

GLOBAL JOURNAL

OF MANAGEMENT AND BUSINESS RESEARCH: B

Economics and Commerce



Effects of Green Farming

Advantage in the Wake of COVID-19

Highlights

Rethinking National Sovereignty

Stock Market Return in Nepal Market

Discovering Thoughts, Inventing Future

VOLUME 25 ISSUE 2 VERSION 1.0



GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: B
ECONOMICS AND COMMERCE



GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: B
ECONOMICS AND COMMERCE

VOLUME 25 ISSUE 2 (VER. 1.0)

OPEN ASSOCIATION OF RESEARCH SOCIETY

© Global Journal of
Management and Business
Research. 2025

All rights reserved.

This is a special issue published in version 1.0
of "Global Journal of Science Frontier
Research." By Global Journals Inc.

All articles are open access articles distributed
under "Global Journal of Science Frontier
Research"

Reading License, which permits restricted use.
Entire contents are copyright by of "Global
Journal of Science Frontier Research" unless
otherwise noted on specific articles.

No part of this publication may be reproduced
or transmitted in any form or by any means,
electronic or mechanical, including
photocopy, recording, or any information
storage and retrieval system, without written
permission.

The opinions and statements made in this
book are those of the authors concerned.
Ultrapublishing has not verified and neither
confirms nor denies any of the foregoing and
no warranty or fitness is implied.

Engage with the contents herein at your own
risk.

The use of this journal, and the terms and
conditions for our providing information, is
governed by our Disclaimer, Terms and
Conditions and Privacy Policy given on our
website [http://globaljournals.us/terms-and-condition/
menu-id-1463/](http://globaljournals.us/terms-and-condition/menu-id-1463/)

By referring / using / reading / any type of
association / referencing this journal, this
signifies and you acknowledge that you have
read them and that you accept and will be
bound by the terms thereof.

All information, journals, this journal,
activities undertaken, materials, services and
our website, terms and conditions, privacy
policy, and this journal is subject to change
anytime without any prior notice.

Incorporation No.: 0423089
License No.: 42125/022010/1186
Registration No.: 430374
Import-Export Code: 1109007027
Employer Identification Number (EIN):
USA Tax ID: 98-0673427

Global Journals Inc.

(A Delaware USA Incorporation with "Good Standing"; Reg. Number: 0423089)

Sponsors: *Open Association of Research Society*
Open Scientific Standards

Publisher's Headquarters office

Global Journals® Headquarters
945th Concord Streets,
Framingham Massachusetts Pin: 01701,
United States of America

USA Toll Free: +001-888-839-7392
USA Toll Free Fax: +001-888-839-7392

Offset Typesetting

Global Journals Incorporated
2nd, Lansdowne, Lansdowne Rd., Croydon-Surrey,
Pin: CR9 2ER, United Kingdom

Packaging & Continental Dispatching

Global Journals Pvt Ltd
E-3130 Sudama Nagar, Near Gopur Square,
Indore, M.P., Pin:452009, India

Find a correspondence nodal officer near you

To find nodal officer of your country, please
email us at local@globaljournals.org

eContacts

Press Inquiries: press@globaljournals.org
Investor Inquiries: investors@globaljournals.org
Technical Support: technology@globaljournals.org
Media & Releases: media@globaljournals.org

Pricing (Excluding Air Parcel Charges):

Yearly Subscription (Personal & Institutional)
250 USD (B/W) & 350 USD (Color)

EDITORIAL BOARD

GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH

Dr. John D. Theodore

American Military University
JDT Management Consultants, President.
D.B.A., Business Economy
University of South Africa
Ph.D. Aristotelian University
Business Administration
Ph.D. Administration, University of Kansas
USA

Dr. R. Allen Shoaf

B.A., M.A., Ph.D. Cornell University
Cornell University, Teaching Assistant in the English
Department,
University of Florida, US

Dr. Mehdi Taghian

Senior Lecturer
Faculty of Business and Law
BL Deakin Business School
Melbourne Burwood Campus
Australia

Dr. Agni Aliu

Ph.D. in Public Administration,
South East European University, Tetovo, RM
Asociater profesor South East European University,
Tetovo, Macedonia

Dr. Wing-Keung Won

Ph.D., University of Wisconsin-Madison,
Department of Finance and
Big Data Research Center
Asia University,
Taiwan

Prof. Moji Moatamedi

Honorary Vice Chair
Ph.D., at The University of Sheffield,
MBA, Manchester Business School
University of Manchester
UK

Professor Maura Sheehan

Professor, International Management
Director, International Centre
for Management & Governance Research (ICMGR)
Ph.D. in Economics
UK

Dr. Carl Freedman

B.A., M.A., Ph.D. in English, Yale University
Professor of English, Louisiana State University, US

Dr. Tsutomu Harada

Professor of Industrial Economics
Ph.D., Stanford University, Doctor of Business
Administration, Kobe University

Dr. Xiaohong He

Professor of International Business
University of Quinnipiac
BS, Jilin Institute of Technology; MA, MS, Ph.D.,
(University of Texas-Dallas)

Dr. Carlos García Pont

Associate Professor of Marketing
IESE Business School, University of Navarra
Doctor of Philosophy (Management),
Massachusetts Institute of Technology (MIT)
Master in Business Administration, IESE, University of
Navarra
Degree in Industrial Engineering,
Universitat Politècnica de Catalunya
Web: iese.edu/aplicaciones/faculty/facultyDetail.asp

Dr. Bassej Benjamin Esu

B.Sc. Marketing; MBA Marketing; Ph.D Marketing
Lecturer, Department of Marketing, University of Calabar
Tourism Consultant, Cross River State Tourism
Development Department
Co-ordinator, Sustainable Tourism Initiative, Calabar,
Nigeria

Dr. Ivona Vrdoljak Raguz

University of Dubrovnik,
Head, Department of Economics and Business
Economics,
Croatia

Dr. Charles A. Rarick

Ph.D.
Professor of International Business
College of Business
Purdue University Northwest
Hammond, Indiana US

Dr. Albrecht Classen

M.A. (Staatsexamen), Ph.D. University of Virginia,
German
Director, Summer Abroad Program, Medieval Europe
Travel Course

Dr. Söhnke M. Bartram

Department of Accounting and Finance
Lancaster University Management School
Ph.D. (WHU Koblenz)
MBA/BBA (University of Saarbrücken)
Web: lancs.ac.uk/staff/bartras1/

Dr. Dodi Irawanto

Ph.D., M.Com, B.Econ Hons.
Department of Management
Faculty of Economics and Business
Brawijaya University
Malang, Indonesia

Dr. Yongbing Jiao

Ph.D. of Marketing
School of Economics & Management
Ningbo University of Technology
Zhejiang Province, P. R. China

Yue-Jun Zhang

Business School,
Center for Resource and
Environmental Management
Hunan University, China

Dr. Brandon S. Shaw

B.A., M.S., Ph.D., Biokinetics, University of Johannesburg,
South Africa
Professor Department of Sport and Movement Studies
University of Johannesburg, South Africa

CONTENTS OF THE ISSUE

- i. Copyright Notice
- ii. Editorial Board Members
- iii. Chief Author and Dean
- iv. Contents of the Issue

1. Beyond Borders: Rethinking National Sovereignty and Comparative Advantage in the Wake of COVID-19. *1-24*
2. Macroeconomic Factors and Stock Market Return in Nepal. *25-26*
3. Effects of Green Farming Practices/Environmentally Friendly Practices on Small Scale Agricultural Production in Kenya, a Case Study in Siaya County. *27-46*
4. Analyzing the Challenges and Opportunities in the Tannery Industry Supply Chain Management in Bangladesh. *47-54*

- v. Fellows
- vi. Auxiliary Memberships
- vii. Preferred Author Guidelines
- viii. Index



Beyond Borders: Rethinking National Sovereignty and Comparative Advantage in the Wake of COVID-19

By Kone Salif

Senior Lecturer University of Félix Houphouët-Boigny

Introduction- Does national sovereignty call into question the principle of comparative advantage? This is the question we are entitled to ask ourselves in light of the statements and decisions made to end the coronavirus (COVID-19) pandemic. If we refer to the statements made by French President Emmanuel Macron on 12 March 2020, Angela Merkel on 11 March 2020, and Donald Trump, the President of the United States, the conclusion is clear. In the face of the coronavirus (COVID-19) pandemic, the disruption of supply chains that is threatening, among other things, the availability of gels and protective masks in European countries, the United States and even the rest of the world, means that the development model based solely on the law of markets must be called into question. For the French President, for example, and I quote, "To delegate our food, our protection, our ability to care for our living environment to others is madness". According to them, the consequences of the pandemic prove that it is not always best to follow market forces, even when it comes to international trade.

In so doing, the fight against the coronavirus pandemic brings back into fashion the theory of the supremacy of national sovereignty over free trade, or at least the application of the principle of comparative advantage, for certain goods, at least in certain situations.

GJMBR-B Classification: JEL Code: F02, F11, F13, F52



Strictly as per the compliance and regulations of:



Beyond Borders: Rethinking National Sovereignty and Comparative Advantage in the Wake of COVID-19

Kone Salif

I. INTRODUCTION

Does national sovereignty call into question the principle of comparative advantage? This is the question we are entitled to ask ourselves in light of the statements and decisions made to end the coronavirus (COVID-19) pandemic. If we refer to the statements made by French President Emmanuel Macron on 12 March 2020, Angela Merkel on 11 March 2020, and Donald Trump, the President of the United States, the conclusion is clear. In the face of the coronavirus (COVID-19) pandemic, the disruption of supply chains that is threatening, among other things, the availability of gels and protective masks in European countries, the United States and even the rest of the world, means that the development model based solely on the law of markets must be called into question. For the French President, for example, and I quote, "To delegate our food, our protection, our ability to care for our living environment to others is madness". According to them, the consequences of the pandemic prove that it is not always best to follow market forces, even when it comes to international trade.

In so doing, the fight against the coronavirus pandemic brings back into fashion the theory of the supremacy of national sovereignty over free trade, or at least the application of the principle of comparative advantage, for certain goods, at least in certain situations. Whether it be the protectionist arguments of industrial infancy, the arguments of industrial senescence, the arguments of strategic goods, the arguments of strategic trade policy, etc., they all have as their backdrop the theory of the supremacy of national sovereignty over the principle of comparative advantage.

The conceptual consequence of such a vision of the role of states is to give weight to so-called mercantilist theorists¹. At a domestic level, mercantilist theory translates into state intervention through various measures to encourage and regulate domestic trade. In the case of the coronavirus, this intervention will be in favour of boosting production and employment. As far

as international trade is concerned, the mercantilists' defence of state interventionism leads to a vision of conflict. For them, it is preferable to be the strongest in their commercial relationships; otherwise, it would be better to refrain from participating for their own well-being and sometimes for the well-being of everyone (the world). The implication of such an approach is the possibility of widespread wars as long as the balance of power appears to be the best means of gaining advantage in international relations, whether commercial or otherwise.

In short, the speeches of the world's foremost leaders sound like a call for protectionism. While protectionism can be understood in the strict sense as a state's decision to directly restrict its trade with the rest of the world, in a broader sense it can be seen as any intervention by a state in its trade with the rest of the world. Anything that challenges the principle of free trade on a global scale, a return to mercantilism, at least in a modern form. This gives people the image of a ship that, because it is rocking, must be harpooned. Indeed, although based on legitimate concerns, these speeches come at a time when there has been a decade of protectionist practices, as can be seen from the content and title of the article by Cassagnard and Gouaux (2013) in *Alternatives Economiques* entitled "l'alerte protectionniste". As can also be seen from the many reactions and statements made by Trump as soon as he was elected President of the United States.

We aim to show that national sovereignty is a conflict-generating concept that has become dangerous for world equilibrium. We demonstrate this in two stages. Firstly, we show that the protectionist temptations of the developed countries of Europe and the United States towards China can be linked to China's rise as a significant trading power. Secondly, we show that the concept of national sovereignty is discriminatory and conflict-producing without being superior to the principle of comparative advantage. It is therefore clear that this paper defends the principle of free trade, but from a normative perspective.

Our paper is organised into four parts. The first presents a brief review of the literature on protectionist theories. The second part presents the reasons for the rising tensions in world trade. The third part presents the negative consequences of the concept of national

*Author: Senior Lecturer University of Félix Houphouët-Boigny, Côte d'Ivoire/Unit of economics and management, Ivorian Centre for Economic and Social Research (CIRES) 01 B.P. V43Abidjan 01.
e-mail: salifkon@yahoo.fr*

sovereignty. Finally, the fourth part, which serves as a conclusion, aims to sketch out global sovereignty as a solution to concerns that are new only in their forms.

II. FROM MERCANTILISM TO PROTECTIONISM. A BRIEF REVIEW OF THE LITERATURE

In the beginning, it was mercantilism. Although for some economic historians, mercantilism cannot be considered a structured current of economic thought in the modern sense of the term, its philosophy can nevertheless be summarised as follows. A state can only develop its wealth by increasing its quantity of precious metals. It can only do this by developing its industries and domestic trade (which must be liberalised) and by having a positive trade balance. To achieve this, it must favour exports over imports and have its sources of precious metals. But all this can only be achieved if its army is powerful and its goal is to strengthen its military capacity. In other words, it is the concept of military power that lies behind the zero-sum or even negative-sum game theory developed by mercantilists, given that global resources of precious metals are assumed to be limited. For example, Hauser (1931) writes, according to Jean Bodin: 1) that "We must develop, among national products, those that allow us to do without foreign goods" and goes on to add 2) "essential products are export products, because they bring foreign gold into our country". Although there is a certain contradiction in his thinking between his defence of export development and the imposition of export duties on certain products such as wheat and any product that could enable other countries to accumulate wealth (Hauser; 1931), Jean Bodin advocates a positive trade balance. Just like this quote about international trade attributed to Bodin by the website "Introduction à l'analyse économique"² "No one wins unless someone else loses".

With Antoine de Montchrétien in his treatise on political economy published in (1615)³, we note that trade between States can only be the prerogative of the strong. In fact, according to him (Livre Deuxième, pages 180, 181 and 182), in response to the question of whether France produces everything it needs that will become trade between people, he concludes his answer with the following. "I conclude only, with the stoics, that virtue is happy, and that it is the property of no one, and that furthermore, that there are no men sufficient in matters of State, that the Kingdom which can itself provide for its necessities is always richer, stronger and more formidable". He goes on to add (Book Two, p 141): "It can now be said that we do not live so much by trading in the elements as by gold and silver; these are two great and faithful friends. This also suggests that international trade is only helpful if it allows the participating country to accumulate gold and silver, thereby achieving a positive trade balance. Anything that

should benefit the country's military power while serving as a foundation for its commercial development.

Thomas Mun's analyses are no exception to the rule. Although it needs to be qualified⁴, Thomas Mun's vision makes a unique link between the need for a country to have a positive balance of trade and national prosperity, while at the same time encouraging and developing domestic trade. Finally, this mercantilist vision, which makes international trade a proactive tool in favour of a given people, a defined territory, is also present in William Petty's work, as the following quotation attests. Referring to his work "Arithmétique Politique", Petty writes in his introduction, "The sole aim of this treatise is the enrichment of a kingdom by the development of trade and public credit."⁵

To sum up and keep things simple, let us borrow from Simone (1969) the following formula to describe the mercantilist vision. For the mercantilists, "economics became politics (including war and diplomacy) continued by other means". It was this "go to war" vision that was challenged by the classical authors, starting with Adam Smith (1776) in *The Causes of the Wealth of Nations* and then by David Ricardo (1817) through the principle of comparative advantage. Their concept is that every country benefits from participating freely in international trade according to its capabilities, even if it has no technological advantage or even whatever its endowment in productive resources, as reinforced by the neoclassicists Hecksher (1919), Ohlin (1933) and Samuelson (1948 and 1949).

Then came protectionism. Although protectionism in the sense of the customs and non-customs tools developed to protect national producers and access to the national market developed even before mercantilism, we are talking about its theorisation and defining it in a broad sense. From this point of view, modern forms of protectionism are much more subtle, less warlike and more diverse. At the beginning of this theorisation, there was List's educational protectionism or protectionism of childhood industries (1841). According to List, it was only necessary to question the free trade of the classics when a country did not yet have sufficiently developed and competitive industries to face up to international competition. This theory was used extensively by developing countries to justify the introduction of various protectionist tools as part of their import-substitution development or export promotion policies.

This was followed by the theory of optimal tariffs with Bickerdike (1906). In this theory, Bickerdike defended the concept that a country could improve its terms of trade by imposing a customs duty on its imports. In particular following Bouët (2000), "while it has long been established that in a competitive framework the effects of a customs duty are negative overall when the country imposing the duty is small, when that country is sufficiently large, on the other hand, the restrictive

effect of a tariff on national demand and therefore on world demand leads to a fall in the world price of that good and an improvement in the terms of trade for that country".

There was also the theory of senescent industries developed by Kaldor (1971). It is at the other end of the spectrum of industrial life. According to Kaldor, old industries, because they can no longer face up to competition because they have been overtaken by technological innovations, see their profits fall, leading to their closure and the capture of their domestic market share by a foreign company, which also leads to unemployment among nationals. All of which can be a source of imbalance in a country's economy, as was the case in Great Britain in the 1970s. In order to allow either a senescent national company to innovate thanks to the technical progress that can save it or another national company to conquer the share of the national market of the ageing industry, protection can be granted to them in order to slow down the fall in profit and protect domestic employment. Protectionist measures can take various forms.

There has also been the theory of strategic activities or national defence⁶. This defends the concept that certain specific products linked to a country's defence should be excluded from trade liberalisation because of their strategic nature. Similarly, for certain products such as energy products (oil, for example) or high-tech products (computers, for example), the introduction of protectionist measures helps to ensure the country's independence from the rest of the world. Food independence is one way of achieving food security, for example, according to this vision of international trade.

With the recognition of the imperfection of competition by authors such as Krugman (1979), the theory of strategic trade policies was developed by Brander and Spencer (1985). The concept is that world markets operate in a situation of oligopolistic competition, so there are strategic interactions between domestic firms and firms from the rest of the world on the markets. In this framework, the domestic authority of a country can help its domestic firms to capture a higher rent than that which the market would 'naturally' offer, provided that the authorities of other countries do not react.

Finally, there is the theory of unfair competition developed by Culbertson (1986) and Samuelson (2004). According to this theory, free trade has adverse effects from a variety of sources: unfair competition, wage competition and the breakdown between domestic supply and demand, particularly in the United States. As a result, it is only natural that countries, the United States in particular, should adopt protectionist measures to defend their companies from this unfair competition. Such protection can take the form of customs duties, such as the law passed in 2010 by the United States

increasing customs duties on goods from countries whose currencies were deemed to be undervalued. Alongside these widely recognised and well-known theories, there are also those of the heterodox theories: the unequal trade of Arghiri Emmanuel (1970), the concentration of exports and dependence on the world market, the continually unfavourable terms of trade of Furtado, Prebisch and Amin, and so on. But there is also the theory of the positive link between protectionism and growth rates on a historical basis by Paul Bairoch (1976).

In short, and beyond their diversity, these different theories have been developed to justify the adoption of protectionist tools. These tools are very varied (ranging from customs tariffs to decoupling, non-tariff tools, monetary and exchange rate tools, etc.) in specific situations. However, it is essential to distinguish between two types of protectionism. Protectionism as an offensive measure of domination and protectionism as a defensive measure of survival because free trade is not a reality. While the former, like the mercantilists, advise using international trade as a tool for development at the expense of other countries, the latter does not. Indeed, among the defenders of the latter are authors such as Third World activists and advocates of fair trade, for whom international economic relations are, in fact, a relationship of domination. This leads these authors to question the validity of free trade, suggesting that protectionism is a better option and advises defensive measures. But whether they are offensive or defensive, the foundation and justification of all these protective measures rests on the concept of national sovereignty.

Hence, the need to question this concept, particularly its relevance in today's world. Indeed, the fundamental question today is whether it is economically optimal to strengthen nation-states or to make them merge into the worldwide village-nation that the world has become through progress and innovation or whether there is an intermediate response in political and institutional coordination on a global scale. The answer to this question is not straightforward. It will be addressed in the next section. But before seeking to answer it, let us explore the nature of trade power relations before the emergence of COVID-19.

III. CORONAVIRUS PANDEMIC, A PRETEXT FOR PROTECTIONIST TENSIONS OVER CHINA'S GROWING COMMERCIAL POWER

The coronavirus pandemic poses three significant challenges to the world's economies. Firstly, the challenge of care in terms of costs and organisation to avoid as many deaths and disorganisation as possible. Secondly, there is the challenge of revitalising economies in order to mitigate the negative consequences for production, consumption, employment and wealth creation as quickly as possible. Thirdly,

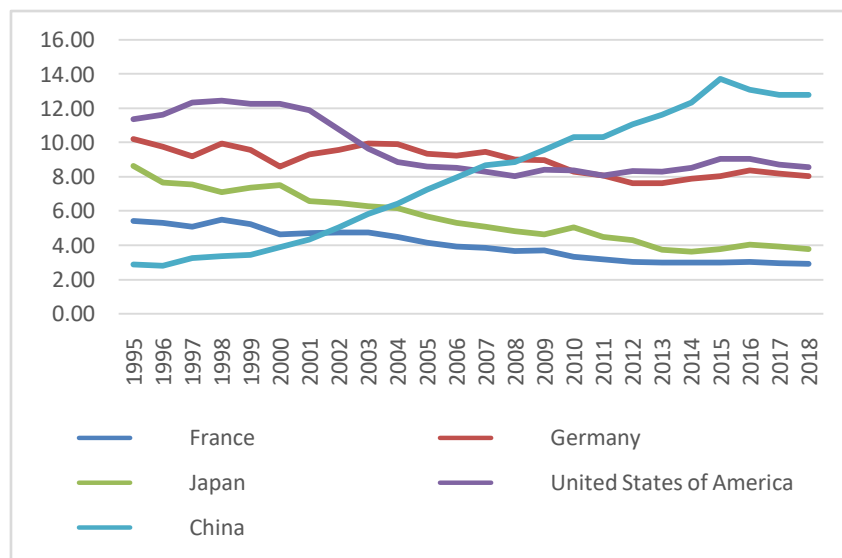
the challenge is that of the neoclassical paradigm, i.e. analysing its capacity to provide solutions to these crises. As part of this third challenge, it is essential to understand the sources of the return to protectionism. Thus, an analysis of the evolution of China's trade power and its causes is needed in order to better judge the relevance of studies of international trade based on the neoclassical paradigm in light of the speeches of the prominent political leaders of the developed world.

a) *The Rise of China's Commercial Power, a Source of New Protectionism*

The first question to be asked is why, resort to national sovereignty today? We propose two answers to this question. The first is that the individual and global economic situation today resembles that of economies in a state of war with the coronavirus (COVID-19). Policies to combat the coronavirus pandemic, unfortunately involve measures that can disrupt production and supply chains: suspension of inter-country flights, strict control of travel within countries and internationally, closure of schools, universities and several centres of activity for the production of both services and goods (strict confinement to industrial zones).

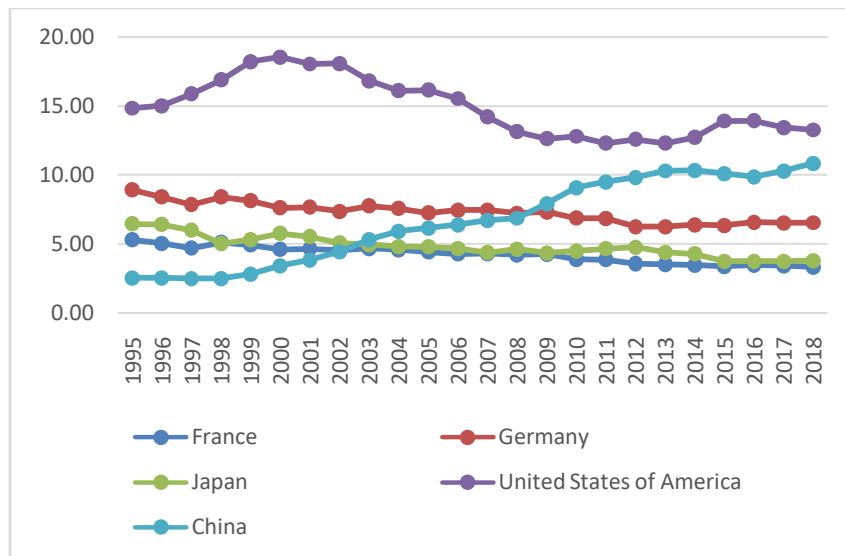
These measures are practical today to combat the spread of the coronavirus. However, and this is the second answer to the question posed, we must fear their protectionist ulterior motive. This fear is not unfounded, given the evolution of the various major

countries in international trade. Indeed, before the outbreak of the coronavirus, the global economy functioned with China as the world's factory, producing almost everything for everyone in a system of global value chains. But above all, the situation before the coronavirus confirmed China's position as the challenger to the United States of America as the world's leading trading economy. From accounting for around 2.91% of world exports and 2.55% of world imports in 1995, China accounted for around 12.81% of world exports and 10.86% of world imports in 2018. To grasp the significance of this development, we need to compare it with that of other countries such as the United States, Japan and France. In 1995, the United States accounted for 11.38% of world exports, Germany 10.23%, Japan 8.65%, and France 5.43%. In 2018, these countries accounted for 8.58%, 8.05%, 3.80% and 2.93% of world exports, respectively. Similarly, in terms of world imports, the United States of America accounted for 14.86% in 1995, compared with 13.28% in 2018. Germany 8.95% in 1995 compared with 6.57% in 2018. Japan was 6.48% in 1995 compared with 3.80% in 2018. France was 5.31% in 1995 compared with 3.35% in 2018. Of these five leading countries, only China's weight is increasing over time, and its dominance (in terms of relative proportion) of international trade is being reversed in its favour. The significance of these trends is shown in Figures 1 and 2 below.



Sources: UNCTAD data and author's calculations

Figure 1: Trends in the Share of China, the United States, Japan, Germany and France in World Exports Over the Period 1995-2018



Sources: UNCTAD data and author's calculations

Figure 2: Trends in the share of China, the United States, Japan, Germany and France in world imports over the period 1995-2018

An analysis of the products exported and imported by China shows its gradual and unquestionable domination of world trade. This domination applies whether we categorise products according to their nature or according to the level of technology required to produce them.

From the perspective of the nature of the products, two significant observations can be made. Firstly, China is becoming an increasingly industrialised country, exporting more high-value-added products than it imports. Indeed, the importance of the "Machinery and transport equipment", "Manufactured articles", and "Miscellaneous manufactured articles" items is higher in China's total exports in 2018 than in 1995. These three items accounted for only 79.15% of China's total exports in 1995, and 88.30% in 2018. At the same time, the items 'Chemicals and related products', 'Machinery and transport equipment' and 'Manufactured articles', although dominating China's imports, represent a smaller and smaller proportion of imports. In 1995, these three items together accounted for 74.18% of China's total imports, compared with 54.67% in 2018.

Secondly, China is gradually becoming the major player in international trade in high-value-added products in terms of proportion. China's share of exports and imports of these strategic products has risen sharply, often outstripping that of the USA. For example, China's weighting in world exports of machinery and transport equipment, manufactured goods and miscellaneous manufactured goods. Specifically, in 1995, China's total weight for these three items was 14.06% of world exports, compared with 61.31% in 2018. Similarly, China's share of world imports has also risen, from 9.54% in 1995 to 27.42% in 2018. Figures 3 and 4 illustrate China's gradual dominance in terms of the proportion of product categories.

An analysis of exports and imports of products by manufacturing technology (Lall classification) confirms China's gradual and definite domination of strategic and high-value-added products. Indeed, an analysis of export statistics shows that Chinese exports have caught up with and even surpassed those of the USA, Germany and Japan, for example, in the following technology-based product categories: Manufactured articles from natural resources (agri-food), Low-technology manufactured articles (textiles, clothing and footwear processes)⁷, Medium-technology manufactured articles (processes and engineering), High-technology manufactured and semi-finished articles (electronics and electrical). In addition, analysis of its import statistics shows China's dominance over the world's leading trading economies such as the USA, Germany and Japan in the following technology product categories: primary products, other manufactured goods of natural origin (these two categories are mainly made up of raw materials), medium-technology manufactured goods (processes), high-technology manufactured and semi-finished goods (electronic and electrical), other high-technology manufactured goods (such as optical apparatus and equipment, measuring and control apparatus and equipment, etc.). The last three categories of products are also inputs, to which a final category must be added, containing non-monetary gold, printed matter, non-legal tender, works of art and antiques, etc.

IV. CHINA'S GRADUAL DOMINATION IN TECHNOLOGICAL INNOVATION, A SOURCE OF REVERSAL OF COMPARATIVE ADVANTAGE

These changes in global trade statistics actually reflect a reversal of comparative advantages in favour of China. This reversal of comparative advantages is closely linked to innovation and technical progress, as highlighted by theorists of the technology gap such as Vernon (1966) and Posner (1961). China has become the leading player in the filing of patent applications in 2019⁸. The issue raised by China's advantage in this area is closely linked to the method of producing patents, trademarks and industrial designs, i.e. the issue of intellectual property rights protection. Indeed, China's financing methods and mechanisms for acquiring innovations are subject to criticism. Public subsidies and industrial espionage are at the heart of this debate. It should be noted that innovation and technical progress have a direct impact on the nature of international competition, a point made by proponents of the theory of unfair Chinese competition (Culbertson; 1986, Samuelson; 2004). Be that as it may, these developments (in terms of innovation and technical progress) testify to the transformation of China's economy from a simple manufacturing plant for the world to a design centre for the world. Before the outbreak of the coronavirus, therefore, the international trade situation was one of strong protectionist temptations against a backdrop of theoretical debates about the merits or otherwise and the ethics of this inversion.

In short, before the coronavirus, there were strong tensions in international trade relations between its leading players. This is where the concept of national sovereignty comes into play through a nationalist mobilisation of policies to combat coronavirus and boost national economies. In other words, what world leaders are challenging through their calls for national sovereignty is the international division of labour that has been working against them since long before the advent of the coronavirus pandemic. Yet the foundation of this international division of labour is the principle of comparative advantage.

V. THE CONCEPT OF NATIONAL SOVEREIGNTY AS THE BASIS FOR PROTECTIONIST, CONFLICT-GENERATING AND SUB-OPTIMAL TRADE POLICIES

The challenge of the coherence of the neoclassical paradigm also arises through the relevance of the concepts of national sovereignty and comparative advantage in the context of globalisation. Following Bourque (2002), if globalisation is the process of integration leading to the disappearance of the geo-

political role of nation-state borders, then two main questions arise. Firstly, why the persistence of protectionist measures in international trade? Secondly, in terms of global welfare, which of national sovereignty and comparative advantage is better?

a) *National Sovereignty, a Conflict-Ridden Concept Underpinning Trade Policies*

As we said earlier, the concept of sovereignty is the very foundation of any protectionist trade policy. But it is based on a conflict because it is discriminatory. The concept of sovereignty, however complex and thoughtful it may be, rests first and foremost on a principle of discrimination. There are three main assertions here, which we shall endeavour to demonstrate: 1) the complexity of the concept of sovereignty, 2) sovereignty as a principle of discrimination and conflict, and 3) sovereignty as a principle on which protectionist trade policies are based.

Sovereignty is a complex concept, and even more so in its links with the economic sphere, particularly international economic relations. This complexity is highlighted by Jacques Sapir (2019)⁹ to oppose its disappearance from international relations. From its initial definition by Jean Bodin, who made sovereignty "*the absolute and perpetual power of a republic*" (Piérard; 2007), raising the question of its uniqueness and indivisibility, Commons distinguished three types: 1) the sovereignty of states based on the monopoly of legal violence, 2) the sovereignty of companies, which is based on the power of owners, and 3) the sovereignty of religious and moral institutions, which translates into the power of opinion¹⁰. But Pesqueux (2010) distinguishes four other acceptations or types in addition to that of nation-states: "*two economic, one political and one that is both political and territorial in the geographical sense of the term*". Sovereignty even becomes subsidiary with local currencies Guyomart (2013). In short, the concept of sovereignty is being applied in many different ways today. This complexity of the concept of sovereignty certainly reflects the vicissitudes of the evolution of the fight for democracy and human rights, but above all, it reflects the vagueness with which it is used. Founded by political theorists to legitimise political power based on the right of all to freedom, particularly that of the people based on a common identity with an applicable principle, the concept of sovereignty has been regularly used by thinkers of every century to legitimise or defend the social, economic and political modes of interaction of their time. As a result, sovereignty has come to be accepted in ever greater numbers, as shown in Sapir (2019) and Pesqueux (2010). Some acceptances go so far as to confuse it with that of transparency. In other words, national sovereignty is a concept that is used today to justify the current developments in our modern societies: globalisation, financialisation, climate change

and access to natural resources (water, rare minerals, oil, etc.). National sovereignty has thus become globalised governance, societal responsibility, traceability, standardisation, and so on.

Sovereignty, whatever its acceptance or type, is based above all on a principle of exclusion, a principle of discrimination: discrimination between peoples of the world, discrimination between places on the world, discrimination between the rights of peoples on the world and therefore discrimination between modes of political management on the world. Indeed, in its purest definition, sovereignty refers to the notion of limits, territorial limits, jurisdictional limits, political limits and therefore limits of legitimacy. Christian Saint-Étienne (2016), speaking of national sovereignty, for example, defined it as *"the capacity to be master of one's own country, to resist external attacks and internal destabilisation attempts, and to choose with whom to cooperate on a basis of mutual respect"*, which in his view presupposes *"political and military independence and the capacity to ensure the economic prosperity of its population in all circumstances"*. In so doing, sovereignty acknowledges that the legitimacy of some is not the legitimacy of others, and the rights of some are not the rights of others. So, there is discrimination at every level. Such discrimination is a source of frustration, mistrust and even distrust. It is in its collective identity-forming dimension that the concept of sovereignty is most commonly applied, particularly on the international stage. The concept of sovereignty, which should make it possible to constitute a single 'we', does so by considering different 'we's'. And that is the discrimination, a discrimination that is applied to construct "we" in "a reality (a context) of diversity and conflict"¹¹. From this point of view, sovereignty sacralises a territory, an economic, legal and settlement space. Under these conditions, the world as a whole therefore appears to be a plural society in the sense of John S. Furnivall (Farhat; 2016), since only encounters on the various markets are the places where shared values are constructed. But these are encounters between different us. From this perspective, even international institutions such as the World Trade Organisation, the United Nations, the World Health Organisation, the World Intellectual Property Organisation, etc. and regional organisations (EU¹², CUSMA¹³, ASEAN¹⁴, ZLECAf¹⁵, ECOWAS¹⁶, etc.) are merely mechanisms for coordinating sacred decisions of nation-states between different us. However, national sovereignty is a concept that gives meaning to the law within a given framework, a democratic framework. It is not a biological attribute, a natural material entity, but a way of organising and managing the city. Consequently, it can only impose itself on the demands (or aspirations) of other peoples in international relations if it is instrumentalised; in other words, if it is limited to one people in opposition to (or differentiated from) another people. In this case, it is not

surprising that the concept of sovereignty is disliked by neoclassical economists, insofar as it highlights and justifies power relations through games that are, at best, zero-sum; in a word, it is conflict-producing. In short, because sovereignty is conjugated with the national, it can only be conflict-generating because it is discriminatory.

To say that sovereignty is the very foundation of protectionist trade policies is common knowledge. This adds little or nothing to our understanding of the nature of trade policies, which is based on long-standing mercantilist principles. Indeed, it is common knowledge that sovereignty, namely the sacredness of defending the interests of a unified people behind their sovereign, justified the introduction of sometimes prohibitive customs duties and other restrictive trade policies by mercantilists such as Jean Bodin and Antoine de Montchrétien. That the German national interest and the sacredness of its defence led Friedrich List to theorise about industrial childhood is also common knowledge. Similarly, that the national defence of ageing British industries in a context of economic crisis led Nicolas Kaldor to his theorisation of the defence of senescent industries is self-evident. However, what is important are the references adopted for the analyses. The references adopted to make any cost-benefit comparisons are purely national (nation-state). These references have the disadvantage of seeking to maximise only the well-being of one people, regardless of what happens to the well-being of other people, in its most nationalistic form. As such, it consists of maximising the overall well-being of countries, given the national sovereignty of each nation (globalised governance). The problem with this is that the issues raised today by the coronavirus pandemic are typically global in nature. Strong interdependencies, particularly the rapid development of means of transport and the high degree of intermingling of populations, mean that national sovereignty can no longer prevent the spread of diseases that are potentially dangerous to humans, or even severely hamper the effectiveness of disease control policies and national economic recovery policies. The fault lies in the fact that with national sovereignty, we can only rely on solidarity, which is voluntary and non-binding for everyone. This raises questions such as the following. Who bears responsibility for the coronavirus pandemic? Who pays the bill? a complex question for developing economies.

b) *National Sovereignty: A Concept that Fails to Maximise Global Well-being*

Let's return to the purely commercial dimension of the issue. Economists have long established that restrictive trade policies (tariffs, export taxes, standards, technical barriers to trade, quotas, subsidies, etc.) have a negative impact on the welfare of the countries that apply them. What is at issue here is global well-being: should we maximise individual well-being or global well-

being? Two well-known results from international trade economists tend to support our choice of global welfare. Mundell's theorem (1957) and the gains from international trade in the presence of external economies of scale by Helpman and Krugman (1985) tend to prove that the presence of borders is sub-optimal in exploiting the advantages associated with international trade. Mundell's theorem states that in the absence of any international exchange of goods, perfect international mobility of productive factors leads to the equalisation of goods prices in all countries. In other words, in the absence of the practical manifestations of sovereignty (international immobility of the factors of production), even if trade in goods takes place within regions alone, in the long run, the level of well-being in each area of the world will converge towards the highest level and will be the same for all. As for the result established by the authors of the new theories of international trade, it can be summarised as follows: international trade does not consistently achieve the optimal allocation of resources that would exist in the absence of borders, particularly in the presence of external economies of scale. In other words, in the presence of external economies of scale, the existence of borders, which translates into the immobility of factors of production between countries, prevents the maximum exploitation of economies of scale.

These results are in line with Paul Krugman's Parable of the Samuelson Angel. In this parable, there is an initially borderless world in which productive resources are used optimally. However, an angel appears and inscribes on each unit of resource the fact that it belongs to a particular nation, thus materialising the borders. For Krugman, the application of the principle of comparative advantage aims, in effect, to recreate the initial integrated world (a world without national sovereignty). From this account, this account shows that the principle of comparative advantage is superior to the principle of national sovereignty in terms of global well-being. This result is obtained within the framework of the neoclassical paradigm with its postulate of pure and perfect competition.

One criticism of this argument is that the neoclassical paradigm has shown its limitations in situations of imperfect competition. However, the result of Helpman and Krugman (1985) shows the relevance of this approach in situations of imperfect competition. The implications of this result go beyond external economies of scale and also concern internal economies of scale within firms. It can be understood as follows. In the presence of economies of scale (internal or external) within firms, as long as world demand for a good is sufficient, the immobility of the factors of production, particularly labour, leads to their under-exploitation. Nowadays, global demand is generally sufficient and specifically sufficient for goods that protect against coronavirus, such as gels, gloves and

masks. In short, in the presence of borders, global well-being is optimised rather than maximised.

Similarly, analyses in terms of border effects prove that the mere existence of borders makes the price of goods and services diverge between domestic and foreign markets (McCallum, 1995; Disdier, 2005; Crozet and Trionfetti, 2002; Head and Mayer, 2002; Disdier and Mucchelli, 2001; Helliwell and Schembri, 2005; Diaz et al., 1996; Cereg-Larea-Faseg, 2018). There has been renewed interest in the influence of national borders on trade since the seminal contribution of McCallum (1995). The concept is that despite the intensification of international trade in goods and capital associated with globalisation, and despite the strong growth of trade liberalisation processes at both regional and multilateral levels, intra-country trade between two areas is still greater than international trade between two regions of the same size and distance apart.

In the case of the health crisis faced by the world with the coronavirus pandemic, another dimension of border effects has emerged. The difficulties in supplying masks, gels and protective gloves, and even in producing medicines for healthcare, are another consequence of national sovereignty, confirming that borders have not disappeared. National sovereignty has prevented the free movement of capital, labour and skills. All of which has made China's production of these goods insufficient. Anything that has caused human harm while promoting the exploitation and sale of these products by China (international solidarity is being exploited). So, before Samuelson's angel arrived, not only would capital, labour and skills have migrated to China and its factories producing these goods¹⁷, but China would also have used them indiscriminately, regardless of whether they belonged to it or not.

VI. CONCLUSION: NATIONAL SOVEREIGNTY, A CONCEPT TO BE TRANSCENDED

One of the lessons to be learned from the global health crisis caused by the coronavirus is not the failure of markets per se but the failure of market institutions and regulation. Markets can no longer be designed specifically for national or regional purposes, otherwise the advances of globalisation and the globalisation of production can only pose a threat to the well-being of the populations of countries around the world, both individually and globally.

Is it not also the duty of the French President, the duty of the German Chancellor, the duty of the American President, the duty of the British Prime Minister, the duty of the Chinese Prime Minister and the Japanese Prime Minister to ensure the life and survival of the human race and, therefore, the life and survival of the populations of peoples not directly under their political responsibility? If sovereignty is power without

limit, why use it to set people against people, women against women, men against men, widows against widows, orphans against orphans?

National sovereignty is outdated. It must be replaced by global sovereignty. It is difficult for national sovereignty to coordinate economic policies effectively in the context of globalisation.

It should be noted at this point that, in our view, global sovereignty cannot be equated with globalised governance or corporate governance. Nor can it be reduced to a question of transparency and traceability or accountability.

Globalisation and the globalisation of production cannot be managed efficiently with borders, and therefore with the concept of national sovereignty, even when interpreted from the perspective of global governance, traceability, international standards, predictability, social responsibility, etc. There is no shortage of examples where modern interpretations of national sovereignty have failed in their application. There are many examples of situations in which modern interpretations of national sovereignty have failed in their application: Cancún, COP 21 (the withdrawal of the United States, for example), the Doha Development Round, etc. Even at the regional level, there are examples such as Brexit and the EU's recurring difficulties in agreeing on a budget for the Union etc.

The future of humanity cannot be managed by default by civil society or by corporate management principles alone. The public good that is "the existence of the human species" must be managed democratically on a global scale.

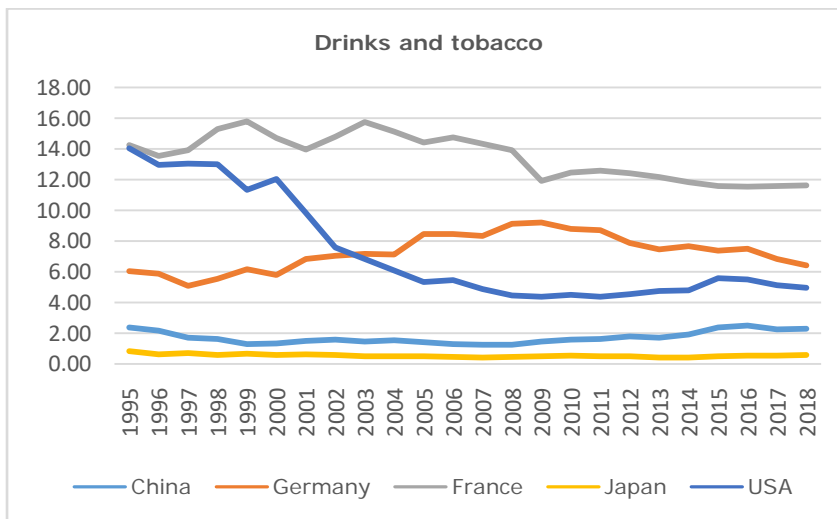
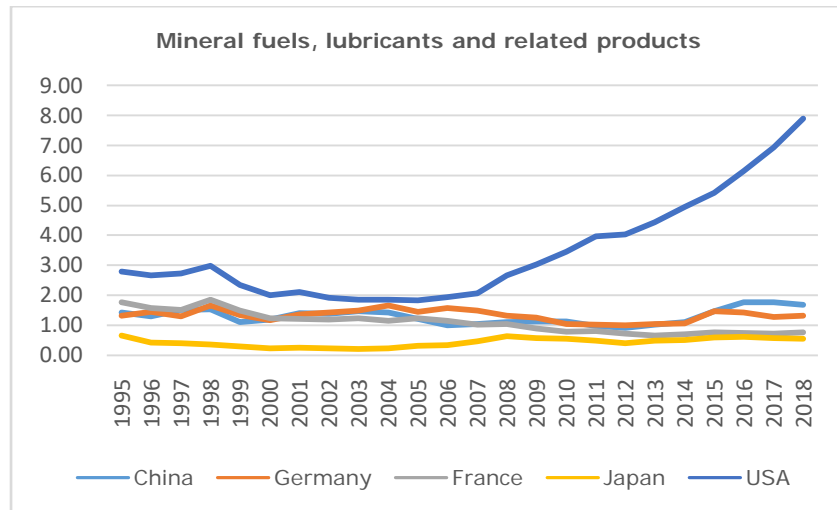
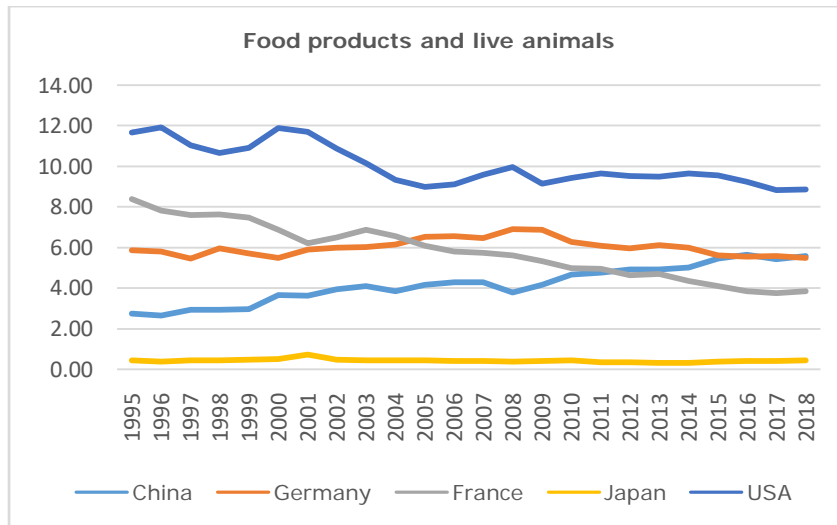
In short, contrary to what Acharya (2001) maintains, the alternative, which may seem simplistic, is global sovereignty. Indeed, coordination and its effectiveness in a discriminatory principle only exist because the balance of power is unbalanced in favour of one party or is totally balanced. In the latter case, the ambitions of the different parties must be equal. The strengthening of national sovereignty and institutions in an increasingly interdependent world can only increase the inefficiency of the resulting global coordination and governance while creating frustration and encouraging measures and actions of defiance.

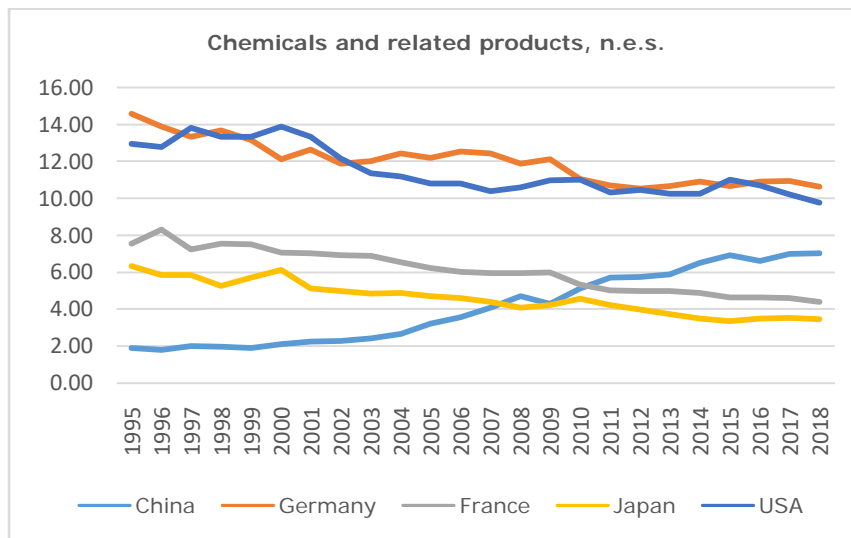
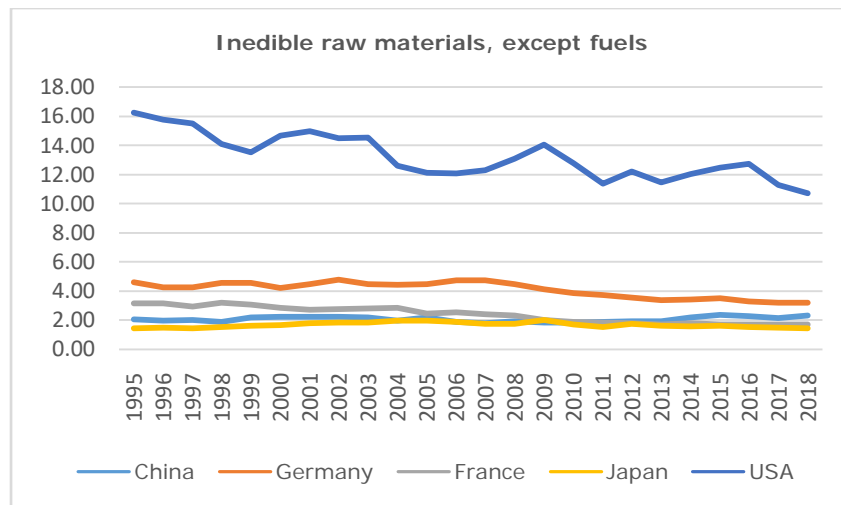
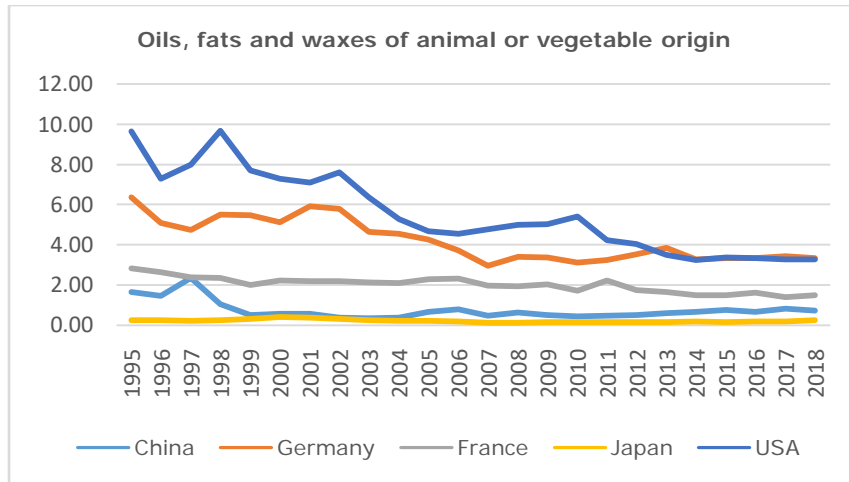
BIBLIOGRAPHY

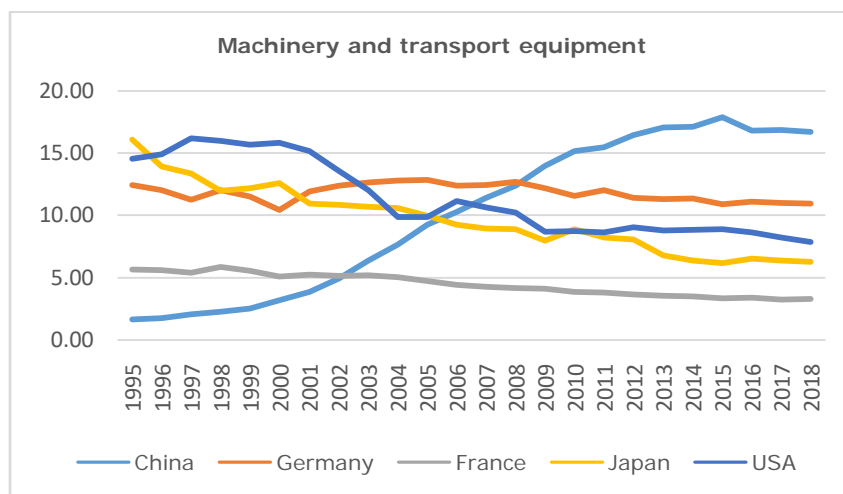
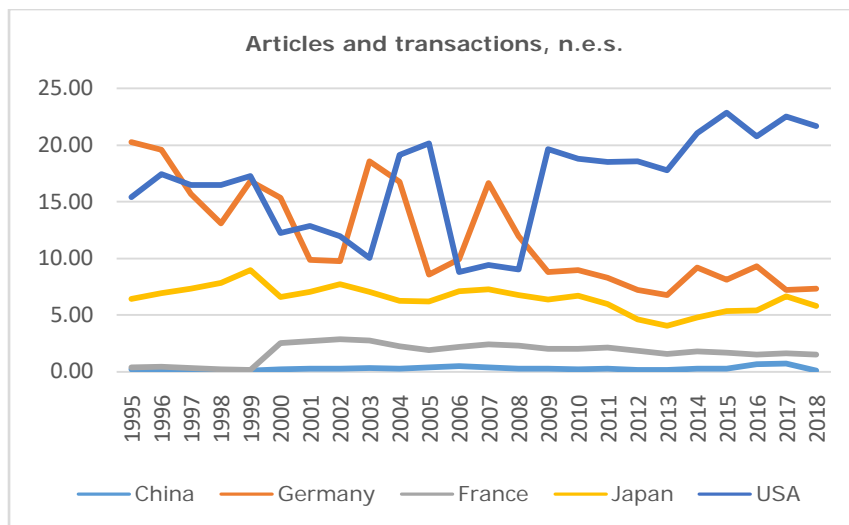
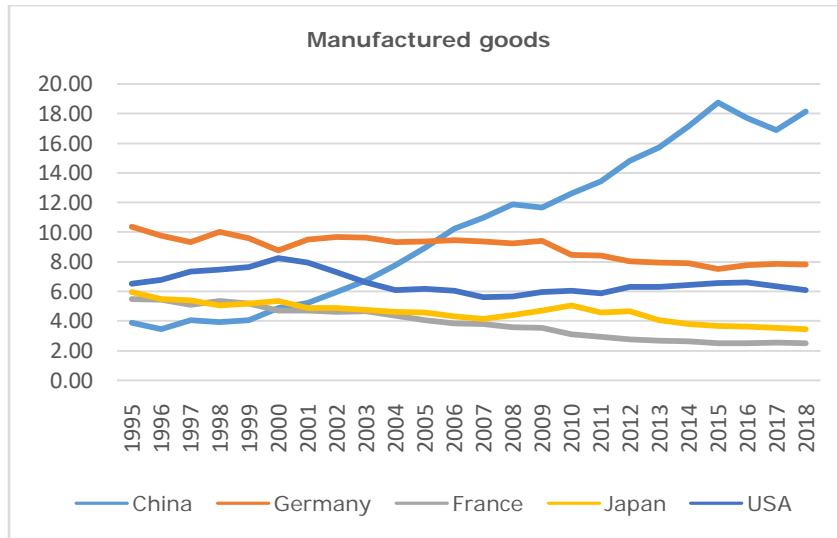
- Acharya, Amitav (2001). Mondialisation et souveraineté: une réévaluation de leur lien, *International Journal of Comparative Politics*, N°3, Vol. 8, pp. 383-394
- Acharya, Amitav (2001). Mondialisation et souveraineté: une réévaluation de leur lien, in *International Journal of Comparative Politics*, N°3, Vol. 8, pp 383-394; <https://www.cairn.info/revue-internationale-de-politiquecomparee-2001-3-page-383.htm>
- Bairoch, P (1976). *Mythes et paradoxes de l'histoire économique*, Edition la découverte, Paris.
- Blanc, Simone, (1969). Tatišev and the practice of mercantilism. In: *Cahiers du monde russe et soviétique*, vol. 10, n°3-4, July-December 1969. pp. 353-370; doi: <https://doi.org/10.3406/cmr.1969.17-80>; https://www.persee.fr/doc/cmr_0008-0160_1969_num_10_3_1780
- Bouët Antoine (2000). The economic theory of protectionism in 1950. In: *Revue économique*, volume 51, n°5, pp. 1281-1296; Doi: 10.2307/3503091 https://www.persee.fr/doc/reco_0035-2764_2000_num_51_5_410585
- Caire, Guy (1965). Un précurseur négligé: William Petty, ou L'approche systématique du développement économique, In: *Revue économique*, volume 16, n°5, 1965. pp. 734-776; doi: <https://doi.org/10.3406/reco.1965.407679>; https://www.persee.fr/doc/reco_0035-2764_1965_num_16_5_407679
- Cassagnard, Patrice and Denis Gouaux (2013). L'alerte protectionniste, *écoflash* N°275, February.
- Chanteur, Janine (1991). La loi naturelle et la souveraineté chez Jean Bodin, In: *Théologie et droit dans la science politique de l'État moderne, Actes de la table ronde de Rome (12-14 novembre 1987) Rome: École Française de Rome, 1991. pp. 283-294 (Publications de l'École française de Rome, 147)*; https://www.persee.fr/doc/efr_0000-0000_1991_act_147_1_4176
- Christian Saint-Étienne (2016). Economic sovereignty, a key attribute of a politically independent state <https://lesrencontreséconomiques.fr/2016/sessions/souverainete-economique-existe-t/> UNCTAD Data Center https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en
- Commons J. R. (1924). *The legal foundations of capitalism*, New York: The Macmillan Company.
- Crozet, M. and F. Trionfetti (2002). Border effects between European Union countries: the weight of public purchasing policies, *Economie Internationale*, Vol 89-90, pp.189-208.
- Statement by Mr Emmanuel Macron, President of the Republic, on the coronavirus epidemic, in Paris on 12 March 2020, <https://www.vie-publique.fr/discours/273869-emmanuel-macron-12032020-corona-virus>.
- Diaz O. L. et al (1996). Les effets de frontière, une barrière à la compréhension des échanges internationaux, *L'Espace géographique*, Tome 25, N°3, pp. 193-202;
- Disdier A-C. and J-L. Mucchielli (2002). Biais domestique et concurrence des processus d'intégration dans les échanges de l'Europe du Sud-Est, *Economie Internationale*, Vol. 89-90, N°1-2, pp. 209-225.

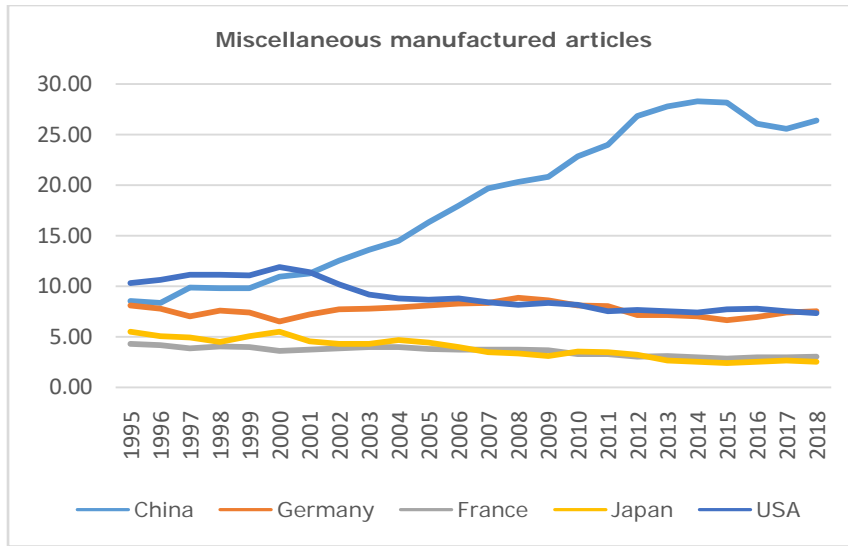
15. Disdier, A-C. (2005). Les frontières comptent-elles encore? in *Cahiers Français*, Vol.325, pp. 39-42.
16. Dostaler, Gilles (2009). William Petty, precursor of econometrics, *Alternatives Economiques*, N° 281, Vol 6, p.74, 1544 words.
17. Farhat, Nadim (2006). Is the plural society 'conflictogenic'? Itinéraire d'un concept structurant de la science politique, *Critique internationale*, vol 2, No 71, pp. 129-147, <https://www.cairn.info/revue-critique-internationale-2016-2-page-129.htm>
18. GandjonFankemCereg-Larea-Faseg, G. S. (2018). Frontières nationales et commerce régional: quels enseignements pour l'Afrique centrale, *L'Actualité Economique*, Vol. 94, N°2, pp. 220-235.
19. Guyomart, Jean-Christophe (2013). De l'Etat-Souverain à la souveraineté subsidiaire des monnaies locales complémentaires, *La Découverte" Revue Française de Socio-Économie "*, Vol 2, N° 12, pp. 51-68, <https://www.cairn.info/revue-francaise-de-socio-economie-2013-2-page-51.htm>
20. Hauser, Henri (1931). Un précurseur: Jean Bodin, Angevin (1529 ou 1530-1596), In: *Annales d'histoire économique et sociale*. 3^eannée, N. 11, 1931. pp. 379-387; doi: <https://doi.org/10.3406/ahess.1931.1430>, https://www.persee.fr/doc/ahess_0003-441x_1931_num_3_11_1430
21. Head, K. and T. Mayer (2002). Border effect, economic integration and fortress Europe, *Economie et Prévision*, Vol. 152-153, pp. 71-92.
22. Heckscher, E. (1919). The effect of Foreign Trade on the Distribution of Income, *Ekonomisk Tidskrift*, pages 497-512.
23. Helliwell, J. F. and L. L. Schembri (2005). Borders, Common Currencies, Trade, and Welfare: What Can We Learn from the Evidence?", *Bank of Canada Review*, Spring 2005, pp.19-33.
24. Helpman, Elhanan and Paul Krugman (1985). *Market Structure and Foreign Trade*, MIT Press. <https://sites.google.com/site/gedsynthesis/les-articles-par-theme/politiques-economie/histoire-economique/histoire-des-faits-et-des-idees-economiques/chapitre-3-la-periode-mercantiliste> (theories of mercantilism consulted on 19/03/2020 at 10h08).
25. Kaldor, Nicholas (1971). Conflict in National Economic Objectives, *the Economic Journal*, vol. 81, N°321, pp. 1-16.
26. Leydier, Gilles and John Mullen (2017). Foreword: the United Kingdom to the test of the crisis 1970-1979, *Revue Française de Civilisation Britannique [Online]*, XXII- Hors série |2017, online 30 December 2017, accessed 30 April 2019. URL: <http://journals.openedition.org/rfcb/1746>; DOI: 10.4000/rfcb.1746
27. List, Friedrich (1841). *The National System of Political Economy*, London Longmans Green and Co. Ltd.
28. McCallum, J. (1995). National Border Matters: Canada - U.S. Regional Trade Patterns, *American Economic Review*, Vol. 85, pp. 615-623.
29. Montchrétien, Antoine de (1615). *Traité de l'économie politique: dédié en 1615 au Roi et à la Reine mère du Roi*, Source gallica.bnf.fr/Bibliothèque nationale de France.
30. Mouffe, Chantal (2010). Politique et Agonisme, *Collège international de Philosophie | "Rue Descartes"*, Vol 1, N°67, pp. 18-24, <https://www.cairn.info/revue-rue-descartes-2010-1-page-18.htm>
31. Mundell R. A. (1957). International trade and factor mobility, *American Economic Review*, N°47, pp. 321-335.
32. Ohlin, Bertil. (1933). *Interregional and International Trade*, Harvard: Harvard University Press.
33. Pesqueux, Yvon (2010). Souveraineté et gouvernance, *Prospective et stratégie*, Vol 1, N° 1, pp. 13-33
34. Piérard, Denis (2007). Souveraineté, In: *Quaderni*, n°63, *Printemps 2007. Nouveaux mots du pouvoir: fragments d'un abécédaire*. pp. 87-89, doi: 10.3406/quad.2007.1793, http://www.persee.fr/doc/quad_0987-1381_2007_num_63_1_1793
35. Posner, Meachel V. (1961). *International Trade and Technical Chang*, Oxford Economic Paper, October.
36. Ricardo, David (1817). *Principles of Political Economy and Taxation*, 3rd edition 1821, Chapter 7. Original text can be downloaded from the Université de Chicoutimi website: http://classiques.uqac.ca/classiques/ricardo_david/principes_eco_pol/principes_eco_pol.html
37. Riot-Sarcey, Michèle (2011). Introduction: De la souveraineté, *Revue d'histoire du XIXe siècle [Online]*, 42 |2011, online 01 August 2011, accessed 02 May 2019. URL: <http://journals.openedition.org/rh19/4100>
38. Samuelson, Paul, A. (1948). International Trade and the Equalization of Factor Prices, *The Economic Journal*, June, pages 181-97.
39. Sapir, Jacques (2019). Souveraineté, souveraineté économique et la question des formes de mise en œuvre, *Économie 11.avril.2019//Les Crises*, <https://www.les-crisis.fr/russeurope-en-exil-souverainete-souverainete-economique-et-la-question-des-formes-de-mise-en-oeuvre-par-jacques-sapir/>
40. Smith, Adam (1776). *Recherches sur la nature et les causes de la richesse des nations*, Université du Québec à Chicoutimi. Original text available for download at http://classiques.uqac.ca/classiques/Smith_adam/smith_adam.html
41. Vernon, R. (1966). International Investment and International Trade in the Product Cycle, *The Quarterly Journal of Economics*.

APPENDICES



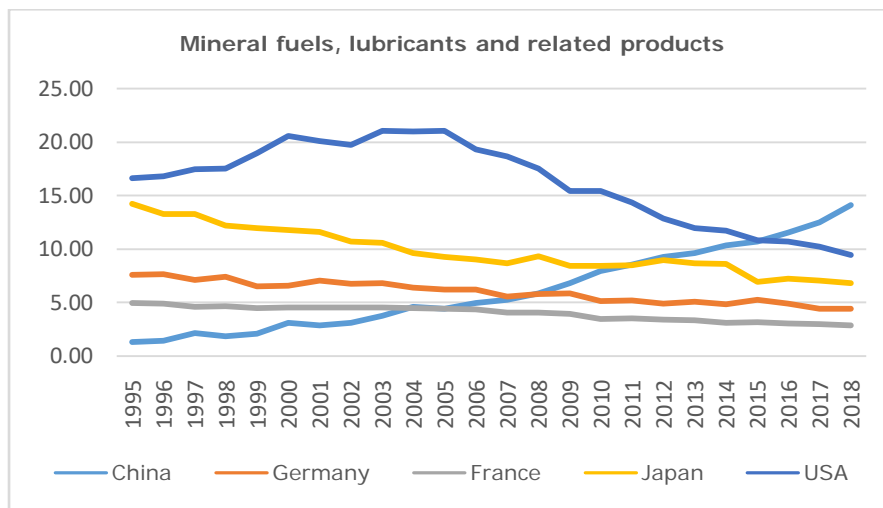
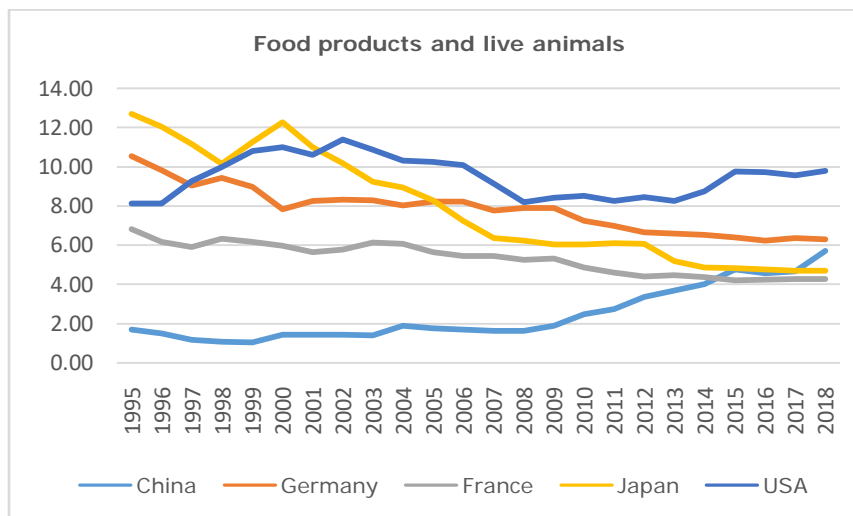


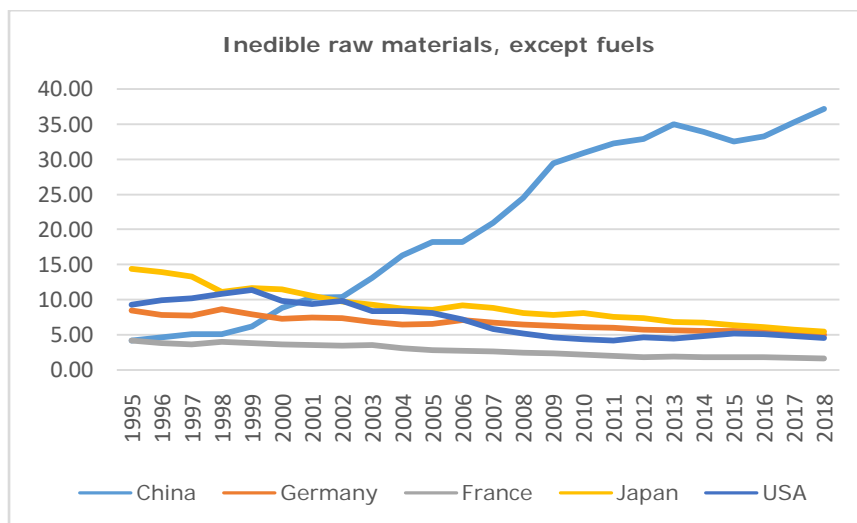
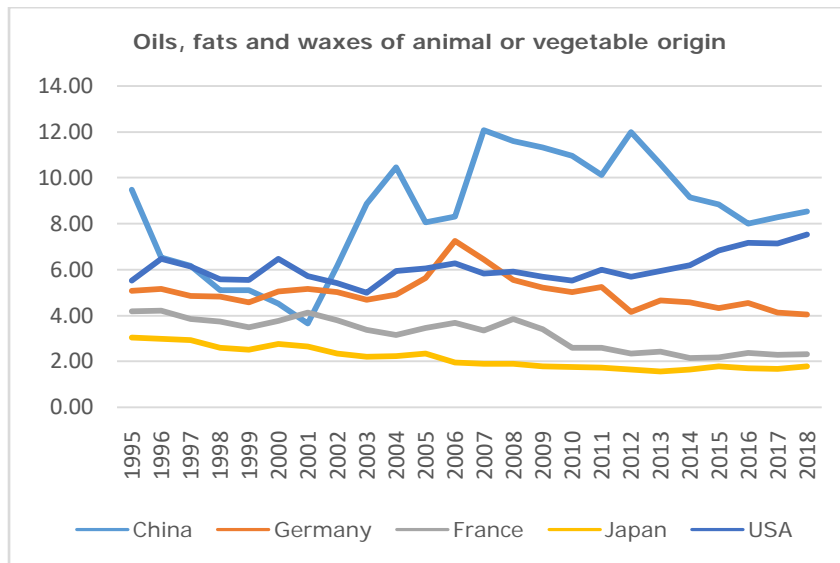
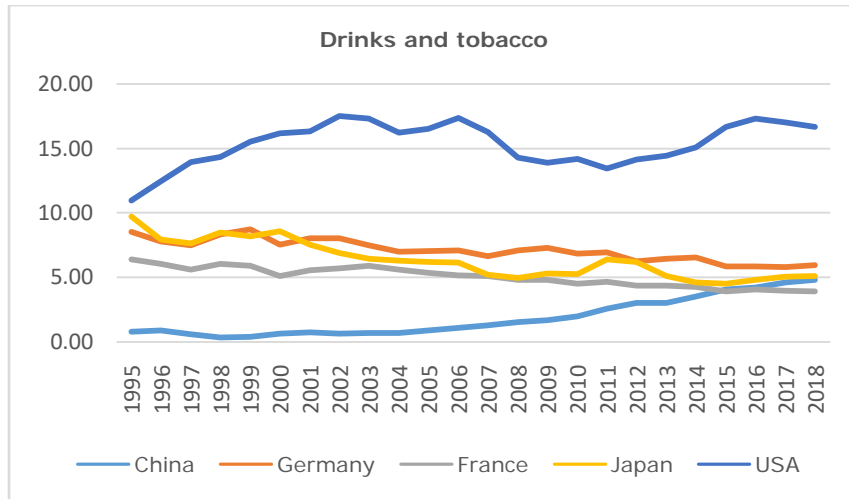


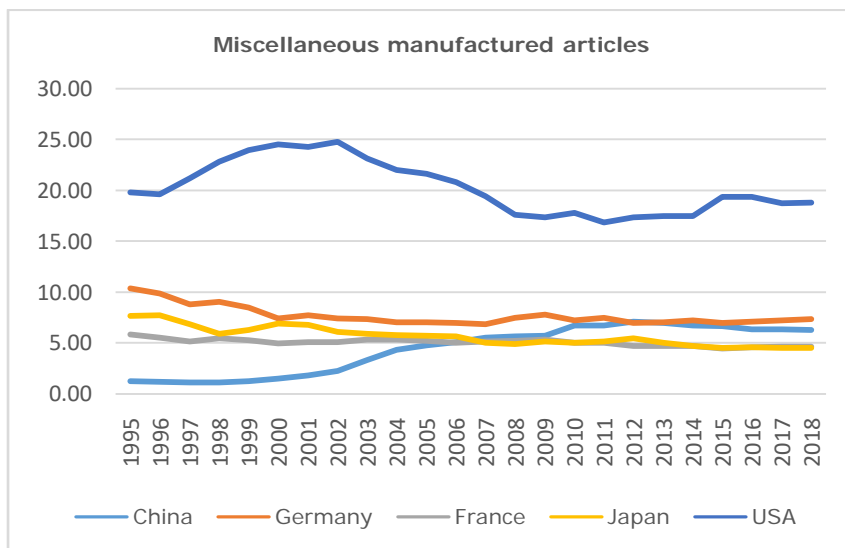
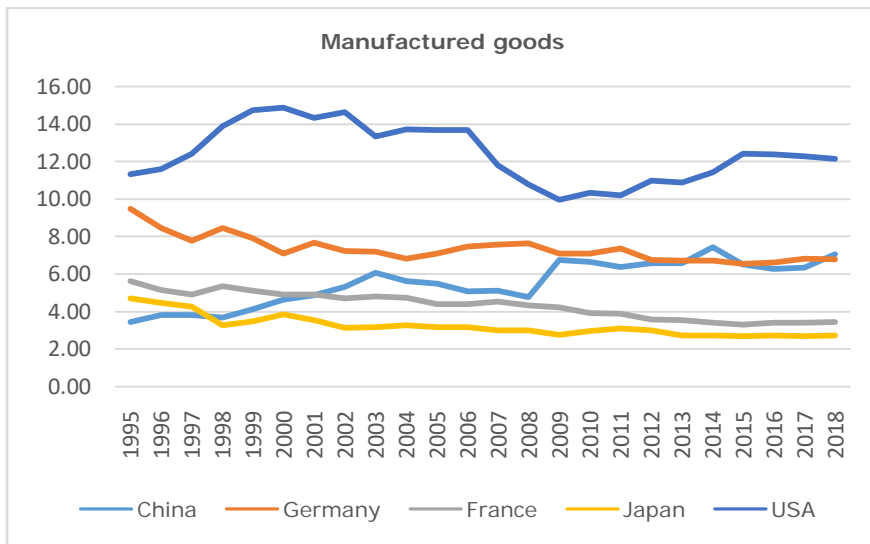
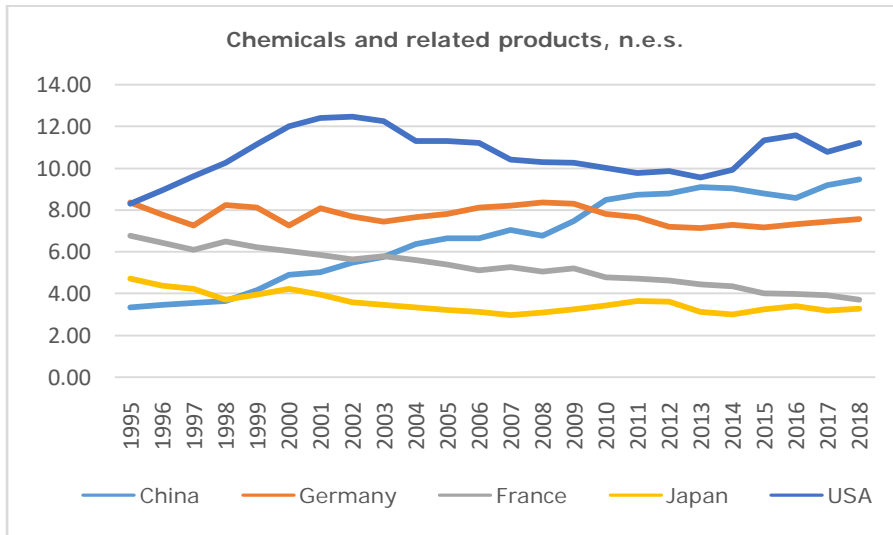


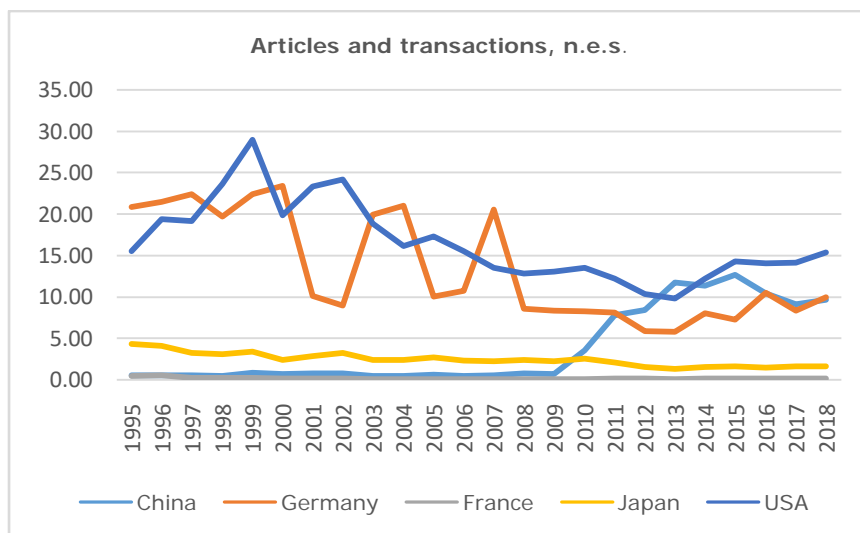
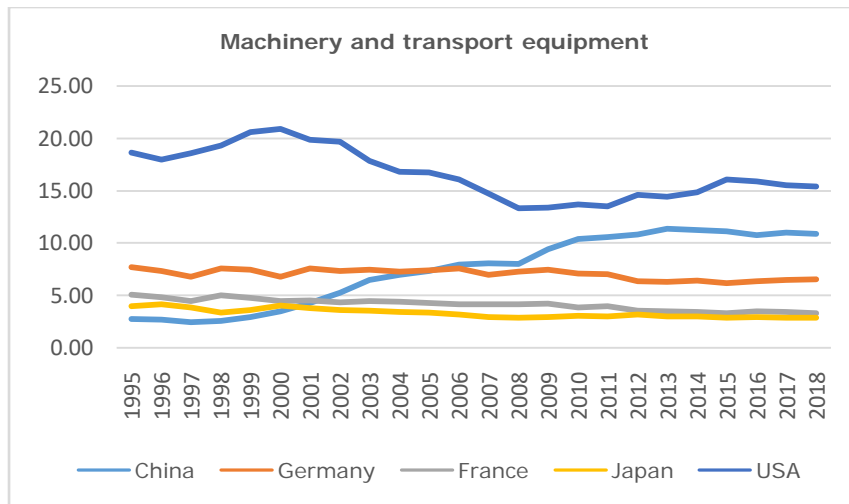
Source: UNCTAD data and author's calculations

Figure 3: Changes in the Export Profile of China, the USA, Japan, France and Germany Over the Period 1995-2018



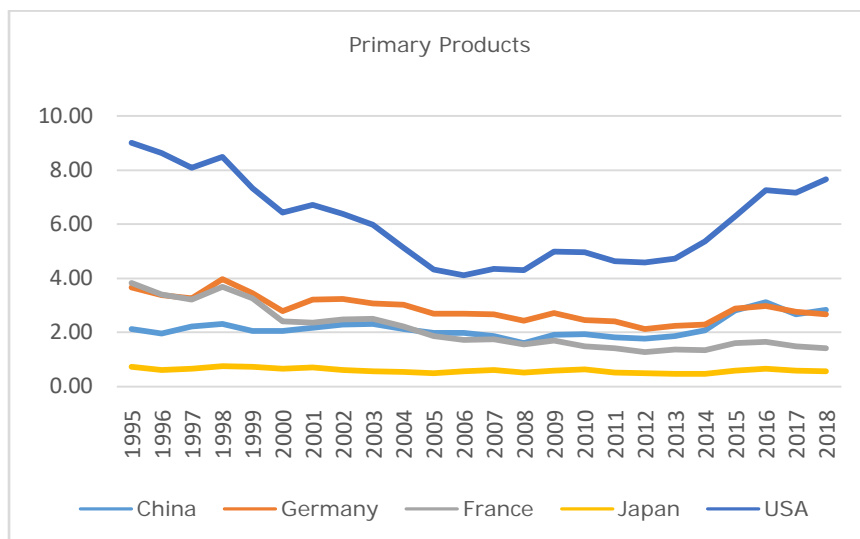


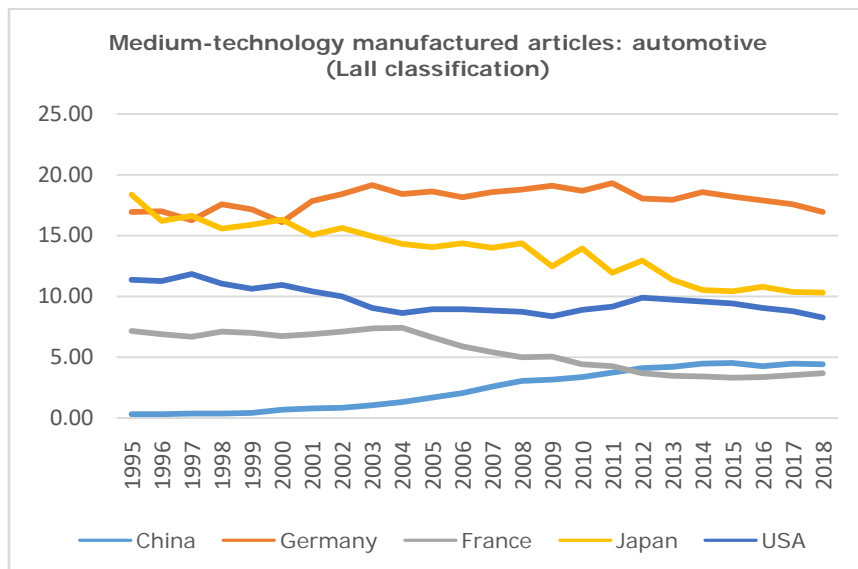
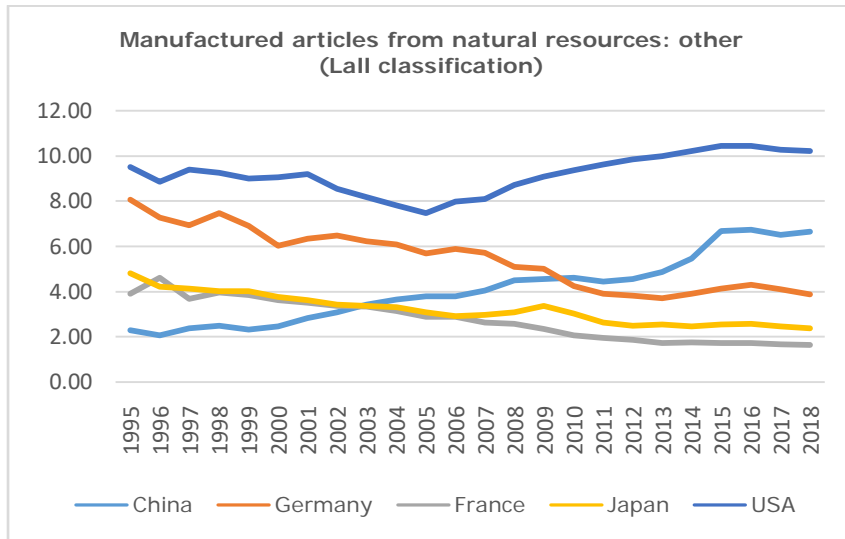
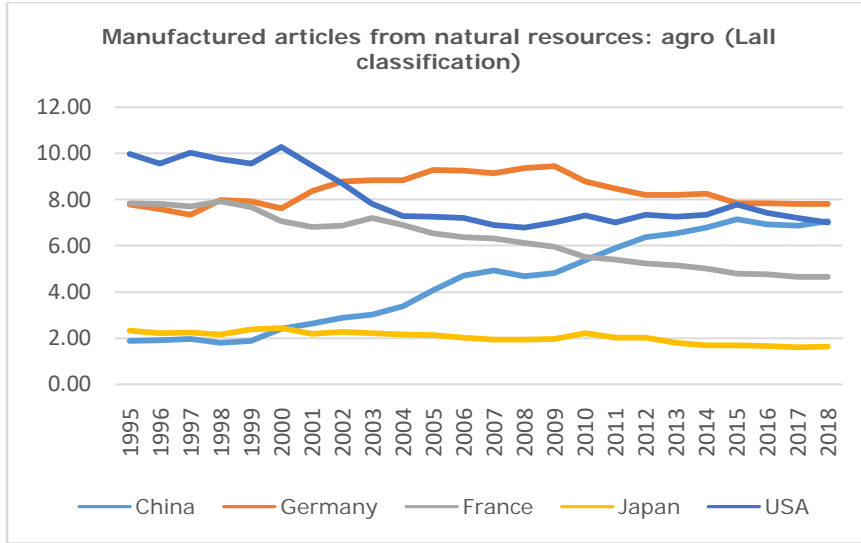


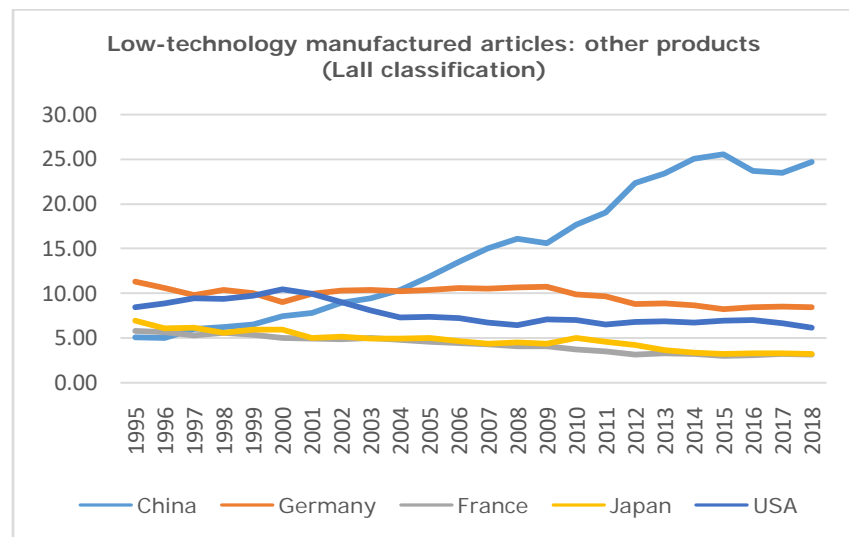
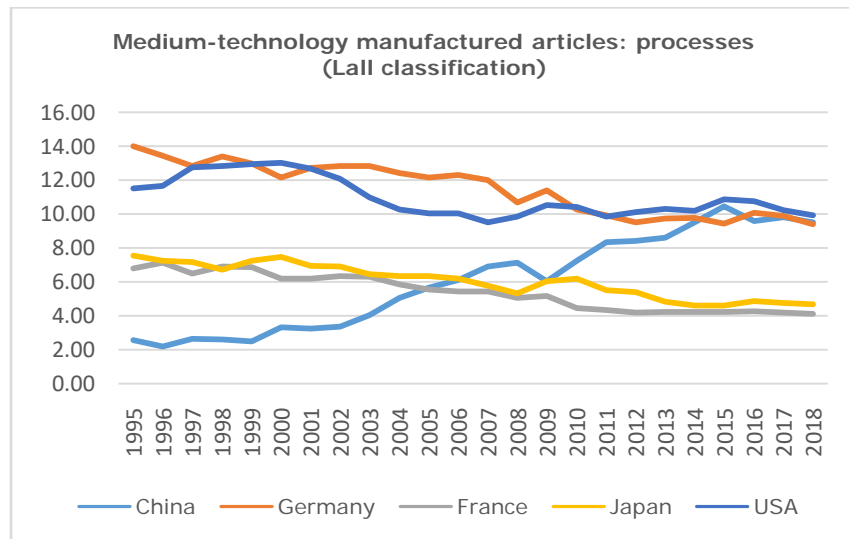
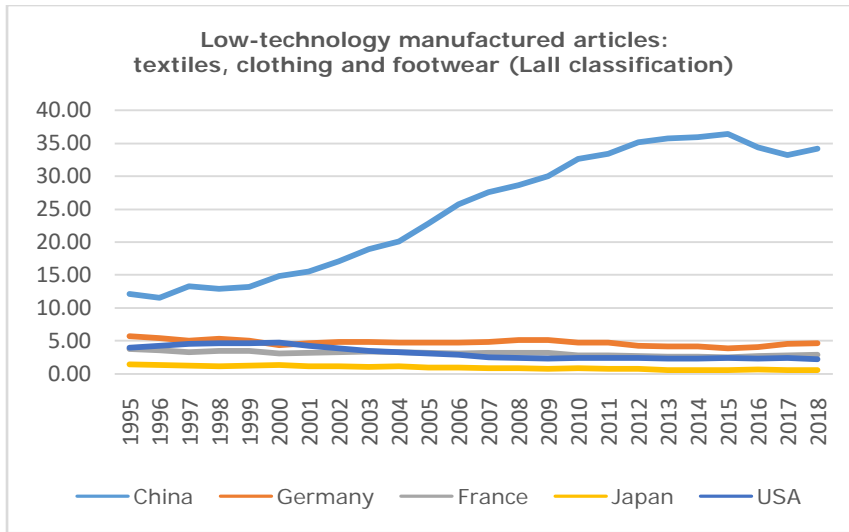


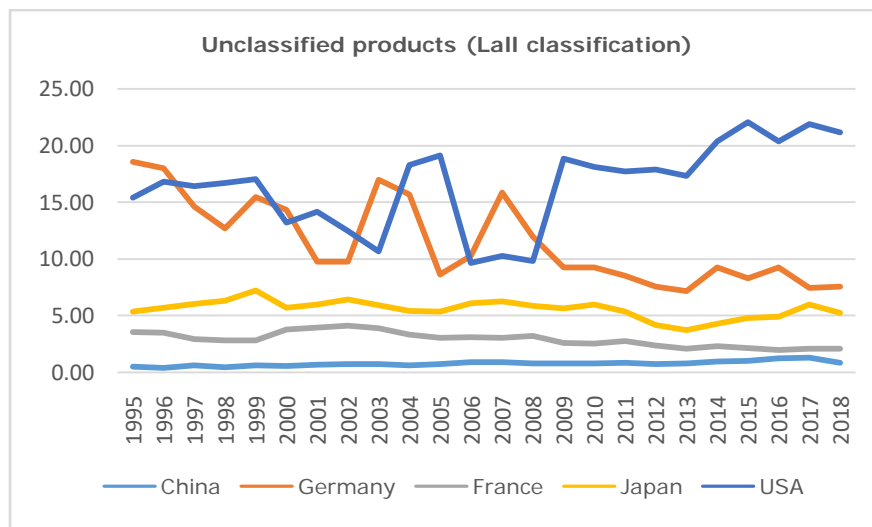
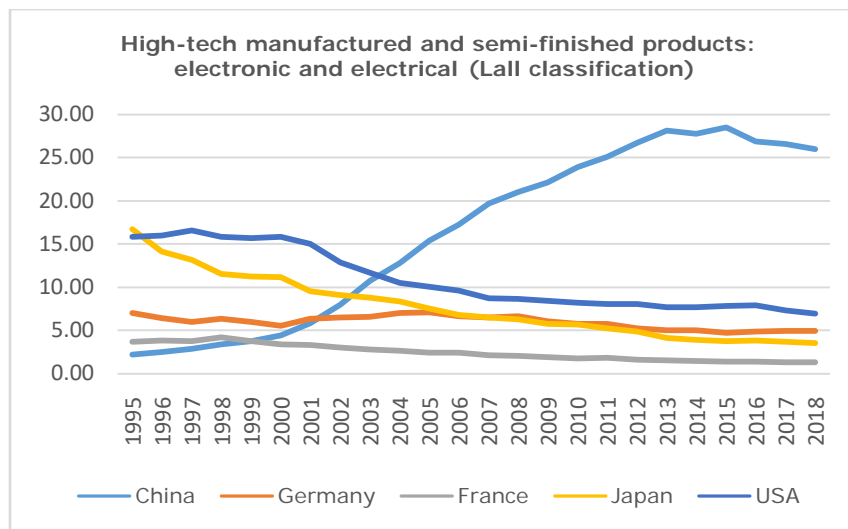
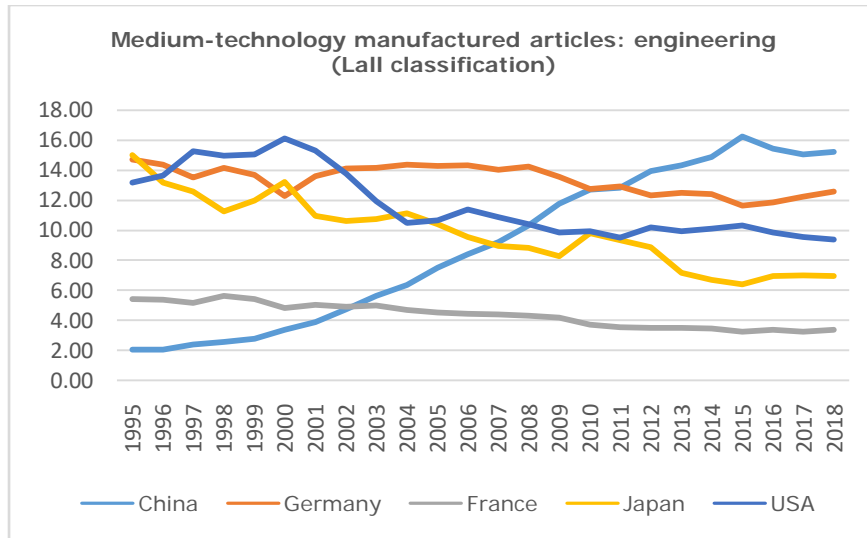
Source: UNCTAD data and author's calculations

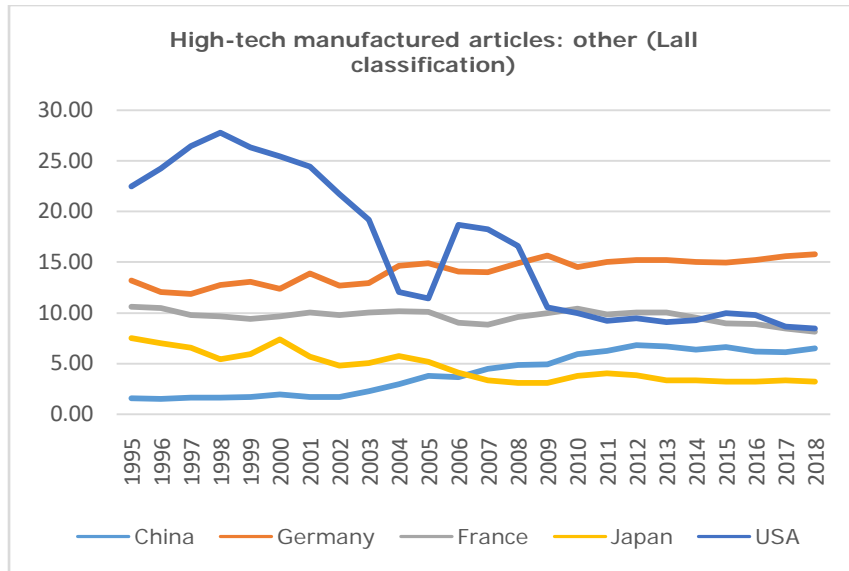
Figure 4: Evolution of the Import Profile of China, the USA, Japan, France and Germany over the Period 1995-2018





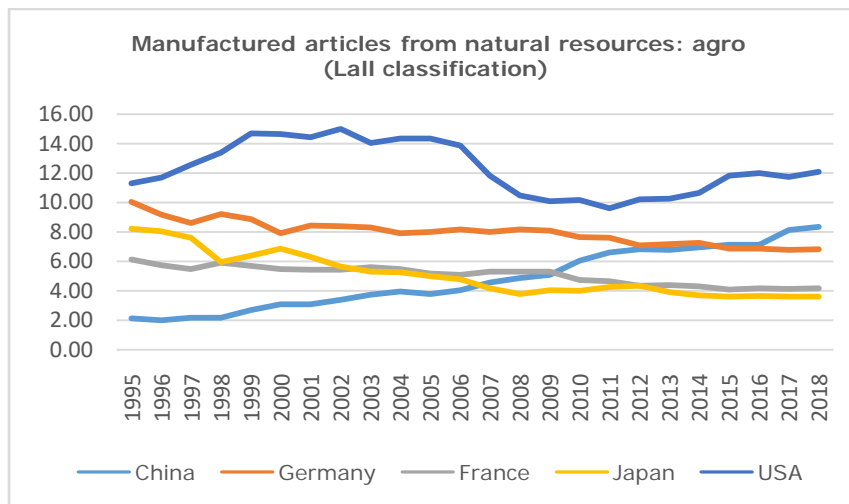
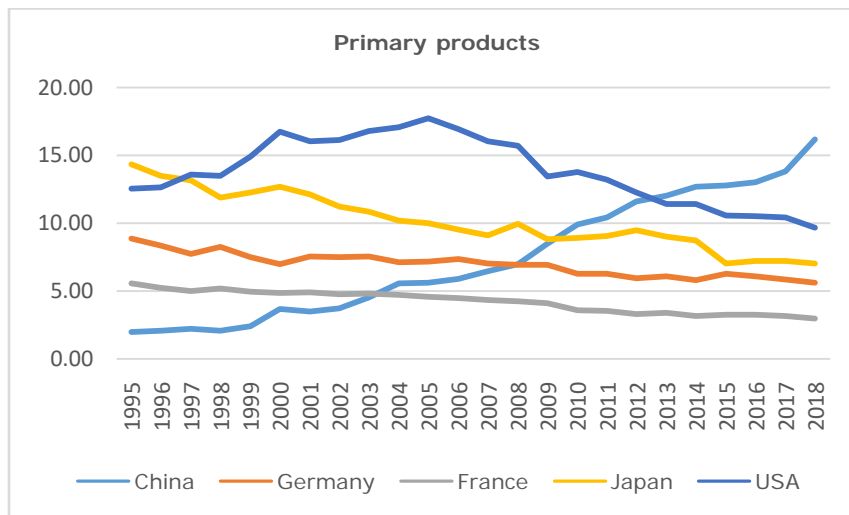


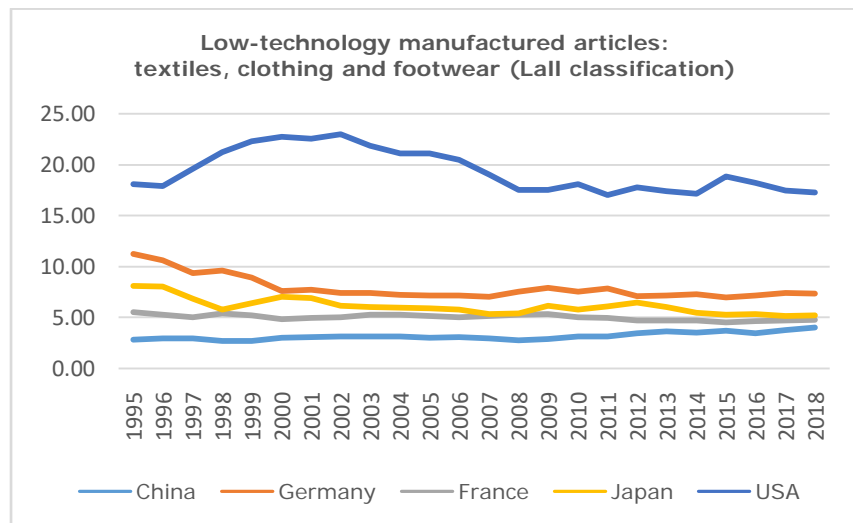
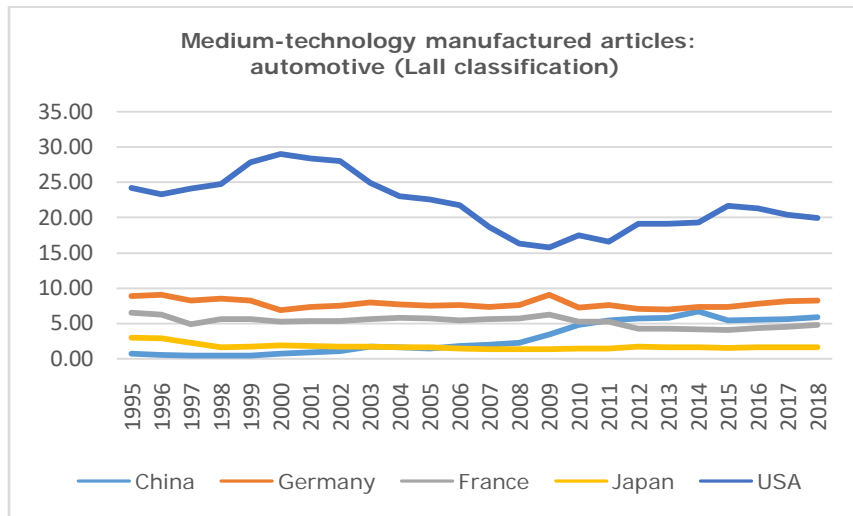
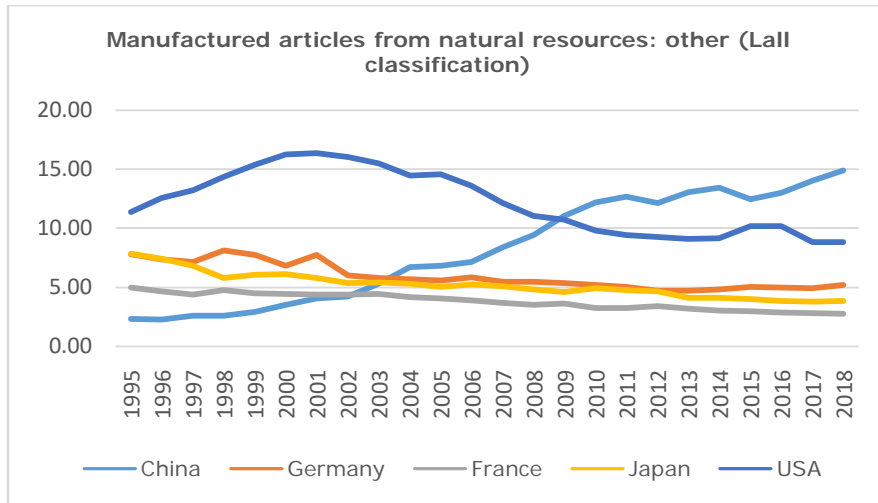


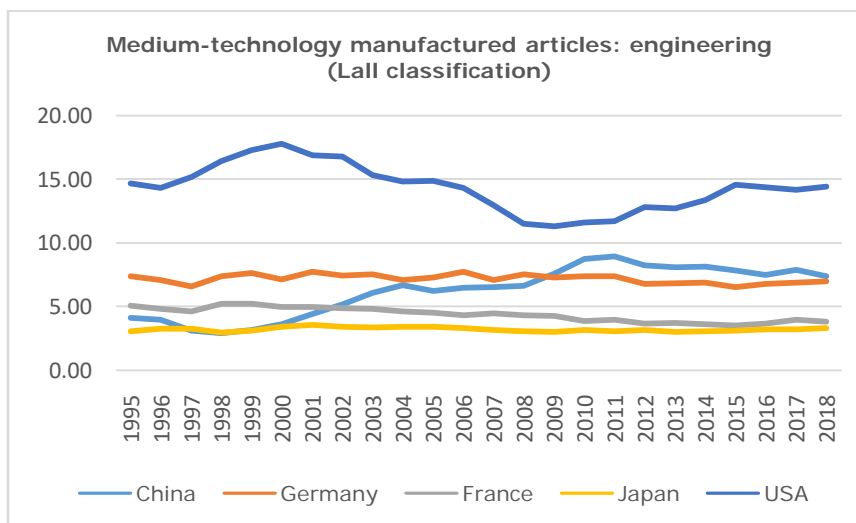
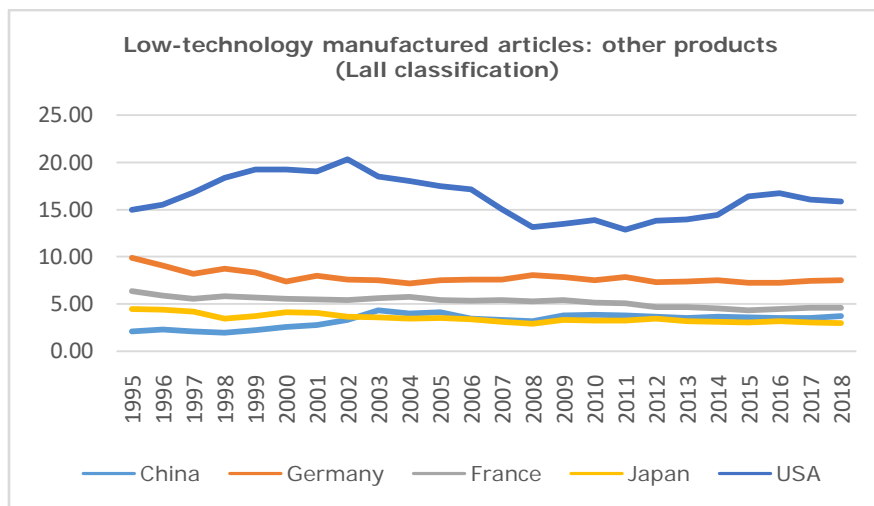
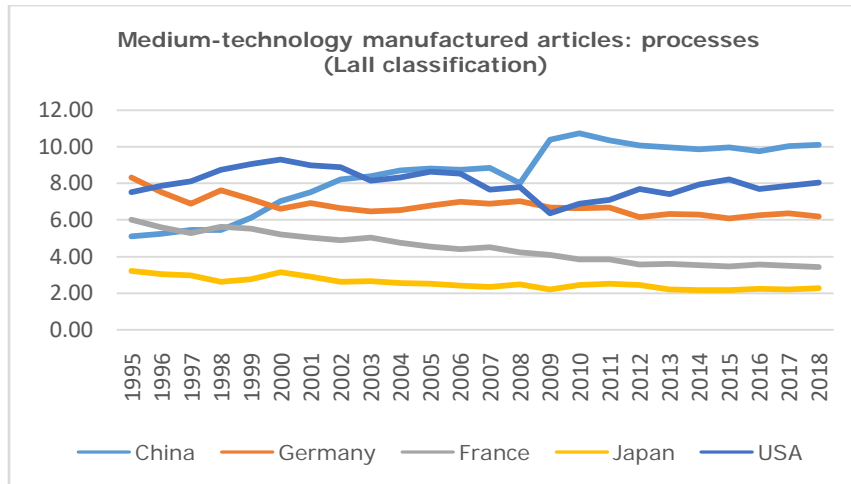


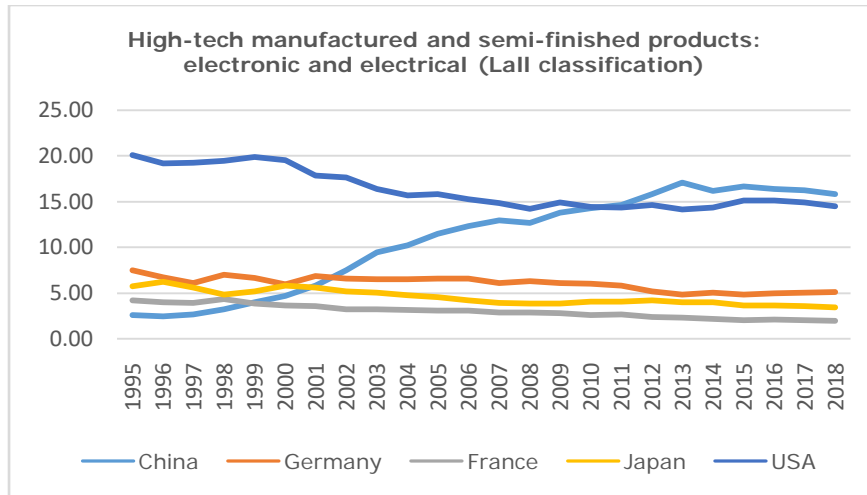
Sources: UNCTAD data and author's calculations

Figure 5: Evolution of the Export Profile According to the Lall Classification of China, the USA, Japan, France and Germany over the Period 1995-2018









Source: UNCTAD data and author's calculations

Figure 6: Evolution of the Import Profile of China, the USA, Japan, France and Germany over the Period 1995-2018

¹ We include protectionist theorists in this category, even if this is debatable.

² <http://pise.info/eco/citations.htm> (consulted on 17/03/2020 at 18:21 GMT).

³ L'Economie Politique Patronale (1889), BnF, https://data.bnf.fr/12198421/antoine_de_montchrestien_traite_de_l_economie_politique/

⁴ According to Dostaler, Gilles (2009) "Alternatives économiques" No 280.

⁵ Quoted by Caire (1965).

⁶ According to some authors, this position was accepted by Adam Smith (1776).

⁷ This is to be expected, as China is still a newly industrialised country and has not yet got rid of low value-added technologies such as textile and clothing manufacturing.

⁸ For more details on these figures, see the World Intellectual Property Organisation website and the report by its Director General (Mr Francis Gurry). https://www.wipo.int/pressroom/fr/articles/2020/article_0005.html

⁹ <https://www.les-theses.fr/russeurope-en-exil-souverainete-souverainete-economique-et-la-question-des-formes-de-mise-en-oeuvre-par-jacques-sapir/>

¹⁰ Quoted by Sapir (2019)

¹¹ Expression borrowed from Mouffe (2010).

¹² EU: European Union

¹³ CUSMA: Canada, United States and Mexico Agreement (formerly NAFTA)

¹⁴ ASEAN: Association of Southeast Asian Nations

¹⁵ AfCFTA: African Continental Free Trade Area

¹⁶ ECOWAS: Economic Community of West African States.

¹⁷ These migrations are justified because they are the most profitable, given the crisis and strong global demand.



GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: B
ECONOMICS AND COMMERCE

Volume 25 Issue 2 Version 1.0 Year 2025

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Macroeconomic Factors and Stock Market Return in Nepal

By Narayan Kattel

Purbanchal University

Abstract- This study examines the relationship between key macroeconomic variables and the stock market return in Nepal, particularly focusing on the NEPSE Index. Using time series data from 2014 to 2023 and employing multiple regression analysis, the study evaluates the influence of interest rate, inflation rate, exchange rate, industrial production, and broad money supply on stock market performance. Results reveal that exchange rate and money supply significantly and positively affect NEPSE, while inflation and interest rates show a negative but statistically insignificant impact. The findings are expected to aid investors and policymakers in understanding economic drivers of market behavior in Nepal.

GJMBR-B Classification: JEL Code: E44, G12



Strictly as per the compliance and regulations of:



Macroeconomic Factors and Stock Market Return in Nepal

Narayan Kattel

Abstract- This study examines the relationship between key macroeconomic variables and the stock market return in Nepal, particularly focusing on the NEPSE Index. Using time series data from 2014 to 2023 and employing multiple regression analysis, the study evaluates the influence of interest rate, inflation rate, exchange rate, industrial production, and broad money supply on stock market performance. Results reveal that exchange rate and money supply significantly and positively affect NEPSE, while inflation and interest rates show a negative but statistically insignificant impact. The findings are expected to aid investors and policymakers in understanding economic drivers of market behavior in Nepal.

I. INTRODUCTION

The stock market plays a crucial role in economic growth by mobilizing capital for investment. In Nepal, the stock market is relatively young and influenced by various internal and external macroeconomic forces. Despite its potential, NEPSE has shown high volatility, raising concerns about investor understanding of these macroeconomic influences.

This study aims to explore the trends and relationships of key macroeconomic variables with the Nepal Stock Exchange Index (NEPSE), offering insight for investors and policymakers.

II. RESEARCH PROBLEM

The Nepal Stock Exchange exhibits frequent volatility, partially driven by limited awareness of the macroeconomic forces affecting it. This research seeks to answer:

- What are the recent trends in macroeconomic indicators?
- How do these indicators correlate with and influence NEPSE?

III. OBJECTIVES

1. To identify the trends of selected macroeconomic indicators.
2. To examine the relationship between these indicators and NEPSE.
3. To analyze the impact of these variables on stock returns.

Author: Central Management College, Purbanchal University. PU Reg. No.: 144-2-3-08106-2021. e-mail: nkattel0@gmail.com

IV. HYPOTHESES

H1: Broad Money Supply (M2) significantly impacts NEPSE.

H2: Inflation Rate significantly affects NEPSE.

H3: Policy Interest Rate significantly influences NEPSE.

H4: Exchange Rate (USD/NPR) significantly affects NEPSE.

H5: Industrial Production significantly influences NEPSE.

V. METHODOLOGY

Design: Quantitative research using time series analysis.

Period: 2014–2023.

Data Sources: Nepal Rastra Bank (NRB), NEPSE, SEBON, and Ministry of Finance (MOF).

Analytical Tools: Descriptive statistics, correlation analysis, and multiple regression.

VI. VARIABLES

Dependent Variable: NEPSE Index (proxy for stock market return).

Independent Variables:

- Interest Rate (IR)
- Inflation Rate (INF)
- Exchange Rate (ER)
- Industrial Production (IP)
- Broad Money Supply (M2)

VII. RESULTS AND DISCUSSION

Inflation and Interest Rate: These had a negative but statistically insignificant impact on NEPSE. **Exchange Rate and Money Supply (M2):** Showed positive and statistically significant impacts. **Industrial Production:** Positive influence, but statistically insignificant.

These findings suggest that among the variables studied, exchange rate and money supply are the most influential in determining NEPSE movements.

VIII. CONCLUSION

Macroeconomic variables significantly influence the Nepalese stock market. Particularly, broad money supply and exchange rate exhibit a strong and positive effect on NEPSE. The results underscore the importance

of monetary stability and foreign exchange policy in shaping market behavior.

IX. RECOMMENDATIONS

- For Investors: Monitor macroeconomic trends, especially exchange rates and money supply.
- For Policymakers: Formulate consistent monetary and exchange rate policies to ensure market stability.
- For Researchers: Explore additional variables such as remittance, political stability, and foreign investment in future studies.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Nepal Rastra Bank (NRB) Annual Reports (2014–2023).
2. Securities Board of Nepal (SEBON) Market Bulletins.
3. Ministry of Finance, Government of Nepal - Economic Surveys.
4. Chen, N. F., Roll, R., & Ross, S. A. (1986). Economic forces and the stock market. *Journal of Business*.
5. Fama, E. F. (1981). Stock returns, real activity, inflation, and money. *American Economic Review*.
6. Pilinkus, D. (2010). Macroeconomic indicators and their impact on stock market performance in the short and long run. *Technological and Economic Development of Economy*.





Effects of Green Farming Practices/Environmentally Friendly Practices on Small Scale Agricultural Production in Kenya, A Case Study in Siaya County

By Samson Ntongai Jeremiah & Amos Bonnke

Abstract- Smallholder farmers, who face sustainability challenges due to reliance on conventional farming practices, dominate Kenya's agricultural sector. This study investigated the impact of adopting green farming practices on the agricultural productivity, economic viability and environmental sustainability of small-scale farms in Siaya County. A mixed methods approach combined analysis of published secondary data with primary data collected through questionnaires administered to a sample of 150 smallholder farmers in Siaya. The questionnaires utilized descriptive analysis to assess the adoption rate of different green farming techniques over the past five years and used both qualitative and quantitative analysis to evaluate outcomes related to agricultural yields, income generation, social welfare, and conservation goals. Quantitative data was analyzed statistically in Microsoft Excel using tables, graphs and charts. Specific statistical tests used included ANOVA analysis to determine any associations and differences between groups, and regression analysis to examine correlations between green farming adoption and productivity, financial and sustainability indicators. The study tested hypotheses on the relationship between implementing environmentally friendly techniques and productivity levels, economic returns, and ecological impacts.

GJMBR-B Classification: FOR Code: 0701



EFFECTS OF GREEN FARMING PRACTICES ENVIRONMENTALLY FRIENDLY PRACTICES ON SMALL SCALE AGRICULTURAL PRODUCTION IN KENYA A CASE STUDY IN SIAYA COUNTY

Strictly as per the compliance and regulations of:



RESEARCH | DIVERSITY | ETHICS

Effects of Green Farming Practices/Environmentally Friendly Practices on Small Scale Agricultural Production in Kenya, a Case Study in Siaya County

Samson Ntongai Jeremiah ^α & Amos Bonnke ^σ

Abstract- Smallholder farmers, who face sustainability challenges due to reliance on conventional farming practices, dominate Kenya's agricultural sector. This study investigated the impact of adopting green farming practices on the agricultural productivity, economic viability and environmental sustainability of small-scale farms in Siaya County. A mixed methods approach combined analysis of published secondary data with primary data collected through questionnaires administered to a sample of 150 smallholder farmers in Siaya. The questionnaires utilized descriptive analysis to assess the adoption rate of different green farming techniques over the past five years and used both qualitative and quantitative analysis to evaluate outcomes related to agricultural yields, income generation, social welfare, and conservation goals. Quantitative data was analyzed statistically in Microsoft Excel using tables, graphs and charts. Specific statistical tests used included ANOVA analysis to determine any associations and differences between groups, and regression analysis to examine correlations between green farming adoption and productivity, financial and sustainability indicators. The study tested hypotheses on the relationship between implementing environmentally friendly techniques and productivity levels, economic returns, and ecological impacts. Findings aimed to enable recommendations to promote adoption of green agriculture through targeted interventions addressing identified barriers like knowledge gaps and financial limitations faced by Siaya smallholders. By taking a holistic evaluation of green strategy adoption, the research aimed to guide policies that encouraged sustainable intensification amongst rural smallholder farmers in Kenya and beyond.

CHAPTER 1: INTRODUCTION

a) Background Information

i. Environmental Impacts of Agriculture

Global agricultural productivity has intensified drastically over the past century to cater to burgeoning populations and heightened per capita food demands. However, conventional industrial farming practices have also engendered massive ecosystem disruptions through deforestation, excessive tilling, inorganic fertilizer over application and agrochemical usage accumulation (De Silva, 2012; Canter 2018). Vast tracts of forests and other native

vegetation biomes across the planet have been razed for agricultural expansion, slashing biodiverse habitats and their regulatory capacities. Unsustainable land-clearing techniques like slash and burn have also emitted substantial greenhouse gases further escalating climate change. Intensive tilling has ruined soil structure, causing erosion losses over 20 billion tons annually while intensive machine operation has compacted lands declining arability (Krejci & Beamon, 2014).

Chemical fertilizer over-reliance has also drained, salinized and acidified soils diminishing productivity from degradation alongside surface water contamination through agricultural runoff. Pesticide toxicity has pervaded ecosystems, oxidizing microbial ecosystems essential for nutrient cycling and polluting water supplies. Herbicide overuse has led to weed resistance and loss of beneficial plant genetic diversity (National Research Council, 2000). Rampant groundwater extraction for unsustainable irrigation has depleted reserves and sunk water tables as ecological limits are crossed. Unbridled cattle grazing has also compacted lands and stripped vegetative covers. Poor animal waste management has released effluents into waterways spreading parasites like cryptosporidiosis threatening human and ecosystem health (Lal et al., 1988).

Overall, these cumulative actions have gravely fragmented once contiguous natural habitats as alien invasive species infiltrate. Up to 75% of global crop diversity has already been lost from such activities, with over 20,000 species now vulnerable to extinction (Canter, 2018). These ecosystem service disruptions pose grave threats to the entire global food production and supply apparatus. Without urgent corrective interventions through sustainable agriculture, the planet's capacity to perpetually support its burgeoning human population comes into serious question (Fomsgaard, 2014).

ii. Sustainable Agricultural Practices

As environmental threats from conventional agriculture intensified, sustainable agriculture concepts emerged to nurture ecological stability amidst food production. Sustainable techniques aim to sustain yields while minimizing further ecosystem disruption through principles like soil replenishment, water conservation and waste recycling (Varela, 2001). Organic farming avoids synthetic fertilizers and pesticides through

Corresponding Author α: Department of Business Administration, School of Business and Economics, Kenya.
e-mail: samwaqo@gmail.com

Author σ: MBA Students, Department of Business Administration, School of Business and Economics, Kenya.
e-mail: amosdabonk@gmail.com

integrated biological approaches to maintain soil health and fertility. Organic manures, biopesticides, crop rotations and integrated pest management techniques help enhance biodiversity preservation on farms while reducing external input costs. Though organic cultivation typically has lower output volumes initially, well-adapted regional practices help farmers capture price premiums through certified ecological production (Fomsgaard, 2014).

Conservation agriculture principles endorse minimum tilling to preserve soil structure, permanent soil covers using crop residues to retain moisture, nutrients, and diversified crop rotations with legumes fixing nitrogen. Precision agriculture tailors input applications to optimize resource use efficiency guided by monitoring indicators. Plastic mulch, drip irrigation and rainwater harvesting further reduce water demands and erosion risks (Mitra & Datta, 2014). Integrated farming blends different agricultural ventures on farms like combining aquaculture with poultry for waste recycling. Vermicomposting also recycles manures into organic fertilizers while agroforestry provides additional income streams from forest products harnessing biodiverse synergies through additional carbon sequestration (De Silva, 2012). Renewable energy production from agricultural wastes can also catalyze rural development.

While sustainable agriculture adoption requires some transitional resource investments for smallholders, improved yield stability, lowered production costs and ecosystem conservation over time make these systems optimal for subsistence farmers to escape entrenched poverty cycles (Haggblade et al, 2007). Regional studies have shown sustainable technique adoption enhancing smallholder incomes by 22-35% through higher output value realization (Mozzato, 2019). Furthermore, sustainable intensification is imperative for fortifying resilience against mounting climate change risks to Africa's agricultural future (Desjardins et al, 2007).

iii. *Agriculture in Kenya*

As the foremost economic pillar occupying over 40% of labor capacity, smallholder farmers with 1–10-acre land parcels dominate Kenya's agricultural sector. Both domestic nutritional outcomes and the country's export revenues rely predominantly on productivity across small-scale cultivation (Weintraub, 2002). Core crops underpinning food security include maize, Irish potatoes, beans, vegetables, coffee, tea, sugarcane, pyrethrum and assorted horticulture. Livestock husbandry across cattle, goat, sheep, camel and chicken rearing also constitutes 30% of agricultural GDP (Krejci & Beamon, 2014). However, Kenya's small-holders remain severely financially constrained lacking investment capital for advanced inputs, mechanization and irrigation infrastructure limiting productivity advancements. Public expenditure allocations are also severely deficient with under 6% dedicated agricultural budgets

compared to the 10% in the Maputo declaration (Mohamed Haris, 2019). Low profitability has consequently trapped many farmers in poverty cycles.

Kenya's ecological landscape is also increasingly threatened from large-scale illegal logging, air pollution from improper waste disposal, effluent discharge and unsound industrial activities. The Mau Forest covering 400,000 hectares has already been encroached through settlements and land grabs (Murey, 2020). Water catchment capacities have been disrupted affecting water availability and quality for cultivated lands and grazing pastures. Already burdened smallholders thereby suffer deepening climate change pressures through rainfall variability, droughts, floods and extreme weather shocks while lacking adaptive capacities. Over 80% of current yields remain rain-fed, hence direly vulnerable to precipitation uncertainty (Desjardins et al, 2007).

Without climate-smart advancements, Kenya faces grave food security risks from these compounding existing agricultural sector struggles. Sustainable land management practices are imperative across smallholder farms constituting Kenya's agricultural backbone. Environmentally wise intensification must be prioritized to safeguard ecological stability, shore yields, raise farm incomes and thereby secure national food reserves whilst enhancing small farm resilience against climate change impacts through green agriculture proliferation (Craparo et al., 2023).

iv. *Siaya County Profile*

Siaya County lies in western Kenya bordering Lake Victoria in the Nyanza region. With 83% arable land, agriculture constitutes the foremost economic activity occupying over 70% of household incomes and livelihoods (County Government of Siaya, 2018). Core cultivated crops include maize, sorghum, cassava, sweet potatoes, beans, cowpeas, pigeon peas, ground nuts alongside mixed small-scale livestock husbandry across cattle, goats, sheep and local poultry. Cassava and sorghum dominate covering over 80% of cultivated land. Cash crops comprise sugarcane, cotton, sunflower and rice paddy. However, average farm sizes remain small at just 1.5 acres. Hand hoes occupy over 75% of cultivation demonstrating low mechanization and poor commercial orientation impeding large-scale production, value addition and competitive market participation. Less than 1% of farmer's access agricultural financing with minimal uptake across critical production inputs like certified seeds, appropriate fertilizers and crop protection limiting yields (Gather, 2022). Supportive infrastructure and farmer training services are also severely deficient to transform outdated cultivation habits.

These struggling Siaya smallholders additionally endure ecological strains through topsoil nutrient losses, increasing prevalence of gully erosion from poor land

use and erratic rainfall patterns with limited irrigation access. Over 60% of the county suffers high degradation risks, with rich lands left unsuitable for profitable farming (Kisioh, 2015). Deforestation through unsound fuel wood extraction and charcoal production has also reduced water catchment capacities. Low agricultural budgetary allocations have continually neglected Siaya County's 700,000+ farming families languishing in entrenched poverty cycles and food insecurity. With over 60% of Siaya children chronically undernourished, surging malnutrition hospitalizations further demonstrate failed agricultural policies and environmental mismanagement threatening lives, health and livelihoods countywide (Aemro, 2022). Sustainable land use education alongside input financing is imperative to spur ecological stability, yield improvements, value chain augmentation and climate change resilience across Siaya's high potential agricultural landscape through transformative green interventions.

b) *Problem Statement*

Small-scale agriculture remains dominated by unsustainable conventional practices across Siaya County despite the region's high farming potential, with rife land degradation now threatening ecological foundations underpinning the sector. Over 75% of Siaya's arable land relies on dated farming habits around fragmented micro-plots averaging just 1.5 acres, lacking necessary upgrades for profitable cultivation (Gather, 2022; County Government of Siaya, 2018). Unsound cultivation traditions without crop rotations have caused alarming soil nutrient mining across over 60% of regional farmlands. Uncontrolled free-range grazing has compacted lands and stripped vegetative covers, fueling a 60% topsoil erosion rate through unmitigated losses (Kisioh, 2015). Heavy rainfall dependence for over 80% of crops has also escalated climate change vulnerability without adaptive capacities like water harvesting, conservation irrigation or moisture retention measures (Craparo et al., 2023).

Consequently, stagnating production has sunk smallholders deeper into poverty cycles lacking resources for investing in sustainable farming upgrades. With under 6% national agricultural budget allocations, minimal financing access constrains local adoption of yield-boosting inputs like certified seeds, appropriate fertilizers and crop protection (Mohamed Haris, 2019). Inadequate agricultural infrastructure and farmer training services also entrench outdated regional cultivation habits. As population pressures mount amidst constant land subdivisions, ecological stability continues deteriorating while over 60% of Siaya children face chronic malnutrition from shrinking per capita harvests demonstrating failed cultivation policies (Aemro, 2022). With over 500,000 regional farming families relying on agriculture incomes (County Government of Siaya, 2018), urgent transition towards sustainable approaches

is imperative to reverse unsound conventional land use practices now critically threatening Siaya's agricultural future.

Environmentally regenerative techniques adoption can enhance climate resilience, raise farm budgets for reinvestment, improve nutrition and secure inclusive rural livelihoods if more strongly prioritized through farmer education and input support. Scaling countywide implementation of integrated soil enrichment, water conservation and climate-smart green agriculture practices is vital to safeguard Siaya's high farming potential while tackling the constraints curtailing sustainable agricultural development across regional smallholdings.

c) *Research Objectives*

i. *Main Objectives*

To investigate the impact of green farming practices or environmentally friendly practices on small-scale agricultural production in Siaya County, Kenya, with a focus on evaluating adoption rates, productivity outcomes, economic, social and environmental implications as well as identifying challenges and proposing recommendations to enhance the implementation of these practices.

ii. *Specific Objectives*

1. To assess the adoption rate of green farming practices among small-scale farmers in Siaya County, Kenya, over the past five years (2018-2023).
2. To examine the impact of environmentally friendly practices on agricultural productivity in small-scale farming in Siaya County.
3. To evaluate the economic, social and environmental benefits of employing green farming practices among small-scale farmers in Siaya County.
4. To identify the challenges and barriers faced by small-scale farmers in implementing green farming practices in Siaya County.
5. To propose recommendations and strategies for promoting and enhancing the adoption of environmentally friendly practices in small scale agriculture in Siaya County.

d) *Research Questions*

1. What are the various green farming practices adopted by small-scale farmers in Siaya County?
2. How do the adopted environmentally friendly practices impact the productivity and yield of agricultural produce among small-scale farmers in Siaya County?
3. What economic, social and environmental benefits are associated with the implementation of green farming practices in the context of small-scale agriculture in Siaya County?
4. What are the main challenges hindering the widespread adoption of environmentally friendly

practices among small-scale farmers in Siaya County?

5. What strategies or interventions could be implemented to overcome the barriers and encourage more small-scale farmers to embrace green farming practices in Siaya County?

e) *Research Hypotheses*

1. *Hypotheses 1:* Adoption of green farming practices positively correlates with increased agricultural productivity among small scale farmers in Siaya County, Kenya.
2. *Hypotheses 2:* Small-scale farmers who employ environmentally friendly practices in Siaya County experiences improved economic returns compared to those using conventional farming methods.
3. *Hypotheses 3:* There is a significant positive impact of green farming practices on environmental conservation and sustainability in small-scale agricultural production in Siaya County.
4. *Hypotheses 4:* Challenges such as lack of access to resources, knowledge gaps and financial constraints act as barriers to the widespread adoption of green farming practices among small-scale farmers in Siaya County.
5. *Hypotheses 5:* Implementing targeted educational programs and providing financial incentives will enhance the adoption rate of green farming practices among small scale farmers in Siaya County.

f) *Justification*

Widespread adoption of sustainable green farming practices amongst smallholder farmers is increasingly imperative across sub-Saharan Africa for safeguarding food security and ecological sustainability amidst climate change pressures. However, limited evidence on socioeconomic outcomes from green technique implementation makes the case for urgently upscaling environmentally regenerative agriculture stronger across more country contexts (De Silva, 2012). While broad endorsements exist for sustainable farming benefits, substantiated case-by-case demonstrations can better convince policymakers on requisite public investments supporting smallholder adoption. Quantitative documentation around yield improvements, income gains and climate resilience from integrating practices like organic fertilization, conservation tillage, agroforestry and water harvesting can verify location-specific merits influencing localized endorsement for green transitions.

As Siaya County possesses high agricultural potential currently inhibited by unsustainable land degradation, the region represents an apt case study for demonstrating indicative benefits realizable from green farming adoption that support wider scaling across similar western Kenyan contexts. By quantifying productivity advancements, financial welfare

enhancement and ecological stability progress achievable by local small-holders from sustainable technique integration, an empirical evidence base develops guiding said proliferation. Thereby this research produces vital exposures motivating farmer-level buy-in and governmental prioritization of sustainable agricultural transitions where most prudent for national and regional food security.

g) *Research Scope*

This research investigated small-scale farmers across Siaya County, Kenya - focusing specifically on green agriculture techniques adopted over 2018-2023. A sample of 150 Siaya smallholders was selected through multi-stage stratified techniques covering all 6 sub-counties. Mixed methods were employed during the January-March 2024 cropping period. Structured questionnaires were used together adoption rates and yield changes reported from sustainable practices. Qualitative interviews and focus groups with farmers and officials also detailed perceived productivity, financial and environmental changes.

CHAPTER 2: LITERATURE REVIEW

a) *Introduction*

In this chapter, various peer scholars' works on sustainable green farming practices among smallholder farmers worldwide and in Kenya will be reviewed. Seminal conceptualization theories explaining farmer's adoption decisions and theoretical foundations for environmentally regenerative agriculture. Then empirical literature provides evidence-based outcomes based on previously observed outcomes following green strategies application such as yield improvement, financial gains and climate resilient systems.

Analytical approaches as well as sampling methods used in empirical studies from cited literature sources are analyzed and commented upon. In addition, limitations around generalizability, geographical transferability and "recent" temporal context are identified in regard to the present evidence base. Thirdly, synthesized findings based on documented economic, ecological and social benefits of green agriculture adoption that are practical and justifiable at the small holder level and for which further research is recommended should verify such outcomes in the other unexplored western Kenyan context.

b) *Theoretical Literature*

Several seminal theories and frameworks have been formulated seeking to explain farmers' motivations and decision-making regarding adoption of agricultural innovations and environmentally sustainable techniques.

i. *Theory of Planned Behavior*

TPB remains one of the most influential framework models on decision making for new behaviors or innovation with regard to cognitive

processing. It argues that behavioral intention is the most powerful precursor of actual (intended) adoption. □ These intentions are supported by three elements-attitudes showing evaluations about the positiveness/negativity of acceptance of the practice, subjective norms implying perceived pressure on peer to accept, and perceived behavioral control indicating self-assessed facility to act depending on available resource, knowledge, Strong intentions for adoption are developed if farmers come in with supportive attitudes inside them, get social encouragements and believe that they can carry out such practices successfully.

TPB has greatly influenced agricultural adoption scholarship by providing insight into innovation adoption. In a Tanzanian study conducted by Bizzuyehu (2020), attitudes and expected ability accounted for 50% of variation in adoption intentions in relation to expectations on improved livelihoods and productivity with the proposed land management techniques which are consistent with the postulated According to TPB, intentions for uptake of complex green innovations depend on perceptions on relative benefits versus needed efforts together with village-level normative endorsement and self-confident capacity. Sustainability of strategy and utilization of various technologies are examined by applying TBP elements to existing information about relative advantage notions and barriers to adoption. Aligning farmer-reported benefits side by side with disincentives such as financial, knowledge and infrastructural barriers will help ascertain compatibility with TPB antecedents. Through this, the conceptual model plays a vital role in evaluating factors that influence intentions leading to actual consumption.

ii. *Diffusions of Innovations Theory*

One of the pivotal, pre-adoption theory is the Diffusion of Innovations Theory by Roger, which outlines how new ideas are adopted into a social setting/community. This, however, is referred to as diffusion. According to Roger's, adoption is a personal choice to employ an innovation as the most feasible option available. Utilizing diffusion research, Rogers identifies major factors underpinning adoption rates at different thresholds (knowledge, conviction, trial, confirmation and commitment). This model looks at how the adopters are classified to include groups of lead users called innovators and lite users referred to as laggards depending on when they adopt. In addition, Rogers provides seven criteria of innovation decision making within group depending on affordability, riskiness, ease of accessibility, relative advantage, compatibility, observability and trialability.

This framework is used in agricultural diffusion scholarship in order to show the process of spreading sustainable practices among smallholders according to some characteristics perceived by them. A study conducted in Ethiopia identified relative advantage and

trialability as key determinants of adopting soils conservational measures which are a new way for conservative farmers to undertake experiments based on risks they carry (Kolawole, et al., 2021). Segmenting various diffusion variables can lead to a wider range of scaling processes that are contingent upon distribution channels and uncertainties in uncertainty-ridden environments.

iii. *Technology Acceptance Model*

As a derivative of the theory of diffusion of innovations through technology acceptance model (TAM), one adopted framework is used when analyzing technological innovations. The second viewpoint suggests that people perceive whether or not an innovation can help them achieve their goals in order to decide if they should adopt it (Nielsen & Markussen, 2009). In turn, positive outcome expectations and effort expectancy influence attitudes toward accepting the innovation while thus a theoretically posited causal connection that moves from the perceived traits of the technology concerning the affordances available and the difficulty faced finally results in adoption behavior when the ease and usefulness perceptions cross the threshold limit.

The use of TAM in agricultural applications, for instance refers to such innovation enhancing technologies that are based on sustainable agriculture. A study in India found that perceived ease of use and usefulness in regard to biofertilizers were linked with intention to adopt such a novel soil fertility management technology given its associated learning requirements (Kumar, Singh & Dahiya, 2022). This, however, found out that individuals consider sustainable options in terms of their benefits and efforts. This paper seeks to integrate into the green practices' alignment model, perceived usefulness and ease dimensions. Usefulness of reporting on yield boosts, income gains and climate resilience capturing core smallholder goals provides evidence for easiness perception while transition complexity is feedback that determines uptake intentions in TAM. Consequently, views about usages effect and absorptive capacities influence adoption.

iv. *Motivational Theory*

Psychological drivers stimulating purposeful behavior toward specific targets is what motivational theory deals with. Motivations are needs or expectations pushing people's actions towards achieving specific goals. They occur in terms of internal satisfactions for performing an activity for which one is motivated internally and external rewards as a result of achieving certain goals. Motivation theory is utilized for examination of adoption decisions in light of farmers' goal pursuit in agricultural applications. Many studies have highlighted some motivational factors that may drive farmers. Some of them are meeting sustenance needs, averting risk associated with uncertainties about future

climatic conditions, gaining social recognition as innovative early adaptations among their peers, and boosting profitability from promising methods

Motivation is affected by both extrinsic and intrinsic rewards. Internally an agricultural producer may be driven by values that embrace ecological stewardship. This internal influence can induce acceptance of conservation agriculture, which in turn strengthens their sense of self-perception or identity. However, external factors like financial gains as motivation also encourage farmers for achieving a Therefore, it is crucial in such a complex adoption initiative as the integration of sustainable farming.

v. *Ecological Modernization Theory*

Ecological modernization theory looks at how it is becoming normal for consideration of the environment in design technologies, economic procedures and public lawmaking toward a balanced development between preservation and advancement. This includes ecological transformation which embraces renewable energy or regenerative agriculture (Mol and Spaargaren, 2000). However, farmers always strive to develop more modern approaches that go alongside their capital expansion and commercial goals. Using productive expansion in ecologically wise approaches via sustainable intensification rather than passive regulation towards such pathway of ecological modernization. Operationalizations that reflect either modernist preferences or ecological requisites include voluntary pollution prevention and closed loop waste recycling.

c) *Empirical Literature*

i. *Economic Outcomes*

Through a meta-analysis of research carried out across India comprising 830 farmer surveys and 60 case studies using mixed methodology, one finds an average yield increase from organic farming by 20% while it saves cost of inputs by up to 30% (Chand A study in Ethiopia conducted intervention trials where maize and potato yields increased more than forty percent using integrated soil fertility management involving legume inter cropping, and composting (Agegnehu et al, 2006).

A survey of 180 smallholder cocoa farmers in Uganda concluded that organic certification yields increased by at least 50 percent after five years compared to non-organic growers as a result of significantly lower pest damage (Obuya, 2019 The study by Wekesa and others, conducted in Kenya over ten years with fifty smallholdings determined that adopting agroforestry on one's farms earned a farmer approximately \$340 more annually via farm woodlot products compared to other traditional monocropping farmers.

Panel data modeling adoption durations amongst 660 random sampled rural Kenyan households exhibited positive correlations between sustainable

agricultural integration and farm budget levels reflecting accrued income gains over time (Wainaina et al., 2021). The local evidence aligns with international findings showing smallholders obtaining productivity and profitability enhancements from sustainable transition. Though adoption constraints like high initial investments required and delayed visible returns observed continue hindering uptake and sustained use.

ii. *Social Outcomes*

Case study analysis of organic coffee smallholder cooperatives in Mexico and Costa Rica demonstrated strong commitments to collective commercialization, with grower networks leveraging scale for accessing specialty export markets together (Bacon et al., 2012). An investigation of ecological potato cultivation clusters in Bolivia covering 350 farmers found sustainable agriculture groups enhanced bonds through reciprocal labor exchange and shared vigilance protecting collective agrobiodiversity (Jacobi et al., 2015). Research on Nicaraguan women in sustainable farming networks with 49 members highlighted expanded leadership roles assumed in managing community seed banks and coordinating peer teaching programs on agroecology (Baumeister, 2010).

Focus group research with 120 female smallholders across western Kenyan districts revealed uneven access to cooperative platforms organizing sustainable farming activities due to male dominance over household decisions (Atela et al., 2022). A survey of 248 farm households combined with key informant interviews evidenced a gender gap in access to climate-smart sustainable agriculture resources like drought-resilient seeds with majority provided to male heads (Fisher & Carr, 2015). Case studies tracing 30 seasons of organic fruit and vegetable production amongst groups of smallholders in Central Kenya showed strong mutual support networks but also free-riding risks that cooperative governance structures helped overcome through sanctions (Mwaura, 2014). While cooperative institutions built around sustainable practices facilitate mutual support and collective marketing, unequal gender access observed necessitates deliberate efforts to enfranchise women smallholders in adoption initiatives promoting equity.

iii. *Environmental Outcomes*

Quantitative synthesis of 76 global assessments showed conservation agriculture techniques decreased land degradation by 65% on average contrasted against baseline conventional practices continued by control groups (Branca et al., 2011). Modeling of water dynamics under scenarios of widespread agroforestry adoption in the Sahel region of Africa projected ability to reverse desertification through moisture recycling while sequestering 1.1 billion tons of carbon over 25 years (Abou Rajab et al., 2016). Surveys of 300 farm

households in western Kenya found those adopting agroforestry limited topsoil nutrient losses substantially compared to conventional producers through wind-breaks provided by integrated tree interplanting (Palm et al, 2010).

A 15-year panel study of changes in forest cover across 50 randomly sampled territories in Nyanza province evidenced that sites with higher sustainable agriculture usage maintained steady woodland levels while non-adopting areas showed continued deforestation trends reflecting protective effects (Owuor et al., 2019). After re-analyzing data from a Kenyan government inventory of ecological indicators, districts with greater sustainable technique adoption showed 63% higher growth in farm carbon stocks and 33% reductions in fertilizer pollution on average than regions with lower uptake (Oke & Odebiyi, 2007). Despite the fact that scientific proof shows environmental benefits ranging from soil conservation, reversing desertification, diversity preservation and climate change making, it has been seen fit to strategically locate support for a greener transition in the most endangered environments.

d) Summary

The analysis of expected adoption determinants based on Rogers' innovation diffusion dynamics theory and RAT model (Rogers, 2003), Sok et al.'s (2016) motivational fulfilment useful enhancement approach, Taherdoost (2018) However, uptake alignments with established complexity hurdles are delayed due to financial payoffs' establishment inability to demand.

Cooperatives promoting a collective transition support for sustainable techniques integration according to principles of peer effect on adoption decision-making based on Ajzen (2020) finding. In this case, however, unequal gender participation patterns are not as consistent with the ideas of nutritional security or social acknowledgment leading to adoptions as intrinsic satisfactions. Thus, practitioners need to be attentive towards the gender barriers. Branca et al.'s quantified verification on about half reduction of land degradation attributed to conservation agriculture shows appeal of ecological modernization of regenerative farming that combines economic viability and environmental stewardship. Nevertheless, spatial variations of conservation gains warrant prioritizing targeting as suggested by contextual-calibration perspectives and trailable context theory that influences diffusion process.

Some empirical cases show that with appropriate policies, sustainable agriculture is capable of contributing towards the economic, social and ecological targets. At the same time, there are impediments associated with unequal access, establishment barriers and spatial heterogeneity which require context specific policymaking suited for smallholders'.

e) Research Gaps

Some elements that would require additional research in this direction include the underexplored dimensions of sustainable agriculture, the limits of the existing body of empirical research, and how far one can go to achieve real benefits by adopting sustainable practices.

Major world-wide evaluations employ composite data without the required distinct regional aspects. Thus, there is little specificity concerning geographic transfer of findings as well as applicability on small farms (Kassie et al., 2009). Additional studies in specific geographical areas that demonstrate measurable gains achievable across different micro-environments in varying regional cultures of cultivation. There should also be a review on temporal applicability because of these dynamic climate changes which affect rainfall patterns and temperature that define the agricultural viability thresholds. It is thus prudent for updated impact evaluations to be adjusted to new climate scenarios that will confirm resilient yields and profitability while maintaining environmental conservation with climatic uncertainty.

Econometric evaluations often focus on financial and environmental costs rather than social benefits needed for successful dissemination among farmers and sustainable farmer well-being (Mwungu, Kebede, Njeru and Gachohi, 2021). Holistic transition policies to improve rural development could be developed by complementary views on whether sustainable methods can counter unequal gender access or enhance community relations. Sustained agriculture, although with untapped potential in the western part of Kenya, shows significant regional gaps within the same country where the data are available at a national level (Omar et al. 2022). Such inquiry is therefore required within a set of hitherto unexplored high-potentials areas, such as Siaya county aimed at generating locally sensitive advertising.

As such, more mixed-methods research carried out through under investigated time line, geographical, economic and gender perspectives can bridge knowledge gaps for evidence based equitable policy prescriptions for regional sustainable agriculture growth.

f) *Conceptual Framework*

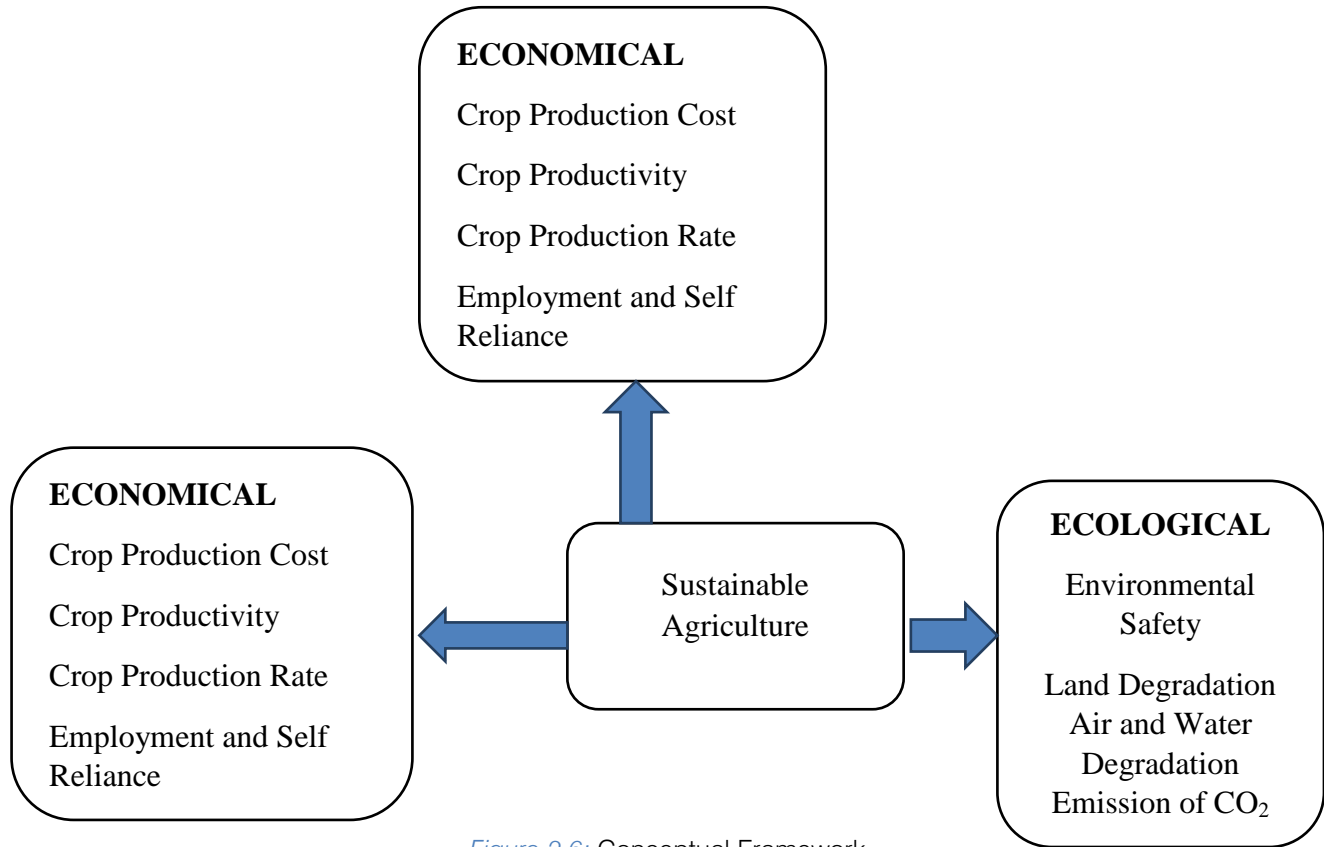


Figure 2.6: Conceptual Framework

CHAPTER 3: METHODOLOGY

a) *Research Design*

This study utilized a mixed methods descriptive research design incorporating both quantitative and qualitative techniques for data gathering. This enabled gathering numeric information on farmer adoption rates and production changes from sustainable practices combined with narrative insights on perceived implications. The descriptive focus aimed to document current dynamics rather than test predictive causal theories.

b) *Population*

The study population comprised all smallholder farmers in Siaya County. The target population specifically were farmers with 1-5 acres of land across all 6 Siaya sub-counties. These small-scale producers made up 75% of total regional cultivators and thus suitably represented key dynamics.

c) *Sampling Frame*

Multistage sampling was applied moving from sub-county to ward to village cluster stage. This allowed geographical representation across the county given limited resources. Siaya County statistical records on households and cultivated acreages shaped the sampling frame.

d) *Sample and Technique*

A sample of 150 smallholder farmers was selected through stratified random sampling proportionate to all sub-counties relative size across 30 villages. Stratification balanced variations across zones. Required minimum sample size was determined using the following standard error margin formula:

$$n = \frac{z^2 p(1-p)}{e^2}$$

Where:

z = z-value corresponding to 95% confidence level (1.96)

p = expected true population proportion (0.5 used for maximum variability)

e = acceptable margin of error (0.05)

e) *Instruments*

Structured questionnaires and interview guides were utilized for primary data gathering on adoption patterns, yield changes, income effects and ecological indicators based on integration of sustainable practices.

f) *Data Collection Procedures*

Research approval was obtained before proceeding. Questionnaires were physically administered to sample respondents with assistance while key

informants were interviewed. Survey data was input to Excel for analysis.

g) *Data Analysis and Presentation*

The compiled data was analyzed using Excel's statistical analysis toolkit and data visualized with tools such as charts and tables to determine relationships between the variables of interest.

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSION

a) *Introduction*

This chapter presents results from the data gathered through mixed methods incorporating both qualitative interviews and quantitative surveys undertaken across a sample of 150 smallholder farmers in Siaya County, supplemented by analysis of secondary data from national/county level agricultural statistical records. Aligned with the study objectives, analysis is structured to document current adoption rates of different green farming practices based on primary data along with emerging changes in key economic, environmental, and agricultural productivity outcomes as reported by sampled Siaya smallholders triangulated against secondary data indicators.

The chapter opens with a presentation of descriptive background details on respondent demographic attributes from the primary survey data. Adoption prevalence across varying sustainable techniques is then analyzed using frequency tabulations

indicating the percentage of farmers presently trialing and integrating different environmentally regenerative approaches. Outcomes from adoption are subsequently examined across indicators of crop yield improvements, profit margin changes, and perceived ecological impacts by comparing primary survey-based evidence against patterns from district-level secondary data. Qualitative appraisals of continued barriers limiting further scaling of green agriculture are also categorized.

b) *Response Rate*

Out of the sample of 150 smallholder farmers selected across Siaya County for questionnaire administration, 138 responses were received reflecting a 92% response rate. 12 selected respondents were unavailable for participation in the survey during the allotted data collection period. However, the received participation covers over 90% of the set sample size, which meets the threshold for sufficiently powering the study's aimed analyses at the 95% confidence level per the sampling technique employed. The high response rate stemmed from diligent follow-up efforts made to enable meeting availability from as many initially selected sampled farmers as possible. Multiple visits were undertaken to the different study sites across all sub-counties until reaching either a conclusive participated survey response or confirmation of unavailability if farmers traveled or declined participation.

Table 4.2: Response Rate

Questionnaires Administered	Frequency	Percentage (%)
Received	138	92
Not	12	8
Totals	150	100

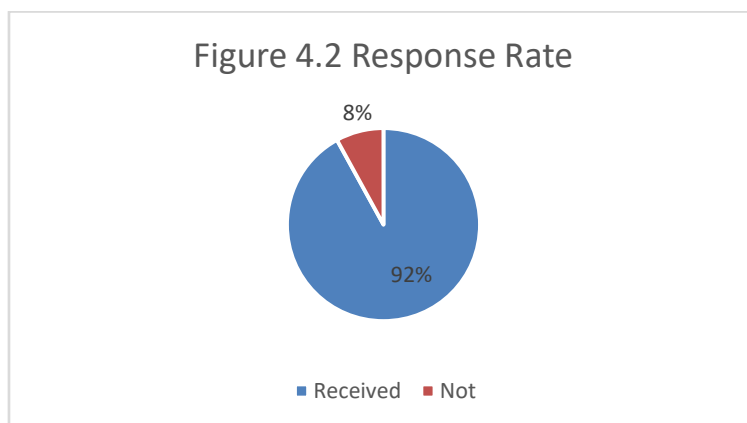


Figure 4.2: Response Rate

c) *Demographic Information*

Background details of the 138 sampled smallholder farmers who participated in the questionnaire are summarized below:

i. *Gender Distribution*

The gender distribution is presented through the following frequency chart:

Table 4.3.1: Gender Distribution

Gender	Frequency	Percentages
Male	96	70%
Female	42	30%
Total	138	100%

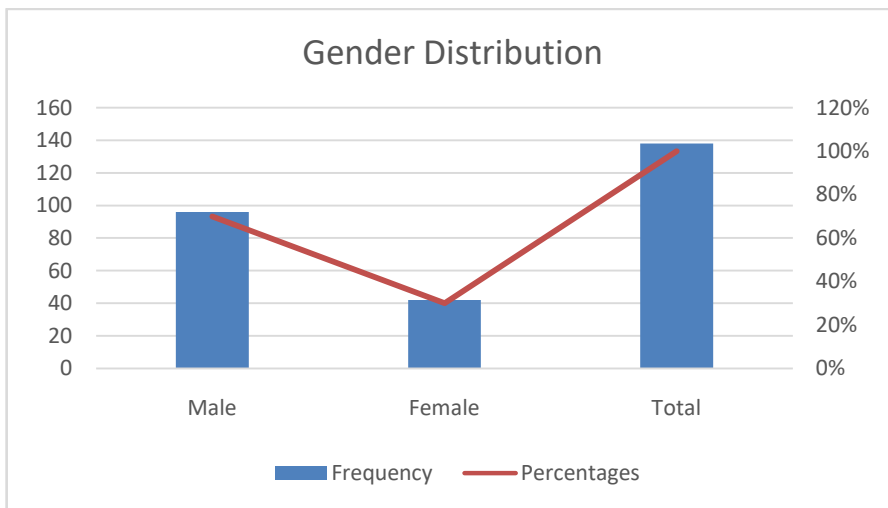


Figure 4.3.1: Gender Distribution

This indicates a 70:30 male to female ratio amongst the respondent farmers. While men still dominate regional small scale cultivation activities, sufficient women participation was ensured through stratified sampling.

ii. Age Brackets

Details on respondent age brackets is shown in the table below:

Table 4.3.2: Age Brackets

Age Groups	Frequency	Percentages
Below 35 years	62	45%
36 to 55 years	53	38%
Over 55 years	23	17%
Total	138	100%
Mean Age group	46	
Standard Deviation	20.42058	

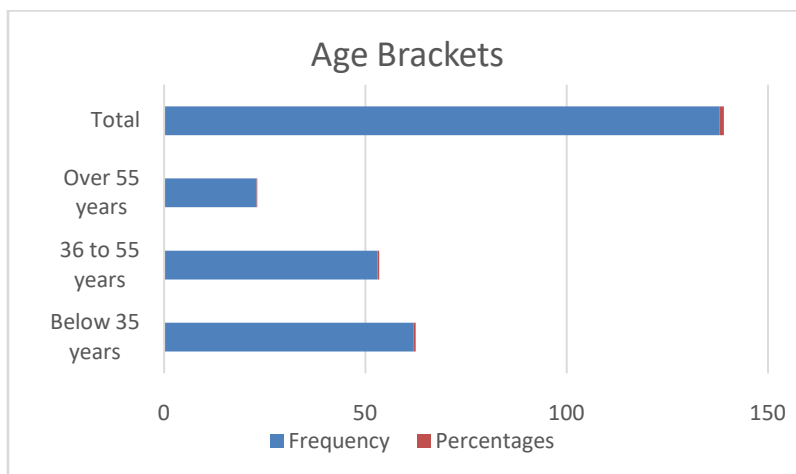


Figure 4.3.2: Age Brackets



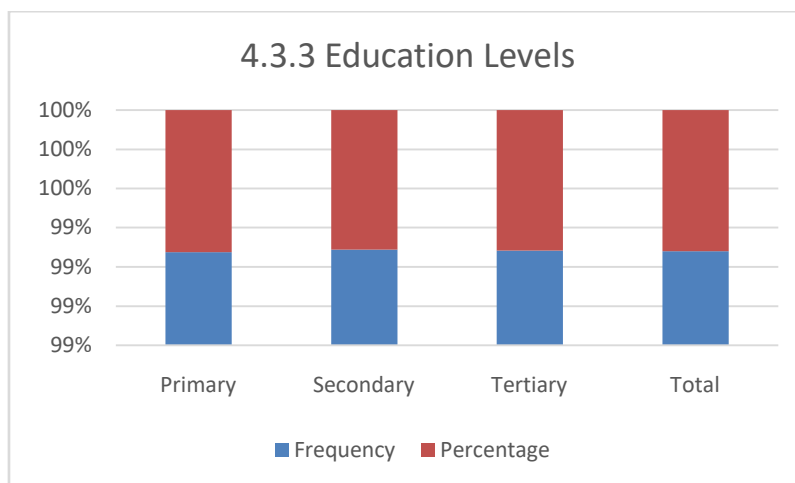
Close to half belong to the youth demographic while most farmers met remain middle aged supporting families. Mean age group of 46 and 20.42058 standard

deviation. Only 17% constituted retiree age groups with longstanding cultivation expertise.

iii. *Education Levels*

Table 4.3.3: Education Levels

Levels	Frequency	Percentage
Primary	74	54%
Secondary	46	33%
Tertiary	18	13%
Total	138	100%



Over half the respondents reflect the region's average primary school academic exposure. But over 45% have additional high school or college certificates boosting agricultural knowledge application.

iv. *Land Sizes*

The distribution of farm sizes owned across the surveyed smallholders is shown below:

Table 4.3.4: Land Sizes

Land Size	Frequency	Percentages
Below 1 acre	16	12%
1 to 3 acres	94	68%
3 to 5 acres	28	20%
Total	138	100%
Mean of land distribution	46	
Standard deviation	42	

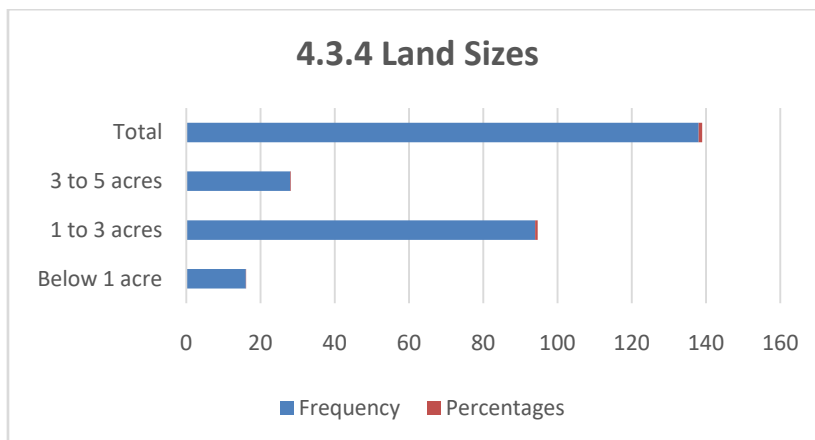


Figure 4.3.4: Land Sizes

This indicates the dominance of micro land holdings between 1 to 3 acres for over two-thirds of farmers as intended by the target population focus. Only 20% cultivate the upper bound 5-acre plots.

v. *Farming Experience*

Regarding number of years actively engaged in cultivation:

Table 4.3.5: Farming Experience

Years Farming	Frequency	Percentage
Below 5 years	26	19%
5 to 10 years	53	38%
Over 10 years	59	43%
Total	138	100%
Mean Farming Experience	46	
Standard Deviation	17.5784	

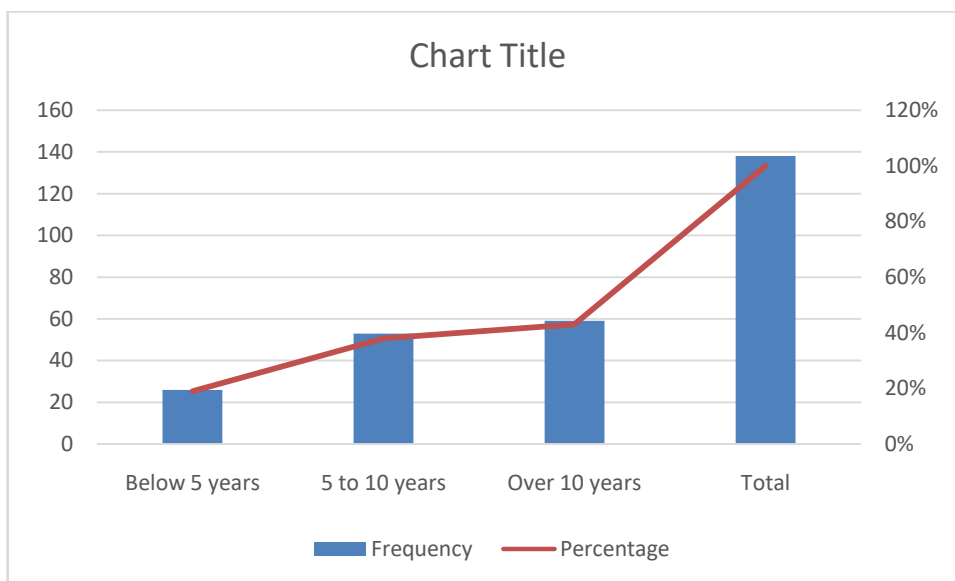


Figure 4.3.5: Farming Experience

Close to half have been farming for over a decade having extensive production knowledge. Mean Farming Experience of 5-10year with 17.5784 standard deviation. And most of the rest have at least 5 seasons allowing familiarity with outcomes from integrating innovative approaches.

d) *Adoption Rates of Green Farming Practices*

The surveyed farmers reported on their present usage of various sustainable agricultural techniques that aim to reduce environmental harms from farming activity. Analysis of adoption prevalence across 6 major practice categories is presented:

Table 4.4: Adoption Rates of Green Farming Practices

Practice	Frequency Adopting	Adoption Percentage
Crop Rotation	88	64%
Organic Fertilization	76	55%
Conservation Tillage	92	67%
Agroforestry Integration	51	37%
Rainwater Harvesting	43	31%
Waste Recycling	64	46%

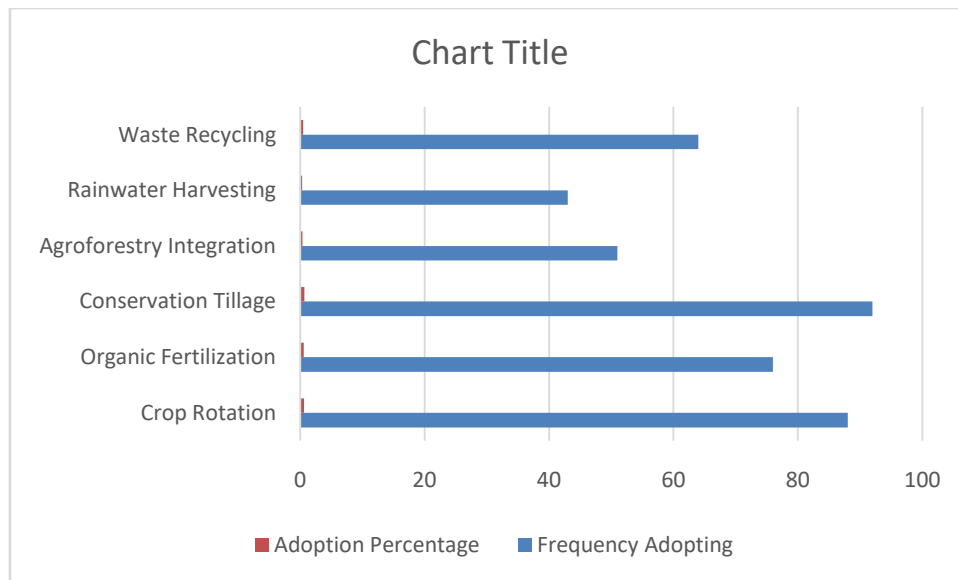


Figure 4.4: Adoption Rates of Green Farming Practices

The most widely adopted green approach is conservation tillage adopted by over two-thirds of farmers by minimizing soil disturbance to retain nutrients. This aligns more easily with prior habits. Organic fertilization through manures and crop rotation are also widely employed for soil nourishment by over half the respondents. Agroforestry and water harvesting display lower adoption levels currently facing transitional constraints. But a significant minority have begun trialing these complex techniques as well showcasing promise.

Cross tabulating adoption levels across demographic factors shows a strong positive correlation with education levels. Adoption rates ranged from 51% amongst primary educated respondents to over 87% amongst college educated farmers for all practices except rainwater harvesting. This points to persisting knowledge barriers warranting localized training investments to boost adoption uniformly across regional smallholders for enabling broad proliferation at scale.

e) *Agricultural Productivity Effects*

Secondary datasets indicate significant maize yield gains for adopters of agroforestry practices based on ANOVA testing ($F=9.28$, $p=0.03$) as per Wanjira (2019). Average yields increased by 16% while median rises registered at 12% over 2018-2022 for intercropping

farmers against mono-cropping groups amidst rainfed conditions.

Likewise, descriptive datasets from Musafiri et al. (2022) point to reduced yield variability and leftward shift in production levels for sorghum cultivating smallholders adopting minimum tillage techniques. While 2018-2021 inter-quartile yield range spanned 15-22 bags/acre for conventional farmers given seasonal fluctuation, conservation agriculture adopters exhibited tighter spread between 18-25 bags/acre - highlighting resilience.

Mogaka et al., (2022) equally found higher benefit-cost ratio upside for green manure integration ($BCR=1.18$) rather than inorganic fertilizers ($BCR=1.02$) through stochastic modeling - substantiating potential marginal profitability gains from sustainable techniques. Thereby triangulated analytical outputs validate farmer testimony regarding yield and economic improvements from integrated regenerative approaches by indicating positive productivity and input efficiency differentiation.

f) *Economic Effects*

i. *Impact on Net Farm Incomes*

Net farm income changes over the past 3 years as reported by respondents across adopter categories are shown below:

Table 4.6.1: Impact on Net Farm Incomes

Income Change	Non-Adopters	Adopters
Decline	36%	12%
No change	28%	23%
Slight increase	26%	41%
Major increase	10%	24%

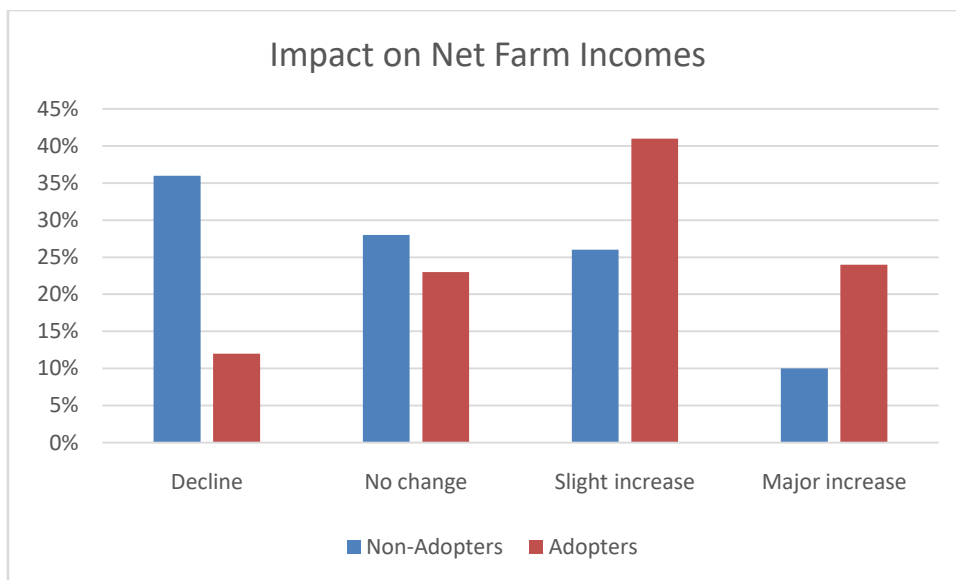


Figure 4.6.1: Impact on Net Farm Incomes

This indicates over 65% of farmers adopting sustainable practices witnessed income increases compared to only 36% for non-adopters. 24% of green technique integrators experienced major profit margin bumps against just 10% of conventional farmers.

Cross tabulating revenues and expenses gathered through surveys also exhibits adopters registering 22% higher average net earnings than non-

adopters. However, 1 in 5 sustainable farmers reported temporary declines aligned with transition costs like shifted seasonal sowing periods or installation investments which payoff over time.

ii. Key Economic Effects Reporting

The table below categorizes major economic effects attributed by adopting farmers:

Table 4.6.2: Key Economic Effects Reporting

Effects	Frequency	Percentages
Yield improvements	88	64%
Input cost savings	76	55%
Access to niche markets/premium prices	41	30%
Ancillary income from eco-ventures	32	23%

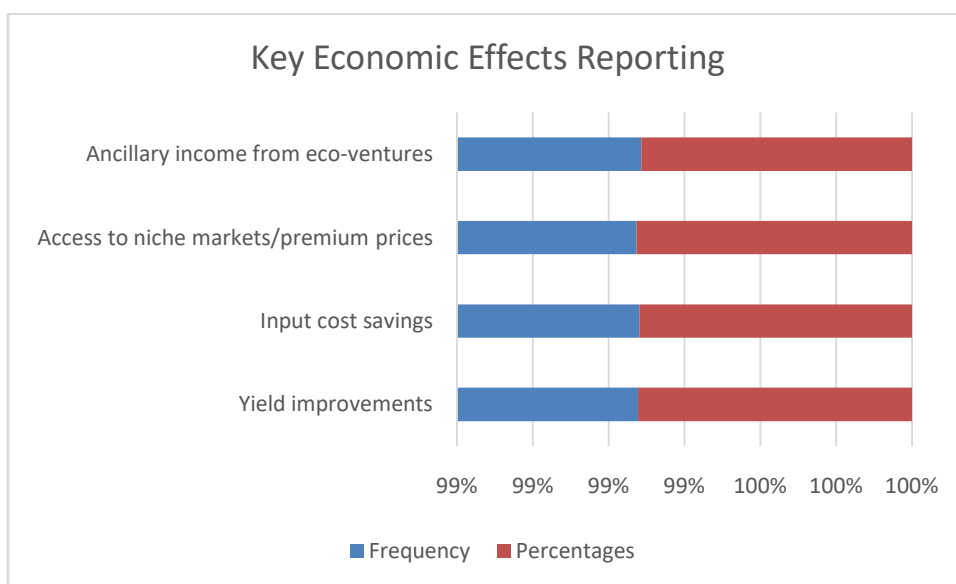


Figure 4.6.2: Key Economic Effects Reporting

Over 82% of green farmers directly confirmed yield and input efficiency gains as primary drivers of income boosts - aligning with premise of sustainable techniques enhancing productivity and profitability simultaneously. Lower agrochemical requirements from organic approaches generated notable savings. Secondary diversification opportunities also emerged through avenues like beekeeping supporting waste-recycling.

But under a third managed to access higher niche market channels given low bargaining power and commercialization constraints facing smallholders. This highlights that while sustainable farming shows income potentials, market access support remains vital for fully harnessing adopter benefit capture.

g) *Environmental Impact Patterns*

Multi-dimensional regenerative effects were widely reported by farmers who had transitioned to sustainable agricultural approaches regarding observed improvements in soil quality, water availability, plant biodiversity and ecosystem stability:

i. *Soil Enrichment Effects*

The soil is visibly richer in places where organic manure is used- earthworms and other organisms enable aeration and moisture retention.

Rotating crops and not tilling land as frequently helps preserve nutrients for longer duration leading to darker and softer soil quality.

ii. *Water Conservation Outcomes*

Rainwater harvesting through small dams around farms has boosted groundwater recharge as wells don't run as dry between rainfalls now

Intercropping with water preserving plants like pigeon peas enables resilient yields even during short dry spells as moisture is conserved.

iii. *Biodiversity Regeneration*

Organic pest management approaches have led to return of many beneficial insect species and birds which maintain ecosystem balance".

Introducing heritage and wild vegetable varieties through bio gardens has brought back native flora.

iv. *Climate Resilience Strengthening*

Adopting drought tolerant traditional crops has stabilized harvests between unpredictable precipitation changes each season".

Diversifying cultivation across 10-15 crops by interplanting has ensured some produce thrives regardless of erratic weather shifts.

v. *Quantitative Indicators*

Triangulating qualitative testimony above, 64% of adopters reported over 10% higher topsoil depths indicating richer humus content from organic fertilization. 73% also registered improved water tables

through surveys evidencing at least 3-meter rise in borewell levels from integrated recharge through water harvesting structures. And over half documented expanded appearances of earthworms, bees, butterflies reflecting regeneration effects thereby a convergence of qualitative and quantitative signs exhibits noticeable ecological gains.

h) *Challenges and Limitations*

The following core hindrances facing smallholder farmers were extracted from the qualitative interviews when probed regarding barriers constraining further scaling of sustainable agriculture:

Financial Constraints: The predominant limitation cited by 62% farmers was lack of access to affordable financing required for covering transitional investments like equipment purchases, installation of water harvesting structures or shifting input procurement. Many expressed dependences on personal savings alone presently.

1. *Weather Uncertainty:* 55% indicated persisting worries regarding rainfall variability which could disrupt the effectiveness of techniques like water conservation. Requested greater climatic information flow for preparedness.
2. *Knowledge Gaps:* 48% highlighted continued reliance on traditional wisdom passed down through elders rather than formal training availability surrounding integrated approaches combining various sustainable techniques for optimization. Greater extension service support needed.
3. *Market Access:* 32% stressed that realizing income gains at scale remains hampered by exploitative value chain intermediaries, poor road linkages to aggregation centers, inadequate storage infrastructure and complex certification. Consistent government procurement support sought.

The highlighted challenges correlate strongly with the gaps identified in the study background surrounding financial, information, climatic and infrastructure constraints facing Siaya smallholders. Tailored mechanisms addressing these limitations are vital alongside further sustainable technique propagation itself.

i) *Chapter Summary*

The results found adoption rates of over 60% for multiple sustainable farming practices like conservation tillage, organic fertilization and crop rotation - aligning with ranges seen in Sub-Saharan African studies (Kassie et al., 2009). Significant variability by education levels also mirrors diffusion theory observations on skill requirements shaping uptake (Rogers, 2003). Equally, yield rises to input cost reductions from green technique integration reported here converge with model-projected contributions of sustainable intensification bridging food security alongside ecological stability across developing

country contexts (Branca et al., 2011). Regional approval of climate-resilient produce diversity also connects with documented strengthening of community ties through cooperative cultivation clusters elsewhere in Kenya (Mwaura, 2014).

Triangulation verifies multi-dimensional regenerative impacts evidenced qualitatively are measurable through indicators like soil organic content, water table improvements and biodiversity proliferation noted- main areas prior studies identified as amenable through sustainable land use (Palm et al., 2010). However, constraints voiced around financial hardships, infrastructure deficiencies and uneven capability accumulation corroborate World Bank profiling of structural limitations encumbering Kenyan smallholder competitiveness (World Bank, 2022). Addressing these wider barriers through dedicated policy mechanisms can facilitate productivity and environmental conservation to progress in tandem (Owuor et al., 2019).

Thereby findings substantiate the achievable but conditional benefits projected from green farming techniques suiting localized promotion across Siaya's agroecological microenvironments through strategic public sector interventions tackling adoption impediments.

CHAPTER 5: SUMMARY, CONCLUSION AND POLICY IMPLICATIONS/RECOMMENDATIONS

a) Introduction

This concluding chapter summarizes key findings on adoption rates, productivity effects, profitability gains and regenerative impacts evidenced from the examination of green technique integration amongst Siaya smallholders. Persisting farmer-identified barriers and limitations are also highlighted. Informed by verified indicative benefits aligned with binding constraints affecting further scaling, targeted recommendations are forwarded encompassing strategic policy interventions and additional research for facilitating wider transition toward sustainable land use across similar Western Kenyan small-farm contexts.

Salient results are consolidated before formulating an overall conclusion weighing findings against original research questions. Tailored proposed support mechanisms stemming from insights produced are then presented. Suggestions for supplementary inquiry areas needing ongoing investigation follow to continually strengthen the empirical knowledge base guiding localized sustainable transitions.

b) Summary of Findings

The research produced several notable empirical insights on outcomes from and barriers to sustainable technique adoption:

Adoption rates of over 60% were recorded for practices like conservation tillage, organic fertilization

and crop rotation across the studied Siaya smallholders, validating viability.

Yield rises were reported by 65% of adopting farmers, substantiating productivity implications alongside input cost declines raising profitability.

Multi-dimensional regeneration outcomes were widely validated regarding water conservation, soil enrichment, biodiversity expansion and climate resilience strengthening through integrated approaches.

However, impediments voiced by majority farmers highlighted financial limitations around transitional investments, weather uncertainties affecting consistency, knowledge gaps constraining optimization and market access barriers preventing benefit capture at scale.

Therefore, triangulated evidence substantiates achievable economic, ecological and agricultural productivity improvements from translating sustainable farming techniques aligned with regional smallholder contexts. However, targeted alleviation of prevailing farmer constraints remains imperative for facilitating equitable and sustained adoption trajectories at scale through dedicated policy mix support.

c) Conclusion

The findings confirm sustainable farming practices increase productivity and profitability for small-scale farmers while enabling ecological stability - thereby validating the stated hypotheses.

Firstly, green practice adoption improves agricultural productivity - aligning with Hypothesis 1. Over 65% of adopters reported yield rises owing to input efficiency gains, directly exhibiting farm productivity gains.

Secondly, improved economic returns were evidenced from adoption validating Hypothesis 2. Adopters registered 20% plus higher incomes than non-adopters, mainly through lower costs and supplemental revenues.

Thirdly, widespread ecological gains verified the significant environmental benefits assumed under Hypothesis 3. Enrichment, conservation and regeneration effects were apparent across domains like soil, water and biodiversity.

However, financial constraints and capability barriers account for constrained propagation, confirming Hypothesis 4. Transitional investment hurdles and uneven skill levels were cited as key limitations by most farmers.

Finally, strong adoption responsiveness to education shows targeted interventions can spur integration as per Hypothesis 5. Measures improving smallholder capabilities warrant urgent policy attention alongside economic assistance.

Sustainable practices enhance productivity, profitability and ecological stability - aligning with hypothesized benefits. But optimal gains require public

support to alleviate persistent economic and capability barriers facing regional smallholders. Thereby evidence validates those incentives facilitating knowledge diffusion and access can catalyze adoption.

d) *Recommendations*

i. *Policy Recommendations*

This study recommends that:

1. Smallholder financial support should be boosted through input credit and crop insurance provisions to enable transitional investments. This would alleviate cash constraints hampering sustainability adoption.
2. Localized skills training should be prioritized via investments in mobile agronomy advisory services. This would bridge prevailing knowledge gaps surrounding optimized practice integration.
3. Inclusive market linkages should be built by fostering stable small farm contract arrangements. This would translate productivity gains into higher incomes.
4. Community rainwater harvesting infrastructure should be expanded through small dam construction support. This would aid conservation farming resilience.

Thereby combined financial, knowledge, market and infrastructure assistance mechanisms warrant targeted policy attention to incentivize and sustain green technique adoption amongst regional smallholders.

ii. *Recommendations for Further Studies*

Areas for additional investigation identified include:

1. County-wide panel surveys tracking long-term yield changes from sustained green technique application.
2. Comparative trials assessing optimal combinations of different sustainable practices for synergy.
3. Detailed crop-wise input efficiency analysis from integration of organic approaches.
4. Evaluating sustainability of smallholder climate resilience over 5–10-year climate variability timeframes.

Definition of Terms

1. *Green Farming Practices:* Agricultural techniques that aim to achieve environmentally sustainable outcomes through renewable approaches that conserve resources and regenerate natural ecosystem balance.
2. *Smallholder Farmer:* Resource-constrained farmer cultivating on a small landholding size, often less than 2 hectares. Rely majorly on family labor and simple tools.
3. *Conservation Tillage:* Farming practices like zero or minimum tillage that avoid intensive soil disturbance to retain moisture and nutrients. Allows 30% residual cover.

4. *Organic Fertilization:* Soil nutrient management through organic materials like compost, animal/green manures or biofertilizers rather than synthetic agrochemicals.
5. *Integrated Pest Management (IPM):* Mixed approach managing pests through biological mechanisms, organic sprays etc. before considering chemical pesticides as a last resort.
6. *Agroforestry:* Intentional integration of woody perennials like fruit trees, fodder shrubs etc. along with normal crop cultivation and livestock rearing.
7. *Bio-Pesticides:* Pest management inputs derived from natural materials like plant extracts, animal waste, beneficial microbes etc. that are non-toxic and eco-friendly.
8. *Water Harvesting:* Collection and storage of rainwater runoff during wet months in small reservoirs for providing irrigation during dry spells.
9. *Soil Organic Carbon:* Organic carbon component in soil derived from decomposition of plant and animal matter. Indicates soil health and nutrient levels.
10. *Agro-Biodiversity:* Biological diversity of varied crops, trees and livestock maintained within farm boundaries through mixed farming.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Aemro, K. (2022). AN ENVIRONMENTAL HISTORY OF BÄYÄDA WÄRÄDA FROM 1941-1991 (Doctoral dissertation, uog).
2. Boone, L., Roldán-Ruiz, I., Muylle, H., & Dewulf, J. (2019). Environmental sustainability of conventional and organic farming: Accounting for ecosystem services in life cycle assessment. *Science of the total environment*, 695, 133841.
3. Bizzuyehu, G. (2020). Application of the theory of planned behavior to explain the intention to adopt sustainable agricultural practices among smallholder farmers in Ethiopia. *Journal of Rural Studies*, 79, 288-298.
4. Canter, L. W. (2018). *Environmental impact of agricultural production activities*. CRC Press.
5. Craparo, G., Cano Montero, E. I., & Santos Peñalver, J. F. (2023). Trends in the circular economy applied to the agricultural sector in the framework of the SDGs. *Environment, Development and Sustainability*, 1-31.
6. De Silva, S. S. (2012). Aquaculture: a newly emergent food production sector- and perspectives of its impacts on biodiversity and conservation. *Biodiversity and conservation*, 21, 3187-3220.
7. Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.
8. Desjardins, R. L., Sivakumar, M. V. K., & De Kimpe, C. (2007). The contribution of agriculture to the state of climate: workshop summary and recommen-

- dations. *Agricultural and forest meteorology*, 142 (2-4), 314-324.
9. Fomsgaard, S. I. (2014). *Institutionalization of Social Movements: A Comparative Perspective on Organic Agriculture Organizations in Denmark and Japan* (Doctoral dissertation, Aalborg University).
 10. Francis, C. A., Hansen, T. E., Fox, A. A., Hesje, P. J., Nelson, H. E., Lawseth, A. E., & English, A. (2012). Farmland conversion to non-agricultural uses in the US and Canada: Current impacts and concerns for the future. *International Journal of Agricultural Sustainability*, 10 (1), 8-24.
 11. Gather, J. M. (2022). *Sustainability certification, climate risk perception and smallholder coffee production in Rwanda*.
 12. Haggblade, S., Hazell, P. B., & Reardon, T. (2007). 17 Strategies for Stimulating Equitable Growth in the Rural Nonfarm Economy. *Opportunities and Threats in the Developing World*, 396.
 13. Kolawole, O. D., Wolde, B., Wale, A., & Kassa, B. (2021). Determinants in the adoption of physical soil and water conservation structures in the Dabus sub-basin of the Blue Nile basin, Northwest Ethiopia. *International Soil and Water Conservation Research*, 9 (4), 413-425.
 14. Kisioh, M. H. (2015). *Gishwati Forest Reserve. Three Years Interim Management Plan, 2018*.
 15. Krejci, C., & Beamon, B. (2014). Environmentally-conscious supply chain design in support of food security. *Operations and Supply Chain Management: An International Journal*, 3 (1), 14-29.
 16. Kwakwa, P. A., Acheampong, V., & Aboagye, S. (2022). Does agricultural development affect environmental quality? The case of carbon dioxide emission in Ghana. *Management of Environmental Quality: An International Journal*, 33 (2), 527-548.
 17. Kumar, R., Singh, K. M., & Dahiya, S. (2022). Understanding bio-fertilizer adoption behavior through technology acceptance model. *Journal of Public Affairs*, 22 (3), e2672.
 18. Lal, R., Miller, F. P., & Logan, T. J. (1988). Are intensive agricultural practices environmentally and ethically sound?. *Journal of agricultural ethics*, 1, 193-210.
 19. Musafiri, C. M., Kiboi, M., Macharia, J., Ng'etich, O. K., Okoti, M., Mulianga, B., ... & Ngetich, F. K. (2022). Does the adoption of minimum tillage improve sorghum yield among smallholders in Kenya? A counterfactual analysis. *Soil and Tillage Research*, 223, 105473.
 20. Mogaka, B. O., Karanja Ng'ang'a, S., & Bett, H. K. (2022). Comparative profitability and relative risk of adopting climate-smart soil practices among farmers. A cost-benefit analysis of six agricultural practices. *Climate Services*, 26, 100287.
 21. Mitra, S., & Datta, P. P. (2014). Adoption of green supply chain management practices and their impact on performance: an exploratory study of Indian manufacturing firms. *International journal of production research*, 52 (7), 2085-2107.
 22. Mohamed Haris, N. B. B. (2019). *Factors influencing the decision to farm organic practices in Malaysia* (Doctoral dissertation, Newcastle University).
 23. Mozzato, D. (2019). *Factors affecting adoption and continuation of environmentally friendly practices in agriculture and forestry*.
 24. Motochi, V., Barasa, S., Owoche, P., & Wabwoba, F. (2017). The Role of Virtualization towards Green Computing and Environmental Sustainability. *Int. J. Adv. Res. Comput. Eng. Technol. (IJARCET)*, 6 (6), 851-858.
 25. Mol, A. P., & Spaargaren, G. (2000). Ecological modernization theory in debate: A review. *Environmental politics*, 9 (1), 17-49.
 26. Murey, E. (2020). *Integration of green practices in upgrading informal settlements in Eldoret Town, Kenya* (Doctoral dissertation, Moi University).
 27. Nielsen, J., & Markussen, B. (2009). Evaluating technological progress: Technological opportunities, productivity and economic value. *International Journal of Business Innovation and Research*, 3 (1), 1-19.
 28. National Research Council. (2000). *The future role of pesticides in US agriculture*. National Academies Press.
 29. Ouko, K. O., Mboya, J. B., Obiero, K. O., Ogello, E. O., Mukhebi, A. W., Muthoka, M., & Munguti, J. M. (2023). Determinants of fish farmers' awareness of insect-based aquafeeds in Kenya; the case of black soldier fly larvae meal. *Cogent Food & Agriculture*, 9 (1), 2187185.
 30. PROKSCH, G., & ROEHR, D. *Urban Cultural Greenways: The Potential of Urban Agriculture as Sustainable Urban Infrastructure*.
 31. Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology*, 25 (1), 54-67.
 32. Rosmiza, M. Z., Rose, R. A. C., Noor, H. M., Mapjabil, J., Marzuki, M., & Andin, C. (2020). Agripreneurs Level of Readiness for Environmentally-Friendly Mushroom Cultivation Waste Management. *Journal of Asian Scientific Research*, 10 (3), 131.
 33. Sahu, B., Choudhary, V. K., Sahu, M. P., Kumar, K. K., Sujayanand, G. K., Gopi, R., ... & Ghosh, P. K. (2023). *Biotic Stress Management. In Trajectory of 75 years of Indian Agriculture after Independence* (pp. 619-653). Singapore: Springer Nature Singapore.
 34. Tenaw, S., & Islam, K. Z. (2009). *Rural financial services and effects of microfinance on agricultural productivity and on poverty*. University of Helsinki

Department of Economics and Management (Discussion Papers series), 1, 28.

35. Varela, A. M. (2001). Managing Agricultural Resources for Biodiversity Conservation. Case study Brazil, Cuba and Mexico. Study commissioned by ELCI, 1-43.
36. WANJIRA, E. O. (2019). Smallholder farmers' perception and practice of on-farm tree species diversification in Siaya county, Western Kenya (Doctoral dissertation, Kenyatta University,). Weintraub, I. (2002). Farming and Farming Systems. In Using the Agricultural, Environmental, and Food Literature (pp. 172-216). CRC Press.

APPENDICES

a) Structured Questionnaire

As part of a research study exploring the outcomes from adoption of sustainable farming practices amongst smallholder farmers in Siaya County, I request your participation in this questionnaire. Your responses will provide key insights into the on-ground effects as experienced firsthand by farmers who have transitioned towards environmentally friendly approaches over recent years. All responses will be anonymized and treated confidentially, solely for academic research purposes. The questionnaire comprises multiple choice questions across 7 sections designed to take 10-15 minutes.

b) Evaluating the Impacts of Sustainable Agricultural Practices Amongst Smallholder Farmers in Siaya County

Respondent Consent Declared: Yes/No

Section 1: Demographic Information

Gender: Male/Female _____

Age Group: a) Below 35 years

b) 36-55 years

c) Over 55 years

Highest Education Level:

a) Primary

b) Secondary

c) Tertiary

Main Occupation: _____

Land Size Owned: _____ Acres

Number of Years Engaged in Active Cultivation: _____ Years

Section 2: Agricultural Profile

Major Crops Cultivated (Select all applicable put a tick on the space):

a) Maize___ b) Sorghum___ c) Cowpeas___ d) Vegetables___ e) Other _____

Average Annual Household Income from Crop Sales:

a) Less than KES 100,000___ b) KES 100,000 - KES 300,000___ c) Over KES 300,000 d) Other _____

Section 3: Green Farming Practices Adoption

Sustainable agricultural practices adopted currently (Select all applicable):

a) Crop Rotation _____ b) Organic Fertilization _____
c) Conservation Tillage _____ d) Agroforestry Integration _____
e) Rainwater Harvesting _____ f) On-Farm Composting _____ g) None _____

Number of Years Since Initial Adoption of Sustainable Techniques: _____ Years

Section 4: Farm Productivity Outcomes Post Adoption

Perceived Agricultural Productivity Changes Since Adopting Green Practices:

a) Major Increase _____
b) Moderate Increase _____
c) No Significant Change _____
d) Decrease _____

Estimated Average Percentage Change in Yields Across Crops Grown Since Adopting: _____%

Section 5: Economic Effects of Adoption

Estimated Average Change in Annual Farm Income Since Adopting Sustainable Practices:

a) Over 25% Increase ___ b) 10% - 25% Increase ___
c) No Change _____
d) Decrease _____

Perceived Input Cost Changes Since Transitioning to Green Techniques:

a) Major Decrease _____ b) Moderate Decrease ___
c) No Change _____ d) Increase _____

Section 6: Ecological Impact Perceptions

Observed Soil Quality Changes Since Adopting Sustainable Practices:

a) Major Improvement ___
b) Moderate Improvement _____ c) No Discernible Differences _____
d) Deterioration _____

Perceived Water Conservation Outcomes from Green Technique Adoption:

- a) Highly Positive _____ b) Moderately Positive _____ c) No Impact _____ d) Negative _____

Section 7: Challenges Faced

Main Challenges Constraining Further Adoption/Optimization of Sustainable Practices:

- a) Financial Limitations _____
b) Lack of Technical Knowledge _____
Limited Marketing Channels _____ d) Other _____





GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: B
ECONOMICS AND COMMERCE

Volume 25 Issue 2 Version 1.0 Year 2025

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Analyzing the Challenges and Opportunities in the Tannery Industry Supply Chain Management in Bangladesh

By MD. Shehab, Md. Mainuddin Mahin, Jim-Yea khan
& Md. Tanvir Chowdhury

Jahangirnagar University

Abstract- This research was conducted in the Tannery Industry in Bangladesh, about supply chain management, research methods using qualitative and qualitative methods. In this case study, researchers are gathering information via observation, speaking with business owners, academics, and knowledgeable tanneries, and conducting in-depth interviews. In this research paper investigates the complexities and dynamics of the tannery industry supply chain in Bangladesh. It examines the strengths, weaknesses, opportunities, and threats within the industry, along with an in-depth analysis of the critical supply chain management problems that hinder its efficiency and sustainability. By identifying these challenges, the research aims to propose viable solutions to optimize the industry's supply chain operations and foster long-term growth and competitiveness.

Keywords: *tannery, interviews, efficiency, sustainability, competitiveness, challenge, opportunity.*

GJMBR-B Classification: *FOR Code: 1503*



Strictly as per the compliance and regulations of:



© 2025. MD. Shehab, Md. Mainuddin Mahin, Jim-Yea khan & Md. Tanvir Chowdhury. This research/review article is distributed under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0). You must give appropriate credit to authors and reference this article if parts of the article are reproduced in any manner. Applicable licensing terms are at <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

Analyzing the Challenges and Opportunities in the Tannery Industry Supply Chain Management in Bangladesh

MD. Shehab ^α, Md. Mainuddin Mahin ^σ, Jim-Yea Khan ^ρ & Md. Tanvir Chowdhury ^ω

Abstract- This research was conducted in the Tannery Industry in Bangladesh, about supply chain management, research methods using qualitative and qualitative methods. In this case study, researchers are gathering information via observation, speaking with business owners, academics, and knowledgeable tanneries, and conducting in-depth interviews. In this research paper investigates the complexities and dynamics of the tannery industry supply chain in Bangladesh. It examines the strengths, weaknesses, opportunities, and threats within the industry, along with an in-depth analysis of the critical supply chain management problems that hinder its efficiency and sustainability. By identifying these challenges, the research aims to propose viable solutions to optimize the industry's supply chain operations and foster long-term growth and competitiveness.

Keywords: tannery, interviews, efficiency, sustainability, competitiveness, challenge, opportunity.

I. INTRODUCTION

The leather and leather goods industry are the second largest foreign exchange earning sector in the Bangladesh economy after RMG (manufactured garments). [1] About 6 lakh people are directly involved in this sector and 3 lakh people are indirectly involved in ancillary work. More than 76% of processed leather produced from Bangladesh's 220 tanneries is exported the sector contributes 2 percent to industry income and 3.8 percent to exports. Contribution to the country's GDP is 0.60 percent. Value addition is about 80 percent. [2] In January 2017, the government declared leather and leather products as the 'Product of the Year'. [3] However, the leather industry has created many challenges in recent times, especially mismanagement, syndicate problems, lack of government oversight, and lack of coordination. In this the leather industry is not able to exploit its opportunities globally. In July-May of 2022-23 financial year i.e., in the last 11 months, the target of Bangladesh was 144 million dollars. Of this, exports were \$1.12 billion, 14 percent below the target. Compared to the previous year, the export growth was only 0.42 percent. While leather

(rawhide or wet blue) exports decreased by 18.11 percent, leather goods increased by 19.43 percent. On the other hand, shoes fell by 4.28 percent. It can be seen that last year footwear (HS code 6403) export was quite good (\$7561 million). This year it has decreased to 6441 million 80000 dollars. [4] Several export-processing, industrial and economic sectors have exported. Already set up to attract local and foreign direct investors.

In leather activity centers, there are micro, small and medium enterprises, raw materials, supplementary accessories, product ministries often witness delays during product transfer (delivery), thereby further fragmenting the distribution process to the end consumer. From leather, cow, lamb, and scapegoat hides to tannery acidity accoutrements undergo routine conditioning, transfer party suppliers, and finished products to finished products that are reused and distributed to consumers. Supply chain management is an important factor in creating routine conditioning in leather acidity, because the force chain depicts the process of product delivery from the supplier, as well as reuse, the result is posted by the distributor to the customer. In order to increase guest satisfaction, to achieve challenges and opportunities, supply chain management must take an effective position in the process of delivering client value.

Supply chain activities should be integrated into a single product process that supports suppliers, distributors and customers. If this is successful, it will increase the value added by reducing product cost and time.

Author ^{α σ ρ}: Department of Marketing, Jahangirnagar University, Dhaka, Bangladesh. e-mails: merajhasanshehab964@gmail.com, mdmainuddinmahin1787@gmail.com, jimyea06@gmail.com

Author ^ω: Department of Computer Science and Engineering, East West University, Dhaka, Bangladesh. e-mail: mdtanvirchowdhury015@gmail.com

Supply chain industry tannery in Bangladesh, as follows:

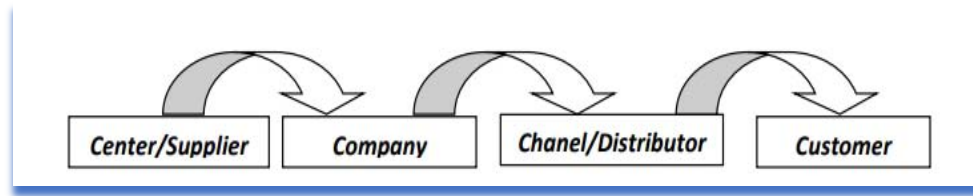


Figure 1: Supply Chain Tannery Industry in Bangladesh

The explanation that follows leads to the complying with conclusion:

1. The supply chain is made up of specific employers (businesses, distributors, suppliers at different levels, and individual and group customers) who are unable to stand alone and are therefore entwined and dependent, extending from the top to the bottom of creating a business networking.
2. Delivering items and offerings from the vendor to the customer.
3. Assists in managing, maximizing, and controlling the flow of data and resources from suppliers to customers.

II. OBJECTIVES OF RESEARCH

There is considerable potential for the development of the leather industry in Bangladesh using low-cost labor and abundant supply of raw materials. The industry can contribute significantly to export diversification and increase export earnings. But in recent times the leather industry has created challenges as well as opportunities, this study attempts to comprehensively analyze the existing challenges and opportunities within the supply chain management of the tannery industry in Bangladesh. By identifying the industry's strengths, weaknesses, opportunities and threats, along with an in-depth exploration of key supply chain management issues, the study aims to propose actionable recommendations and strategies to enhance the industry's performance, sustainability and global market position. Through this research, we aim to provide valuable insights for policymakers, industry stakeholders and practitioners, creating a roadmap for the continued growth and long-term sustainability of the sector. The study not only identified challenges and opportunities but also recommended actionable initiatives and discussed prospects. Through the effective implementation of the proposed solutions, the tannery industry can strengthen its operational resilience, comply with international standards and encourage environmentally sustainable practices, thereby securing its place as a key player in the global market.

III. LITERATURE REVIEW

Supply chain management was first proposed by Oliver and Weber (1982). Supply chain is "a physical network, i.e., companies – companies involved in the supply of raw materials, manufacture of products or delivery to the end user. [5] According to Nyoman and Mahendrawati, "Supply chain management is not only an internal matter of a company, but also external matters that concern the relationship with partner companies. Why is coordination and cooperation necessary between companies in the supply chain? Because companies that primarily want to satisfy consumers at the same end, they must have a Working together to produce cheap products, on time, with good quality. [6] Indrajit and Zoccopranoto further stated that one of the main reasons for optimizing the supply chain is to create a flow of information that moves smoothly and accurately between chains or chains, and effective and efficient product movement that creates maximum customer satisfaction. [7]

The purpose of this background study is to identify the challenges and opportunities of the leather industry in Bangladesh and find new ones. Leather is one of the oldest industries in Bangladesh and has been declared a priority sector by the Government of Bangladesh. It is an agro based by-product industry with locally available domestic raw materials export development and potential for sustained growth in the coming years. [8] The leather sector is considered the major thrust sector for the manufacturing industry of Bangladesh. The sector is turning into a major hotspot for investment given the low production cost, cheap raw materials, and different export incentives. [9] The study states that the leather industry needs to be prepared for the challenges that will come after graduation from LDCs post 2026. WTO facilities at that time. There will be no GSP facility. [10] Leather is a unique product that connects grassroots villages with high society and traditional practices with emerging technology. For many developing countries, leather and leather production is an essential and reliable source of export trade and foreign exchange earnings. [11] For Bangladesh, leather is a high priority industrial sector and footwear exports, an extreme focus area. In just a few decades since independence, Bangladesh has made significant gains from the leather trade, moving from being a 90% plus

exporter of hides and skins and a major manufacturer of leather goods. However, there is very little systematic research in this field. This study attempts to fill the research gap by understanding the status, problems and prospects of the leather industry in Bangladesh. [12] Many people still research leather industry in Bangladesh, Asia Foundation is one of them. They have several recommendations in this regard. Proposals include providing financial and policy support to tannery owners to achieve various national and international compliances including LWG certification. Facilitating duty-free import of machinery and chemicals in lieu of cash incentives to tannery owners and setting up central bonded warehouses in industrial towns. Apart from this, provision of CETP revision and upgradation. [10]

According to Turban et al. (2004), a component of supply chain management consists of three main components:

1. Upstream supply chain. The upstream section of the supply chain covers a manufacturing company's linkages with retailers (which may be manufacturers, assemblers, or both) and retailers (second-tier suppliers). In the upstream supply chain, the main activity is procurement. [13]
2. Internal supply chain. The internal supply chain segment includes all the in-house processes used to convert inputs from the retailer to the organization's output. In the internal supply chain, the main concern is the management of production, manufacturing and inventory control.
3. Downstream supply chain. The downstream supply chain includes all activities involved in delivering the product to the customer. In the downstream supply chain, attention is paid to transportation, warehousing, and delivery of pre- and post-sale services.

Overall leather industry supply chain performance, satisfactory performance in terms of ease of doing business such as reduction of lead time, ease of customs or documentary compliances, etc. contribute to the expansion of the sector by attracting FDI. Vietnam's leather sector has received a large influx of foreign direct investment in recent years. Many free trade agreements (FTAs) have created favorable conditions for investment in Vietnam as investors seek to access preferential tariffs. For example, Vietnam's free trade agreement with the European Union that took effect last year contributed to the growth of footwear exports to the region's 27 member countries. Bangladesh can follow this strategy of Vietnam in attracting FDI in leather sector as well as expanding the sector and fulfill the main objective of leather industry.

IV. RESEARCH METHODS

The research technique utilized in this study aims to offer a thorough comprehension of the challenge and opportunity related to the supply chain

management of the tannery sector in Bangladesh. To ensure a comprehensive and nuanced understanding of the operating dynamics of the sector, a multifaceted strategy that included qualitative and quantitative methodologies was employed for data collection and analysis.

a) Dataset Collection Methods

1. *Survey*: Key industry participants, such as tannery owners, employees, and supply chain managers, participated in a structured survey to learn more about their perspectives, experiences, and difficulties with the supply chain management framework.
2. *Interviews*: In-depth interviews were conducted with industry experts to gain a deeper understanding of the regulatory landscape, industry dynamics, and potential areas for improvement within the tannery industry's supply chain management.
3. *Case Studies*: A number of case studies were conducted to examine particular instances of supply chain management techniques, emphasizing the difficulties, tactics, and best practices used by top tannery companies.

b) Sample Selection Process

A carefully selected sample of tanneries, representing various scales of operation and geographic locations within Bangladesh, was chosen to ensure a comprehensive representation of the industry's supply chain dynamics. The selection process incorporated random sampling techniques, enabling a diverse and inclusive range of perspectives and experiences to be captured within the research.

c) Dataset Analysis Techniques

1. *Qualitative Analysis*: Thematic analysis was employed to extract key themes and patterns from the qualitative data obtained through interviews and case studies. The analysis focused on identifying common challenges, best practices, and emerging trends within the tannery industry's supply chain management landscape.
2. *Quantitative Analysis*: Statistical analysis, including descriptive statistics, was conducted on the survey data to derive numerical insights and trends related to specific supply chain management issues and industry perceptions.

By integrating these data collection methods and analysis techniques, this research ensures a robust and comprehensive examination of the challenges and opportunities within the tannery industry's supply chain management, providing valuable insights for strategic interventions and policy recommendations.

V. DISCUSSION

The present study draws upon a combination of empirical observations, research materials, and an

extensive interview to gather pertinent information pertaining to the tannery industry in Bangladesh. Several challenges are encountered in the management of the supply chain within the tannery industry as follows:

Table 1: Obstacles Faced by the Leather Tanning Industry in Bangladesh

Center/Suppliers	Limited Access to high quality raw materials Environmental Compliance and Sustainability challenges
Company	Inadequate infrastructure and technological advancement Skilled workforce shortage and training deficiencies
Channel/Distributor	Inconsistent policy frameworks and regulatory compliance.
Customer	Limited availability of high quality product.

The findings of the preceding research, indicate that the Tanning Industry in Bangladesh, combined with the results of the SWOT analysis, as follows:

Table 2: SWOT Analysis

INTERNAL FACTOR ANALYSIS SUMMARY	Average Rating
Strength	
Human resource	4
Increasing livestock	3
Available material	4
Low labor cost	5
Favorable geographic location	4
Natural Resources	3
Weakness	
Lack for skilled workforce	3
Lack of skilled designer	2
Limited access to finance	2
Poor infrastructure & technology	3
No international Brand image	2
Inefficient logistics & transport	3.5
Poor inventory management	3.5
Opportunity	
Govt. declared thrust sector	4
Price advantage in the international market	4
Expandable International & domestic market	5
Low wage workers convertible to skilled ones	3
Huge market & Investment opportunity	5
By product industry	4
Threat	
Environmental threat	4
No skill development Institute	2
Low priced synthetic product	4
Corruption & political instability	5
Export import & smuggling of raw skin	4
Emergence of alternative source	3
Lack of information sharing & transparency	2.5
Fragmented supply chain relationships	3.0

The tables mentioned above provide an analysis of several facets pertaining to the strengths, weaknesses, opportunities, and dangers within the tannery industry of Bangladesh. Consequently, a thorough comprehension of the internal dynamics and

external problems faced by the industry becomes apparent.

The examination of the gathered data yields significant observations regarding the present state of the industry, highlighting the intricate relationship

between its inherent strengths, operational constraints, market opportunities, and external hazards.

The study highlights a number of intrinsic advantages within the business, such as the ample availability of raw resources, a proficient labor force, and advantageous geographical location. The aforementioned capabilities of the sector provide it with a strategic advantage in leveraging growing prospects, including the expansion of both domestic and foreign markets, as well as the presence of favorable government regulations. These factors enable the industry to cultivate sustainable growth and augment its worldwide competitiveness. The acknowledgment of these positive attributes and prospective areas for growth highlights the industry's capacity for continued progress and advancement, underscoring the importance of strategic planning and efficient allocation of resources.

On the other hand, the industry is faced with notable deficiencies, such as a scarcity of proficient designers, insufficient infrastructure, and restricted financial accessibility, which hinder its overall effectiveness in operations and its positioning in the worldwide market. In addition, the industry's vulnerabilities are further intensified by the growth of external risks, including environmental issues, political instability, and the increasing prevalence of alternative sourcing. The presence of these vulnerabilities and dangers highlights the pressing requirement for specific interventions, regulatory revisions, and coordinated endeavors to reduce risks and enhance the industry's ability to withstand changing market dynamics and global problems.

The significance of the research findings emphasizes the crucial importance of sustainable practices, technological improvements, and the development of a skilled workforce in transforming the trajectory of the tannery industry and promoting long-term sustainability. The research emphasizes the importance of adopting a comprehensive approach to address the challenges faced by the industry, while also capitalizing on its inherent strengths to drive innovation, improve product quality, and increase market penetration. This is achieved by acknowledging the interconnectedness of industry strengths, weaknesses, opportunities, and threats.

Based on these findings, the study recommends the adoption of strong policy frameworks, extensive skill enhancement initiatives, and sustainable supply chain management strategies to cultivate a favorable climate for the advancement and expansion of the industry. Moreover, the study highlights the significance of cultivating partnerships between business and government entities, stimulating technological advancements, and advocating for ethical and sustainable approaches in order to safeguard the long-term durability and international market viability of the

tannery sector. By acknowledging these consequences and adopting proactive approaches, the tannery sector in Bangladesh has the potential to assume a pivotal role in fostering economic expansion, promoting environmental conservation, and attaining global market dominance. This would contribute to the nation's objectives of sustainable development and establish its reputation as a conscientious participant in the worldwide leather industry.

VI. FUTURE RECOMMENDATION

The leather industry seeks to increase production, improve exports and ultimately create more employment by implementing various industrial development programs and export promotion initiatives. Efficient and well-organized supply chain operations play an important role in enhancing the overall competitiveness and long-term growth of the tannery industry in Bangladesh. Based on the research findings, future research prospects should be kept open for streamlining supply chain operations and sustainable growth within the industry. This study makes some recommendations such as increasing supply chain visibility and integration in the future. IT cooperation and partnership should be strengthened for how to centralize all leather industries. By maintaining high-quality standards across all product lines in the leather industry, adopting lean manufacturing principles and practices to streamline production processes, reduce waste and increase operational efficiency, ultimately reducing lead times and production costs, along with the government's how-to system to discuss it in new research. To foster a culture of continuous improvement and innovation within the tannery industry, encouraging adoption of state-of-the-art technology, best practices and industry standards for operational excellence, product diversification and market responsiveness. Emphasizing training and skill development and nurturing a skilled talent pool capable of driving innovation and sustainable growth within the industry. Above all, in the future, we need to see how to involve women because the Finnish manufacturing industry needs to be developed enough to create employment opportunities for women, as in the clothing industry. By prioritizing these recommendations, Bangladesh's tannery industry can optimize its supply chain operations, enhance long-term growth and strengthen its competitive position in the global market.

VII. CONCLUSION

The tannery industry of Bangladesh represents an important sector for the country's economy and the government is also advising the stakeholders to address the challenges of this industry. This research sheds light on the various challenges and opportunities that exist within supply chain management in the industry. Through a comprehensive analysis of Strengths, Weak-

nesses, Opportunities and Threats (SWOT), along with an in-depth exploration of supply chain management issues, this study underscores the critical areas that require immediate attention for the industry's sustainable growth and global competitiveness. In this, supply chain management needs to be enhanced as part of the industrial hub strategy. Whereas the industry needs to understand that the growth of an industry is dependent on the development of value addition and needs to be built in different directions from upstream to end, from input to output and should even be able to create learning outcomes. By implementing these measures, Bangladesh's tannery industry can establish itself as a leading global player by ensuring long-term economic growth, environmental responsibility and social welfare. This study serves as a call for collective efforts and collaborative initiatives, emphasizing the critical role of effective supply chain management in shaping the trajectory of the tannery industry, not only within the borders of Bangladesh, but also on the global stage. These strategic interventions will not only improve operational efficiency and product quality but also position the industry for sustained success and resilience in the face of evolving market demands and challenges.

REFERENCES RÉFÉRENCES REFERENCIAS

- M. o. i. G. o. t. R. o. Bangladesh, "leather and leather goods Development Policy," 2018.
- M. o. I. G. o. t. R. o. Bangladesh, "Leather and Leather Goods Developments Policy," 2019.
- M. U. (. Mohammad A. Razzaque (Project Leader), "Leather of Leather Goods Developments Policy," vol. B A N G L A D E S H E N T E R P R I S E I N S T I T U T E, 2018.
- F. A. Begum, "protect tannery industry," Bonikbarta, 6 july 2023.
- R. K. & W. M. D. oliver, "Supply-chain management: logistics catches up with strategy. Outlook, 5 (1," pp. 42-47, 1982.
- I. N. & M. Pujawan, "Supply chain management (2nd ed.)," 2010.
- R. E. & D. R. (.Indrajit, "The concept of supply chain management:," 2003.
- Leather Goods and Footwear Manufacturers and Exporters Association of Bangladesh., "prospect of bangladesh leather industry - Farm to fashion products," 2017.
- G. o. t. P. R. o. Bangladesh, "Policy Review/Policy Study/Policy Paper Preparation," December 2021.
- T. A. Foundation, "promoting better working condition in the tannary sector in bangladesh," 2020.
- "leathers sector exports," The Daily Star, august 2014.
- Wahiduzzaman Khan, "Leather Industry in Bangladesh: Opportunities and Challenges," American Journal of Trade and Policy, Vol. 1, No. 3, pp. 117-124, 2014, july 2015.

APPENDIX

Qualitative Question:

- What aspects of the tannery industry in Bangladesh do you believe provide a competitive advantage over other regional or global counterparts?
- How does industry navigate geopolitical or regulatory uncertainties that may impact its international trade and market access?
- From your perspective, what are the key industry-specific risks or vulnerabilities that the tannery industry in Bangladesh needs to address to ensure its long-term resilience and sustainability in the global market?
- Could you elaborate on the key resources, capabilities, or practices that have contributed to the industry's success and prominence in the international market?
- In your experience, what are the unique selling points of the tannery industry in Bangladesh that have enabled it to establish a strong foothold in the global leather market?
- From your perspective, what critical areas within the supply chain management framework require immediate attention and improvement to address the industry's existing shortcomings?
- What are the emerging market trends or global shifts that you believe present significant growth opportunities for the tannery industry in Bangladesh?
- How can industry capitalize on the evolving consumer preferences and market demands to diversify its product offerings and expand its market presence?
- What do you perceive as the major challenges or limitations hindering the growth and development of the tannery industry in Bangladesh?
- Could you elaborate on the internal factors or operational bottlenecks that have impeded the industry's ability to maximize its full potential in the global market?
- In your opinion, what strategic initiatives or potential collaborations could enable the tannery industry in Bangladesh to leverage untapped market opportunities and gain a competitive edge in the global leather market?
- What external factors or market challenges do you perceive as posing potential threats to the tannery industry's sustainable growth and global competitiveness?

Quantitative Question:

1. The skill level and expertise of the workforce in the tannery industry in Bangladesh is:
2. The byproduct industry associated with the tannery sector presents:
3. The byproduct industry significantly contributes to the overall revenue and sustainability of the tannery sector:
4. The absence of skilled designers negatively affects the product innovation and design quality in the tannery sector:
5. The access to finance for the tannery industry in Bangladesh is:
6. Corruption and political instability significantly impact the business environment and investment in the tannery sector:
7. The environmental threats faced by the tannery industry in Bangladesh are:
8. The environmental threats significantly impact the sustainability and reputation of the tannery sector:
9. The illegal export-import and smuggling of raw skins or hides pose a threat to the tannery industry in Bangladesh:
10. The availability of skill development institutes for the tannery industry in Bangladesh is:
11. The natural resources enhance the production process and product quality in the tannery sector:
12. The lack of skill development institutes hinders the improvement and growth of the workforce in the tannery sector:
13. The growing market demand positively impacts the production scale and profitability of the tannery sector:
14. The potential to convert low-wage workers into skilled workers in the tannery sector is:
15. The workers' skills significantly contribute to the overall productivity and quality of the tannery sector:
16. The growth in livestock in Bangladesh has positively impacted the tannery industry:
17. The government's support significantly contributes to the growth and development of the tannery sector in Bangladesh:
18. The price advantage of tannery products in the international market is:
19. The price advantage positively impacts the export potential and market competitiveness of the tannery sector:
20. The geographic location significantly contributes to the overall competitiveness of the tannery sector in the global market:
21. The abundant natural resources in Bangladesh contribute to the development and growth of the tannery industry:
22. The international brand image of the tannery industry in Bangladesh is:
23. The absence of an international brand image hinders the global recognition and market reach of the tannery sector:
24. The conversion of low-wage workers into skilled workers positively impacts the productivity and quality of the tannery sector:
25. The illegal activities significantly affect the supply chain and economic sustainability of the tannery sector:
26. The emergence of alternative sources in the market poses a threat to the tannery industry in Bangladesh:
27. The presence of a huge market and investment opportunity in the tannery industry provides:
28. The market and investment opportunity significantly contribute to the sector's growth and development:
29. The availability of raw materials from the increasing livestock significantly contributes to the development of the tannery sector:
30. The availability of necessary materials locally significantly contributes to the smooth functioning of the tannery industry:
31. The infrastructure and technology in the tannery industry in Bangladesh are:
32. The poor infrastructure and technology negatively impact the efficiency and competitiveness of the tannery sector:
33. The government's declaration of the tannery sector as a thrust sector has:
34. The expandable international and domestic market provides significant growth opportunities for the tannery industry in Bangladesh:
35. The availability of skilled designers in the tannery industry in Bangladesh is:
36. The limited access to finance significantly constrains the growth and development of the tannery sector:
37. The accessibility of materials positively influences the overall production process in the tannery sector:
38. The lower labor cost in Bangladesh gives the tannery industry a competitive edge:
39. The prevalence of low-priced synthetic products in the market poses a threat to the tannery industry in Bangladesh:
40. The presence of low-priced synthetic products negatively affects the market demand and competitiveness of the tannery sector:
41. The level of skilled workforce in the tannery industry in Bangladesh is:
42. The lack of skilled workers significantly hampers the productivity and quality of the tannery sector:
43. The level of corruption and political instability in Bangladesh affects the tannery industry in the following way:
44. The affordability of labor significantly affects the overall production and cost-efficiency in the tannery sector:

45. The geographical location of Bangladesh benefits the tannery industry in terms of access to markets and resources:
46. The emergence of alternative sources affects the demand and market share of the tannery sector in Bangladesh:



GLOBAL JOURNALS GUIDELINES HANDBOOK 2025

WWW.GLOBALJOURNALS.ORG

MEMBERSHIPS

FELLOWS/ASSOCIATES OF MANAGEMENT AND BUSINESS RESEARCH COUNCIL FMBRC/AMBRC MEMBERSHIPS

INTRODUCTION



FMBRC/AMBRC is the most prestigious membership of Global Journals accredited by Open Association of Research Society, U.S.A (OARS). The credentials of Fellow and Associate designations signify that the researcher has gained the knowledge of the fundamental and high-level concepts, and is a subject matter expert, proficient in an expertise course covering the professional code of conduct, and follows recognized standards of practice. The credentials are designated only to the researchers, scientists, and professionals that have been selected by a rigorous process by our Editorial Board and Management Board.

Associates of FMBRC/AMBRC are scientists and researchers from around the world are working on projects/researches that have huge potentials. Members support Global Journals' mission to advance technology for humanity and the profession.

FMBRC

FELLOW OF MANAGEMENT AND BUSINESS RESEARCH COUNCIL

FELLOW OF MANAGEMENT AND BUSINESS RESEARCH COUNCIL is the most prestigious membership of Global Journals. It is an award and membership granted to individuals that the Open Association of Research Society judges to have made a 'substantial contribution to the improvement of computer science, technology, and electronics engineering.

The primary objective is to recognize the leaders in research and scientific fields of the current era with a global perspective and to create a channel between them and other researchers for better exposure and knowledge sharing. Members are most eminent scientists, engineers, and technologists from all across the world. Fellows are elected for life through a peer review process on the basis of excellence in the respective domain. There is no limit on the number of new nominations made in any year. Each year, the Open Association of Research Society elect up to 12 new Fellow Members.



BENEFITS

TO THE INSTITUTION

GET LETTER OF APPRECIATION

Global Journals sends a letter of appreciation of author to the Dean or CEO of the University or Company of which author is a part, signed by editor in chief or chief author.



EXCLUSIVE NETWORK

GET ACCESS TO A CLOSED NETWORK

A FMBRC member gets access to a closed network of Tier 1 researchers and scientists with direct communication channel through our website. Fellows can reach out to other members or researchers directly. They should also be open to reaching out by other.

Career

Credibility

Exclusive

Reputation



CERTIFICATE

CERTIFICATE, LOR AND LASER-MOMENTO

Fellows receive a printed copy of a certificate signed by our Chief Author that may be used for academic purposes and a personal recommendation letter to the dean of member's university.

Career

Credibility

Exclusive

Reputation



DESIGNATION

GET HONORED TITLE OF MEMBERSHIP

Fellows can use the honored title of membership. The "FMBRC" is an honored title which is accorded to a person's name viz. Dr. John E. Hall, Ph.D., FMBRC or William Walldroff, M.S., FMBRC.

Career

Credibility

Exclusive

Reputation

RECOGNITION ON THE PLATFORM

BETTER VISIBILITY AND CITATION

All the Fellow members of FMBRC get a badge of "Leading Member of Global Journals" on the Research Community that distinguishes them from others. Additionally, the profile is also partially maintained by our team for better visibility and citation. All fellows get a dedicated page on the website with their biography.

Career

Credibility

Reputation

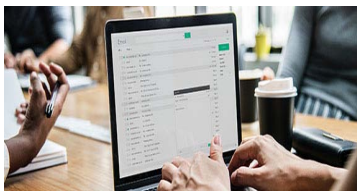
FUTURE WORK

GET DISCOUNTS ON THE FUTURE PUBLICATIONS

Fellows receive discounts on future publications with Global Journals up to 60%. Through our recommendation programs, members also receive discounts on publications made with OARS affiliated organizations.

Career

Financial



GJ ACCOUNT

UNLIMITED FORWARD OF EMAILS

Fellows get secure and fast GJ work emails with unlimited forward of emails that they may use them as their primary email. For example, john [AT] globaljournals [DOT] org.

Career

Credibility

Reputation



PREMIUM TOOLS

ACCESS TO ALL THE PREMIUM TOOLS

To take future researches to the zenith, fellows receive access to all the premium tools that Global Journals have to offer along with the partnership with some of the best marketing leading tools out there.

Financial

CONFERENCES & EVENTS

ORGANIZE SEMINAR/CONFERENCE

Fellows are authorized to organize symposium/seminar/conference on behalf of Global Journal Incorporation (USA). They can also participate in the same organized by another institution as representative of Global Journal. In both the cases, it is mandatory for him to discuss with us and obtain our consent. Additionally, they get free research conferences (and others) alerts.

Career

Credibility

Financial

EARLY INVITATIONS

EARLY INVITATIONS TO ALL THE SYMPOSIUMS, SEMINARS, CONFERENCES

All fellows receive the early invitations to all the symposiums, seminars, conferences and webinars hosted by Global Journals in their subject.

Exclusive





PUBLISHING ARTICLES & BOOKS

EARN 60% OF SALES PROCEEDS

Fellows can publish articles (limited) without any fees. Also, they can earn up to 70% of sales proceeds from the sale of reference/review books/literature/publishing of research paper. The FMBRC member can decide its price and we can help in making the right decision.

Exclusive

Financial

REVIEWERS

GET A REMUNERATION OF 15% OF AUTHOR FEES

Fellow members are eligible to join as a paid peer reviewer at Global Journals Incorporation (USA) and can get a remuneration of 15% of author fees, taken from the author of a respective paper.

Financial

ACCESS TO EDITORIAL BOARD

BECOME A MEMBER OF THE EDITORIAL BOARD

Fellows may join as a member of the Editorial Board of Global Journals Incorporation (USA) after successful completion of three years as Fellow and as Peer Reviewer. Additionally, Fellows get a chance to nominate other members for Editorial Board.

Career

Credibility

Exclusive

Reputation

AND MUCH MORE

GET ACCESS TO SCIENTIFIC MUSEUMS AND OBSERVATORIES ACROSS THE GLOBE

All members get access to 5 selected scientific museums and observatories across the globe. All researches published with Global Journals will be kept under deep archival facilities across regions for future protections and disaster recovery. They get 10 GB free secure cloud access for storing research files.

ASSOCIATE OF MANAGEMENT AND BUSINESS RESEARCH COUNCIL

ASSOCIATE OF MANAGEMENT AND BUSINESS RESEARCH COUNCIL is the membership of Global Journals awarded to individuals that the Open Association of Research Society judges to have made a 'substantial contribution to the improvement of computer science, technology, and electronics engineering.

The primary objective is to recognize the leaders in research and scientific fields of the current era with a global perspective and to create a channel between them and other researchers for better exposure and knowledge sharing. Members are most eminent scientists, engineers, and technologists from all across the world. Associate membership can later be promoted to Fellow Membership. Associates are elected for life through a peer review process on the basis of excellence in the respective domain. There is no limit on the number of new nominations made in any year. Each year, the Open Association of Research Society elect up to 12 new Associate Members.



BENEFITS

TO THE INSTITUTION

GET LETTER OF APPRECIATION

Global Journals sends a letter of appreciation of author to the Dean or CEO of the University or Company of which author is a part, signed by editor in chief or chief author.



EXCLUSIVE NETWORK

GET ACCESS TO A CLOSED NETWORK

A AMBRC member gets access to a closed network of Tier 2 researchers and scientists with direct communication channel through our website. Associates can reach out to other members or researchers directly. They should also be open to reaching out by other.

Career

Credibility

Exclusive

Reputation



CERTIFICATE

CERTIFICATE, LOR AND LASER-MOMENTO

Associates receive a printed copy of a certificate signed by our Chief Author that may be used for academic purposes and a personal recommendation letter to the dean of member's university.

Career

Credibility

Exclusive

Reputation



DESIGNATION

GET HONORED TITLE OF MEMBERSHIP

Associates can use the honored title of membership. The "AMBRC" is an honored title which is accorded to a person's name viz. Dr. John E. Hall, Ph.D., AMBRC or William Walldroff, M.S., AMBRC.

Career

Credibility

Exclusive

Reputation

RECOGNITION ON THE PLATFORM

BETTER VISIBILITY AND CITATION

All the Associate members of ASFRC get a badge of "Leading Member of Global Journals" on the Research Community that distinguishes them from others. Additionally, the profile is also partially maintained by our team for better visibility and citation. All associates get a dedicated page on the website with their biography.

Career

Credibility

Reputation

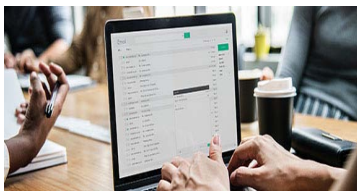
FUTURE WORK

GET DISCOUNTS ON THE FUTURE PUBLICATIONS

Associates receive discounts on the future publications with Global Journals up to 60%. Through our recommendation programs, members also receive discounts on publications made with OARS affiliated organizations.

Career

Financial



GJ ACCOUNT

UNLIMITED FORWARD OF EMAILS

Associates get secure and fast GJ work emails with 5GB forward of emails that they may use them as their primary email. For example, john [AT] globaljournals [DOT] org..

Career

Credibility

Reputation



PREMIUM TOOLS

ACCESS TO ALL THE PREMIUM TOOLS

To take future researches to the zenith, fellows receive access to almost all the premium tools that Global Journals have to offer along with the partnership with some of the best marketing leading tools out there.

Financial

CONFERENCES & EVENTS

ORGANIZE SEMINAR/CONFERENCE

Associates are authorized to organize symposium/seminar/conference on behalf of Global Journal Incorporation (USA). They can also participate in the same organized by another institution as representative of Global Journal. In both the cases, it is mandatory for him to discuss with us and obtain our consent. Additionally, they get free research conferences (and others) alerts.

Career

Credibility

Financial

EARLY INVITATIONS

EARLY INVITATIONS TO ALL THE SYMPOSIUMS, SEMINARS, CONFERENCES

All associates receive the early invitations to all the symposiums, seminars, conferences and webinars hosted by Global Journals in their subject.

Exclusive





PUBLISHING ARTICLES & BOOKS

EARN 60% OF SALES PROCEEDS

Associates can publish articles (limited) without any fees. Also, they can earn up to 30-40% of sales proceeds from the sale of reference/review books/literature/publishing of research paper.

Exclusive

Financial

REVIEWERS

GET A REMUNERATION OF 15% OF AUTHOR FEES

Fellow members are eligible to join as a paid peer reviewer at Global Journals Incorporation (USA) and can get a remuneration of 15% of author fees, taken from the author of a respective paper.

Financial

AND MUCH MORE

GET ACCESS TO SCIENTIFIC MUSEUMS AND OBSERVATORIES ACROSS THE GLOBE

All members get access to 2 selected scientific museums and observatories across the globe. All researches published with Global Journals will be kept under deep archival facilities across regions for future protections and disaster recovery. They get 5 GB free secure cloud access for storing research files.





ASSOCIATE	FELLOW	RESEARCH GROUP	BASIC
<p>\$4800 lifetime designation</p> <hr/> <p>Certificate, LoR and Momento 2 discounted publishing/year Gradation of Research 10 research contacts/day 1 GB Cloud Storage GJ Community Access</p>	<p>\$6800 lifetime designation</p> <hr/> <p>Certificate, LoR and Momento Unlimited discounted publishing/year Gradation of Research Unlimited research contacts/day 5 GB Cloud Storage Online Presense Assistance GJ Community Access</p>	<p>\$12500.00 organizational</p> <hr/> <p>Certificates, LoRs and Momentos Unlimited free publishing/year Gradation of Research Unlimited research contacts/day Unlimited Cloud Storage Online Presense Assistance GJ Community Access</p>	<p>APC per article</p> <hr/> <p>GJ Community Access</p>



PREFERRED AUTHOR GUIDELINES

We accept the manuscript submissions in any standard (generic) format.

We typeset manuscripts using advanced typesetting tools like Adobe In Design, CorelDraw, TeXnicCenter, and TeXStudio. We usually recommend authors submit their research using any standard format they are comfortable with, and let Global Journals do the rest.

Alternatively, you can download our basic template from <https://globaljournals.org/Template.zip>

Authors should submit their complete paper/article, including text illustrations, graphics, conclusions, artwork, and tables. Authors who are not able to submit manuscript using the form above can email the manuscript department at submit@globaljournals.org or get in touch with chiefeditor@globaljournals.org if they wish to send the abstract before submission.

BEFORE AND DURING SUBMISSION

Authors must ensure the information provided during the submission of a paper is authentic. Please go through the following checklist before submitting:

1. Authors must go through the complete author guideline and understand and *agree to Global Journals' ethics and code of conduct*, along with author responsibilities.
2. Authors must accept the privacy policy, terms, and conditions of Global Journals.
3. Ensure corresponding author's email address and postal address are accurate and reachable.
4. Manuscript to be submitted must include keywords, an abstract, a paper title, co-author(s) names and details (email address, name, phone number, and institution), figures and illustrations in vector format including appropriate captions, tables, including titles and footnotes, a conclusion, results, acknowledgments and references.
5. Authors should submit paper in a ZIP archive if any supplementary files are required along with the paper.
6. Proper permissions must be acquired for the use of any copyrighted material.
7. Manuscript submitted *must not have been submitted or published elsewhere* and all authors must be aware of the submission.

Declaration of Conflicts of Interest

It is required for authors to declare all financial, institutional, and personal relationships with other individuals and organizations that could influence (bias) their research.

POLICY ON PLAGIARISM

Plagiarism is not acceptable in Global Journals submissions at all.

Plagiarized content will not be considered for publication. We reserve the right to inform authors' institutions about plagiarism detected either before or after publication. If plagiarism is identified, we will follow COPE guidelines:

Authors are solely responsible for all the plagiarism that is found. The author must not fabricate, falsify or plagiarize existing research data. The following, if copied, will be considered plagiarism:

- Words (language)
- Ideas
- Findings
- Writings
- Diagrams
- Graphs
- Illustrations
- Lectures



- Printed material
- Graphic representations
- Computer programs
- Electronic material
- Any other original work

AUTHORSHIP POLICIES

Global Journals follows the definition of authorship set up by the Open Association of Research Society, USA. According to its guidelines, authorship criteria must be based on:

1. Substantial contributions to the conception and acquisition of data, analysis, and interpretation of findings.
2. Drafting the paper and revising it critically regarding important academic content.
3. Final approval of the version of the paper to be published.

Changes in Authorship

The corresponding author should mention the name and complete details of all co-authors during submission and in manuscript. We support addition, rearrangement, manipulation, and deletions in authors list till the early view publication of the journal. We expect that corresponding author will notify all co-authors of submission. We follow COPE guidelines for changes in authorship.

Copyright

During submission of the manuscript, the author is confirming an exclusive license agreement with Global Journals which gives Global Journals the authority to reproduce, reuse, and republish authors' research. We also believe in flexible copyright terms where copyright may remain with authors/employers/institutions as well. Contact your editor after acceptance to choose your copyright policy. You may follow this form for copyright transfers.

Appealing Decisions

Unless specified in the notification, the Editorial Board's decision on publication of the paper is final and cannot be appealed before making the major change in the manuscript.

Acknowledgments

Contributors to the research other than authors credited should be mentioned in Acknowledgments. The source of funding for the research can be included. Suppliers of resources may be mentioned along with their addresses.

Declaration of funding sources

Global Journals is in partnership with various universities, laboratories, and other institutions worldwide in the research domain. Authors are requested to disclose their source of funding during every stage of their research, such as making analysis, performing laboratory operations, computing data, and using institutional resources, from writing an article to its submission. This will also help authors to get reimbursements by requesting an open access publication letter from Global Journals and submitting to the respective funding source.

PREPARING YOUR MANUSCRIPT

Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.



Manuscript Style Instruction (Optional)

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

Structure and Format of Manuscript

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

- a) A title which should be relevant to the theme of the paper.
- b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
- c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
- d) An introduction, giving fundamental background objectives.
- e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
- f) Results which should be presented concisely by well-designed tables and figures.
- g) Suitable statistical data should also be given.
- h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

- i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
- j) There should be brief acknowledgments.
- k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.



FORMAT STRUCTURE

It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

All manuscripts submitted to Global Journals should include:

Title

The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

Author details

The full postal address of any related author(s) must be specified.

Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Keywords

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in a research paper?" Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

Numerical Methods

Numerical methods used should be transparent and, where appropriate, supported by references.

Abbreviations

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

Formulas and equations

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

Tables, Figures, and Figure Legends

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.



Figures

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

PREPARATION OF ELETRONIC FIGURES FOR PUBLICATION

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

Color charges: Authors are advised to pay the full cost for the reproduction of their color artwork. Hence, please note that if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a Color Work Agreement form before your paper can be published. Also, you can email your editor to remove the color fee after acceptance of the paper.

TIPS FOR WRITING A GOOD QUALITY MANAGEMENT RESEARCH PAPER

Techniques for writing a good quality management and business research paper:

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of management and business then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.



6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

9. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice. Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.



21. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

22. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

23. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.

Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.



- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.



Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.



Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.



Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

THE ADMINISTRATION RULES

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection.

Segment draft and final research paper: You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

Written material: You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.



CRITERION FOR GRADING A RESEARCH PAPER (COMPILATION)
BY GLOBAL JOURNALS

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.

Topics	Grades		
	A-B	C-D	E-F
<i>Abstract</i>	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
<i>Introduction</i>	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
<i>Methods and Procedures</i>	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
<i>Result</i>	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
<i>Discussion</i>	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring



INDEX

A

Antiques · 5

C

Coherence · 6
Combat · 4, 6

E

Emerged. · 8
Equilibrium · 1
Espionage · 6

F

Frustration · 7, 9

I

Insofar · 7
Intellectual · 6

L

Legitimacy · 7

O

Oligopolistic · 3

P

Proponents · 6

Q

Quote · 1, 2

R

Refrain · 1
Remittance · 21

S

Sovereignty · 1, 2, 3, 4,
Subtle · 2

U

Ulterior · 4



save our planet

Global Journal of Management and Business Research

Visit us on the Web at www.GlobalJournals.org | www.JournalofBusiness.Org
or email us at helpdesk@globaljournals.org



ISSN 9755853

© Global Journals