstats.org unsd snaama introduction.asp

4: https:\\www.albankaldawli.org World Bank Carbon Data Data

1990 costs were calculated at $20 and 2014 costs at $30.

see

5: Fact sheet: carbon pricing around the world White papers EES https:\\www.eesi-org papers\ Fact-sheet-jobs

adjusted gross domestic product (GDP = CDPP) - CO2 costs that violate the Kyoto Protocol (because they are paid as environmental taxes and thus reflected in export prices)).

Through Table 1, which shows the inclusion GDP costs of CO2 in violation of the agreement, carbon dioxide gas, which will be reflected in the prices of exported and imported commodities, it is possible to extract the emissions included for both exports and imports for both countries by finding the ratio of exports and imports for both countries from the traditional GDP and its ratio to the average results. We notice a relatively high percentage of emissions from Iran. For those received from Turkey, they constituted approximately

20% (19.5 as well as the increase in the value of emissions included in the trading process between Iraq and Iran, which amounted to $600,2205,129477 as a difference between the values of emissions exported from Iraq to the Iranian partner.

While the value of the emissions included in the trading process with the Turkish partner was $ 990525584897, changes in the prices of traded commodities between the parties involved in the trade process are required.

In order to calculate the adjusted trade balance, we calculate the changes that must be made in the prices of exported and imported commodities for both countries, and to calculate the changes in the prices of commodities exported to Iran and Turkey, we calculate the ratio of the adjusted trade balance to the Iranian GDP, as we note through this that Iraq has the possibility of raising its The prices of commodities exported by Iran increased by 2%, while the ratio of the adjusted trade balance relative to the Turkish average GDP (GdppT) indicates the need for Iraq to reduce its exports to Turkey by 1%, and that difference is the carbon content of the traded goods, as Iraq exports goods with low carbon content to Iran in proportion to the goods exported to Turkey.

The amount of change in the prices of commodities imported into Iraq

We note that Iraq must raise 25% of the prices of commodities exported to Iran due to the high carbon content of Iranian-exported commodities relative to the carbon content of commodities exported from Iraq to Iran. It is time for Iran to reduce the prices of commodities exported to Iraq by 25% and for Turkey to reduce the prices of its goods exported to Iraq by 4%, and these measures must be reflected in the amended balance of payments.

CONCLUSIONS

1. When calculating the costs of environmental damage arising from the conduct of economic activities that are not responsible from an environmental point of view, due to the high carbon content and other greenhouse gases within the output intended for export and import, such a matter must lead to an increase in the prices of those commodities.

2. The Iranian output is more carbon-containing than the Turkish output.

3. Decrease in the deficit values in the Iraqi balance of payments with the two parties to the trading subject of the study

RECOMMENDATIONS

1.We recommend taking into consideration the environmental costs associated with the domestic product, which rise with the high dependence on activities considered polluting to the

environment, especially in those countries where most of their output consists of extractive activities.

2. We recommend raising the rates of trade exchange with the Turkish partner due to the lower carbon content than that of the Iranian partner.

3. We also recommend raising the export rates to the Iranian partner as well as raising the import rates from the Turkish partner, which is completely opposite the current situation and will improve the trade balance situation.

REFERENCES

1. Ahlam Lamara, "Inflation and its Impact on the Balance of Payments in Algeria During the Period 1990-2013," Master's Thesis, Algeria, 2015.
2. Ahmed Iyad Ibrahim, Forecasting the Ecological Impact on the Sustainable Consumption Equation in Iraq, Goal 2025, College of Administration and Economics/ Mustansiriya University, PhD thesis, 2019.
3. Baalbaki, Mounir. (1991) Balance of Payments "Encyclopedia of Al-Mawred. Encyclopedia of the Rural Knowledge Network".
4. Iraqi facts, the law of the accession of the Republic of Iraq to the United Nations Framework Convention on Climate Change and the Kyoto Protocol annexed to it, Issue No. 4114 on March 23, 2009, the fiftieth year, and to complement the explanation of the law, Iraq is obligated to reduce the percentage of 25% according to the base year 1990 for the period from 2008-2012, even if it works within economic and regional integration organizations; the work within these organizations should not affect the protocol. 6, 5, 4, 3 of Article 14 of the Convention, while the countries within Annex I are obliged to reduce 5% of the basis for the year 1990, taking into account what was removed within that year.
5. Raed Fadel Jawaid, Modern Theory in Foreign Trade, Journal of Historical and Civilizational Studies, Volume (5), Issue (17), 2013.
6. Samir Hanna Behnam, "The impact of the development of foreign trade on the economic growth of the countries of South and East Asia for the period 1990–2011," Al-Rafidain Development Journal, No. (114), Volume (35), 2013, 172.
7. Ghazi Salih al-Ta'i, "The International Economy," Dar al-Kutub for printing and publishing, Mosul, 1999
8. The Basic Rules of International Economics, by Muhammad Ali Reda Al-Jassim, Al-Tadamon Press and Baghdad, first edition, 1967.
9. Muhammad Ali Reda Al-Jassem, former source
10. Nema, Samir Fakhry, The reciprocal relationship between the exchange rate and the interest rate and its reflection on the balance of payments, Egypt: a case study for the period (1975–2006, 2007).

11. Hana Yahya Sayed Ahmed, An analytical study of the movement of foreign trade in Syria in the light of economic and demographic changes during the period 1980–2005, College of Administration, Shirin University, PhD thesis, 2006.
12. Carbon pricing around the world fact sheet White papers: EES and https://www.eesi-org/papers/Fact-sheet-jobs
13. "Co2 and International Trade: Implications for Global Climate Policy and Environmental Science and Technology," Glenp. Peters and Edgar G. Hertwich, Vol. 42, No. 5, March 2008, p. 1402
14. United Nations GDP National Accounts https://unstats.un.org/unsd/snaama/introduction.asp
15. Sloman, John (2004), Economics, Penguin (PP 59).
16. United Nations Conference of European Statisticians' Recommendations on Measure, ING Sust. PP54
17. Export data from the World Integrated Trade Solution (WITS) (https://wits.worldbank.org/).)
18. World Bank carbon data: https://www.albankaldawli.org