



BILINGUAL  
PUBLISHING CO.  
Pioneer of Global Academics Since 1984

# Journal of Economic Science Research

---

Volume 4 | Issue 4 | October 2021 | ISSN 2630-5240(Online)



Volume 4 Issue 4 • October 2021 • ISSN 2630-5240 (Online)

# Journal of Economic Science Research

**Editor-in-Chief**

Dr. Francisco Guijarro

**Co-Editor-in-Chief**

Dr. Mbodja Mougoué



**BILINGUAL  
PUBLISHING CO.**

Pioneer of Global Academics Since 1984



**BILINGUAL  
PUBLISHING CO.**  
Pioneer of Global Academics Since 1984

## Editor-in-Chief

**Dr. Francisco Guijarro**      Universitat Politècnica de Valencia, Spain

## Co-Editor-in-Chief

**Dr. Mbodja Mougoué**      Wayne State University, United States

## Associate Editor

**Dr. Shujian Zhang**      Shenzhen University, China

## Editorial Board Members

Shaobo Long, China

Valentina Bondarenko, Russian Federation

Md. Aoulad Hosen, Bangladesh

Anshui Li, China

Xuewen Xia, China

Shame Mukoka, Zimbabwe

El Hadj Ali Gbané, Côte d'Ivoire

Romuald Guede, Côte d'Ivoire

Hui Shan Lee, Malaysia

Huaping Sun, China

Alex A. A. Bruce, Nigeria

Dinabandhu Sethi, India

Roger Tsafack Nanfoso, Cameroon

Samwel Sanga Alananga, United Republic of

Abeer M Hassan, United Kingdom

Abdulazeez Y.H. Saif-Alyousfi, Malaysia

Sarat Kumar Jena, India

Kingsley Appiah, Ghana

Ireneusz Maciej Miciuła, Poland

Jingli Fan, China

Shihong Zeng, China

Saleh Mothana Obadi, Slovakia

Narayanage Jayantha Dewasiri, Sri Lanka

Okan DEMİR, Turkey

Xinghui Wang, China

Ashraful Alam, United Kingdom

Rejaul Karim Bakshi, Bangladesh

Leonard Mushunje, Zimbabwe

Liang Guo, United States

Nassreddine Garoui, Tunisia

Sebastian Thomas Schich, France

Eugene Kouassi, Côte d'Ivoire

Mamadou Abdoulaye Konte, Senegal

Milan Kostić, Serbia

Aynur Kazaz, Turkey

Beatrice Orlando, Italy

Sandrina Berthault Moreira, Portugal

Md Wahid Murad, Australia

Denis Yur'evich Samygin, Russian Federation

Arpita Mukherjee, India

Rafia Afroz, Malaysia

SM Rajibur Reza, Australia

Nenad Zoran Tomić, Serbia

Wagdi Mohammed Khalifa, Libya

Neslihan Turguttopbas, Turkey

Stefan Cristian Gherghina, Romania

Yaling Lin, Taiwan

Martin John O'Brien, Australia

Feng-Jui Hsu, Taiwan

Piotr Misztal, Poland

Yuanyuan Zhang, China

Salvador Climent-Serrano, Spain

Erfan Hassannayebi, Iran

Muhammad Imran, Pakistan

Unmana Sarangi, India

Omer Allagabo Omer Mustafa, Sudan

Tuan Viet Le, United States

Shuhong Peng, China

Benjamin D Keen, United States

Massoud Khazabi, Canada

Jong In Kim, Korea The Republic of

Mussie Tessema, Netherlands

Cristina Isabel Fernandes, Portugal

Pierangelo De Pace, United States

Hanadi Mubarak Al-Mubarak, Kuwait

Peiyong Yu, United States

Martin Ruzima, Rwanda

Salokhiddin Shakhbiddinovich Avazkhodjaev,  
Uzbekistan



## Contents

### Articles

- 6      **Study on the Formalized Development of the Street Stall Economy-based on Domestic and International Experiences and Perspectives**  
Yixuan Chen   Lingfeng Liu   Hao Liu   Yukun Sun
- 13     **Woman Empowerment and Household Income in Kira Municipality, Uganda**  
Hope Natukunda   Peter Nareeba   Sawuya Nakijoba
- 25     **The Long-term Consequences of Ordeals: Evidence from the Chinese Sent-down Movement**  
Shuhong Peng
- 36     **Impact of Institutional Quality on Multilateral Aid in Nigeria**  
Ezebuilo Romanus Ukwueze   Uchenna Casmir Ugwu   Ogochukwu Anastasia Okafor
- 48     **The Impact of Money Supply on the Economy: A Panel Study on Selected Countries**  
Javier de Oña García Matres   Tuan Viet Le

### Review

- 1      **Street Stall Economy in China in the COVID-19 Era: Dilemmas and the International Experience of Promoting the Normalization of Street Stall Economy**  
Weining Li   Sirui Zhang   Weizhe Ou   Yujin Zhang



## REVIEW

# Street Stall Economy in China in the COVID-19 Era: Dilemmas and the International Experience of Promoting the Normalization of Street Stall Economy

Weining Li<sup>1\*</sup> Sirui Zhang<sup>2</sup> Weizhe Ou<sup>3</sup> Yujin Zhang<sup>4</sup>

1. Department of Business, Qingdao Hengxing University of Science and Technology, Shandong, 255000, China

2. Department of Business, Nanjing University of Information Science and Technology, Nanjing, 210044, China

3. Guangdong University of Finance & Economics, Guangzhou City, Guangdong, 510000, China

4. School of International Trade and Economics, Central University of Finance and Economics, Beijing, 102206, China

**Received:** 26 August 2021; **Accepted:** 14 September 2021; **Published:** 20 October 2021

**Citation:** Weining Li, Sirui Zhang, Weizhe Ou, et al., Street Stall Economy in China in the COVID-19 era: Dilemmas and the International Experience of Promoting the Normalization of Street Stall Economy. *Journal of Economic Science Research*, 2021, 4(4), 3634. <https://doi.org/10.30564/jesr.v4i4.3634>

**Abstract:** Compared with those major policies that need to be practiced over the years, the street stall economy is more like a special means after the epidemic, resulting in a “short and brilliant” heat. Nevertheless, the street stall economy revives is facing several dilemmas. This paper reveals the dilemma of the prosperity and development of the stall economy before and after the epidemic, followed by the international experience and enlightenment of promoting the normalization of street stall economy, ranging from street vendor’s legal status and road administrative promotion to street food safety and environmental protection. To sum up, employment is the foundation of people’s livelihood and the source of wealth, hence, stall economy plays an indispensable role to create a win-win working world and promote the formation of a sustainable economic.

**Keywords:** COVID-19, Street stall economy, Informal economy

---

\*Corresponding Author:

Weining Li,

Department of Business, Qingdao Hengxing University of Science and Technology, Shandong, 255000, China;

Email: 3437445904@qq.com

DOI: <https://doi.org/10.30564/jesr.v4i4.3634>

Copyright © 2021 by the author(s). Published by Bilingual Publishing Co. This is an open access article under the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License. (<https://creativecommons.org/licenses/by-nc/4.0/>).



## **1. Introduction**

Due to the sudden emergence of COVID-19 in the Lunar New Year of 2020, the government had strengthened preferential policy support for the street stall economy to speed up the recovery of China's battered economy. As the policy promoted by leaps and bounds, stall economy became all the rage among the bulk of young people and micro-enterprises notably amid this onrushing COVID-19 pandemic for their dominant and positive economic benefit. Through the ages, the Street stall economy is an important part of the informal economy in the world, but it is not always supported by laws and regulations in China. Recently street stall economy is making a comeback in China to reboot the coronations-stricken economy, ranging from street vendor's legal status and road administrative promotion to street food safety and environmental protection. Therefore, solving the regulatory dilemmas on street vendors' legal status, road administration, food safety and environmental protection in the post-COVID-19 era are highly topical issues<sup>[1]</sup>. This essay discusses these dilemmas by analyzing international countries' actual situations and then draws international experience and enlightenment from the whole world to provide directions to promote the normalization of the street stall economy in China.

## **2. The Dilemmas behind the Street Stall Economy**

### **2.1 Difficulties in China before the COVID-19 Era**

The stall economy shows many good characteristics, such as flexibility, convenience, and temporary. First, flexibility means the street stall business can be conducted at any location and at any time, and even the things sold can be different every day. These changes are due to changes in the needs of surrounding customers. Moreover, convenience means that vendors can place their stalls in places with a lot of people, such as residential areas, downtown streets, etc. Meanwhile, temporary means that the stall is an unregistered informal business behavior. However, at the same time, these characteristics and advantages have brought some problems to a society, which means the Street stall economy has been facing several dilemmas for many years.

#### **2.1.1 Space Squeeze Caused by Flexibility**

Before COVID-19, although street stall is highly active in China, it is not always supported by laws and regulations<sup>[2]</sup>. As we all know, most street vendors tend to concentrate in areas of high population density, offering a variety of foods, clothing, printed things, second-hand goods, daily necessities, and so on. The establishment of

stalls in these public areas where traffic flow is relatively concentrated will further aggravate the contradiction of poor traffic congestion on public roads<sup>[3]</sup>. Hence, to relieve street congestion caused by vendors, the Urban Management and Law Enforcement, which called Chengguan in China, who imposed a fine to unlicensed street vendors, were responsible for the implementation of ordinances and stopped the contravention of city regulations.

#### **2.1.2 Conflict with the Formal Market Caused by Convenience**

Compared with regular shopping malls and supermarkets, the street stall market is located closer to the residential area, and people move closer to the active area. The freedom of business hours is not restricted, which provides residents with great aspects. In addition, the lively night market and low-cost products have put a lot of pressure on the formal market. Therefore, some regular operators will drive away from the vendors in front of their shops and even have physical conflicts.

#### **2.1.3 Potential Goods Safety Issues Caused by Temporary**

From the temporary characteristics of the vendor economy, it can be seen that the range of vendors is very wide, ranging from students to elderly people. Most of them use their free time to come out to set up stalls, not as a daily job. Therefore, most of the vendors' products have not undergone quality and safety inspections. Especially food, if it causes physical discomfort after eating, it cannot be held accountable. The introduction of food safety regulations will suppress the part of vendors because originally, they rely on low-cost operations. To improve food safety, changes in materials and processing methods are needed.

### **2.2 A Variety of Issues Raised in the Post-COVID-19 Era**

In the post-COVID-19 era, however, the street stall economy gains more support from the government to reboot the economy and support employment<sup>[4]</sup>. In the post-COVID-19 era, when the epidemic situation is slightly controlled but the employment situation is not very clear, setting up a stall has become a feasible income-generating option for many people, and some even call it "China's vitality". Nevertheless, such vitality is based on the chaos and confusion that affects the appearance of the city, and sanitation conditions are not guaranteed, so, understandably, the government regulated it and the

stall economy gradually disappears. Therefore, whether to retain or cancel the stall is the test of the management and balance of local governments. To some extent, in the post-COVID-19 era, China's street vendors are facing the following difficulties in their economic revival. First of all, the quality of goods cannot be guaranteed. Second, it gives a negative impact on the sanitation development of the whole city. Third, it causes traffic jams. Fourth, it is difficult to protect rights when there are quality and food problems. Fifth, there may be uncontrollable problems such as short weight, price fraud, and so on. Additionally, although it is temporarily placed, it also occupies public land for business activities. In the end, there are many retail vendors, which are difficult to manage. It is apparent to everyone that the impact on food safety is of vital importance. For example, as early as 2009, the Chinese government enacted the "Food Safety Law", and has undergone several amendments since then, but there are no clear and effective regulations on the management of street vendors. For street vendors, they have not registered with the relevant departments, even if something goes wrong, they can run away, it is difficult for the government to hold them accountable. Under the guidance of this kind of psychology, some merchants are willing to take risks to obtain greater profits and used low-cost raw materials like drain oil, which seriously violated consumers' right to life and health <sup>[5]</sup>.

### **3. The International Experience and Enlightenment**

#### **3.1 Experience on Street Vendor's Legal Status**

The old saying "The fireworks in man's world touch the hearts of ordinary people" holds for international economic development in these years, but many fundamental questions have yet to be resolved in China such as street vendors' legal status. However, from the perspective of developed countries, a stall economy is not a low-level economy, which is a normal business type. Meanwhile, the developed country also supports the street vendors' right to work. For instance, Borough Market, founded in the 13th century, as a food business card in London, is not only a food market for diners but also a raw material market respected by countless famous chefs. And Portland farmers market in the United States is located on the campus of Portland State University which is deeply loved by everyone because of locally grown organic agricultural products, meat, fish, and other self-made products. To some extent, the prosperity of the foreign stall economy is precise because of the protection of stall vendors by law.

Thankfully, we are building up laws and regulations needed to reverse this situation so that, such potentially inconvenient relations become a thing of the past. In my opinion, one of the most economically significant trends of the post-COVID-19 era has been the legalization of street vendors, which is beneficial to increase Gross Domestic Product. Compared with forcibly removing or fully liberalizing the street stall economy, treating the street vendors correctly and opening the market to them reasonably can play a better role in the development of the street stall economy in the post-COVID-19 era. The Constitution of the People's Republic of China can make people voluntarily opt for careers, occupations, and trade that imposes reasonable restrictions on the exercise of the right in the public interest. Furthermore, the Employment Promotion Law of the People's Republic of China also encourages the proper rights of workers to employ themselves, which implies the proper position of all types of street vendors should be recognized by laws and regulations. These government policies are not only positive and inclusive, but also seek the balance between workers' security and economic development, create a win-win working world for the government, enterprises, and individuals, and promote a sustainable economic and social ecosystem take shape.

#### **3.2 Experience on Road Administrative Promotion**

As mentioned in the previous article, stalls in places with a lot of people and random walking will cause traffic jams. In response to this problem, foreign countries have implemented corresponding measures.

##### **3.2.1 Japan's Management Measures**

According to the Japanese Road Traffic Law, all kinds of vendors must comply with the regulations and operate legally after approval <sup>[6]</sup>. This means that only if the stalls on the road are approved in advance can they be set up at the time and are permitted by the police. Otherwise, any obstruction to road traffic is "absolutely prohibited". At the same time, the road management law is very clear and humane. For example, the scope of police supervision is limited to "public roads." If vendors set up stalls in the station square, they do not need to obtain the approval of the police, but only need to obtain the approval of the railway company and the station, because this is the railway company's "private land" and does not fall under the jurisdiction of the police.

##### **3.2.2 Korea's Management Measures**

The Korean government's management measures

for mobile vendors have generally adopted a regional management approach<sup>[7]</sup>. That is, the government divides urban areas into three categories: The first one is “absolutely prohibited area”, which mainly includes the main lanes and sidewalks of the road. The second category is “relatively prohibited area”. Such are certain restrictions on the size, timing, and scope of business stalls, advance registration is required. The third category is “inducing area”. Generally, it includes the open space outside the urban center far from the residential area, and there are fewer vehicles, and the roads in the market are naturally formed, but there are also restrictions on the corresponding time and scope.

### **3.2.3 America’s Management Measures**

The United States has relatively high barriers to entry for mobile vendors. This high threshold is not just for the need to maintain the appearance of the city, but for comprehensive requirements such as hygiene, safety, legal registration, and taxation<sup>[8]</sup>. The strict management of the United States tends to be more regular, but it also retains the original characteristics of the stall economy, and at the same time avoids road congestion caused by random stalls. Of course, under clear regulations, any small mistakes by vendors may result in penalties.

### **3.3 Experience on Regulating Street Food Safety**

It is not difficult to find that many countries have set up separate operation and management regulations for street food stalls, such as Vancouver and Washington. Singapore attaches great importance to the management of street food stalls which has established a perfect system, and the management of food hygiene is particularly strict. At the same time, it stipulates that all street vendors must have a physical examination and take food hygiene courses. In 1997, Singapore implemented a rating system for stalls. Consumers can judge the health status of stalls according to the level, which is one of the effective measures to strengthen the self-discipline of vendors and the supervision of public opinion

In addition, the management measures in Calcutta, India believe that the permit system and mobile kiosks are effective measures to ensure the cleanliness of street food. Safety management measures for selling street food in Latin America include routine management procedures and personnel training of street food, education of street food producers and traders, etc. These experiences have important reference significance for promoting the standardization of the street stall economy.

Huang tingjun and other scholars pointed out that stall

economic vendors should do a good job in health work, including commodity quality management, commodity after-sales management, etc. The goods shall be priced, the quality shall meet the national standards, and the source of the goods shall be registered. At the same time, the quality of commodity supervision requires the government to establish channels for consumer feedback, establish a multi-level feedback mechanism, standardize the feedback process, and ensure the interests of consumers<sup>[9]</sup>.

### **3.4 Experience on Enhancing Environmental Protection**

The environmental problems left over by the street stall economy, which are crucial to the solution of economic difficulties of the street stall economy, have been attached importance to and given measures by many countries. As for urban mobile vendors, South Korea mainly implements “zonal” management with a division of three regions. The first category is “absolutely-prohibited areas”, including areas having a serious impact on city and traffic, like main roads, railway stations, bus stations, squares, and auxiliary trunk lines, etc. The second category is “relatively-prohibited areas”, aiming at less traffic-harmful areas with restrictions on size, scope, and operating time of stalls. The third category is “induced areas”, which refers to areas that have little impact on the city’s appearance and traffic, including vacant space in urban centers, roads on both sides of rivers and streams, and roads in traditional markets. In induced areas, the Government generally allows vendors to set up stalls under the supervision of time and scope of operation<sup>[10]</sup>. With this method, the government encourages land-stage economies to meet the needs of citizens while avoiding damage to the urban environment.

In addition, in Germany, if vendors intending to set up stalls in the market, they are required to contact the market organizers and pay stall fees and utilities, and waste disposal costs<sup>[11]</sup>, which solves the environmental problem to some extent.

Drawing experience from South Korea and Germany, China could take the following measures. Firstly, the stall-holders need to register to achieve status legalization and transparency. A fixed area and period are essential for not only the relief of street chaos and other issues but also the distribution of economic trend standardization. Besides, the local urban planning authorities can also set up relevant regulatory departments, which maintain urban order, ensures the distribution of economic and social-economic output, promotes the inner cycle of urban and regional economic systems, and achieves accurate management eventually. Furthermore, establish a regional health re-



sponsibility system. That is to set up a special pilot where operators work in the unity of health and safety responsibility<sup>[12]</sup>. Last, charge fees for garbage clean-up and other matters in residential or urban centers from low-paid stalls.

#### 4. Conclusions

Street stall economy is an important part of the informal economy<sup>[13]</sup>. In the context of entrepreneurship and innovation, the street-stall economy is the primary driving force for the development of all walks of life and makes both positive and negative contributions to the corona-stricken economy in the post-COVID-19 era. With the development of a competitive street-stall economy, A lot of aspects are encountering difficulties of regulating street stall economy concerning vendors' legal status, road administration, food safety, and environmental protection. Efforts have been made to solve these dilemmas. Firstly, to resolve the problem of street vendors' legal status, designated laws and regulations for street vending activities can be introduced. This regulatory method can also help to promote road administration. Besides, the government also can adopt a regional management approach, lift the barrier to entry for street vendors, and soon. Secondly, establishing a multi-level feedback mechanism, paying stall fees, and registering the source of the goods is a good way to realize food safety and environmental protection. As we gain evidence and experience with each of these approaches, we are moving closer to being able to trigger the prosperity of the street stall economy.

#### Author Contributions

Weining Li contributed to the conception of the study, wrote the manuscript and modified; Sirui Zhang performed the data analyses and contributed to fix syntax errors; Weizhe Ou contributed significantly to analysis and manuscript preparation; Yujin Zhang helped perform the analysis with constructive discussions. We have the same contribution to this article.

#### References

[1] Liao, Y. & Shi H. Traffic and sanitation problems in

Dalian night market, 2020.

- [2] Bell and Loukaitou-Sideris. Sidewalk informality: An examination of street vending regulation in China, 2014.
- [3] Wang Yan. How does the refined management of the city tolerate the market economy——based on the empirical investigation and research of the central area of Shanghai[J]. China Development Observer, 2018(13): 47-51.
- [4] China Daily. Shanghai kicks off night festival to stimulate economy, 2020.
- [5] Pengcheng Shen. School of Economics, Anhui University of Finance and Economics, Anhui, 233000, China.
- [6] Wang Yanwei. "Fall economy" should be developed with high quality[J]. Financial Expo (Fortune), 2020(07): 22-23.
- [7] Liang Bo. The enlightenment of management methods of mobile vendors in foreign cities to my country's related work[J]. China Price, 2009(08): 49-51.
- [8] Wen Zhi. The fireworks of different countries in the "market economy"[J]. Financial Expo (Fortune), 2020(07): 82-83.
- [9] Huang tingjun, Wang Shiyang, Chen Ziwei, Yang XINGRAN, Liu Xin. Exploration and analysis of standardized governance model of urban stall industry in China under the background of stall economy[J]. Quality exploration, 2020,17 (04): 53-60.
- [10] Lu Hongyan. Experience and Enlightenment of Urban Mobile Vendors governance at home and abroad. Journal of Tianshui School of Administration, 2016, 17 (06): 29-32.
- [11] Xiong Ying, Sun Liyuan, Li Danni, Yang Wei, Shu Xiaohui. Research on the economic development of China's land distribution and countermeasures under the new crown epidemic -- take the first and second-tier cities as an example of modern commerce, 2021 (11): 18-20.
- [12] Zhou Yuxuan, Gu Yayilan, Xu Yiqing, Mo Di. Management and Enlightenment of German Mobile Traders[J]. Shanghai Business, 2021 (05): 82-83.
- [13] Reid et al. A study of Chinese street vendors: How they operate, Journal of Asia-Pacific Business, 2010,11 (4): 244-257.

## ARTICLE

# Study on the Formalized Development of the Street Stall Economy-based on Domestic and International Experiences and Perspectives

Yixuan Chen<sup>1\*</sup> Lingfeng Liu<sup>2</sup> Hao Liu<sup>3</sup> Yukun Sun<sup>4</sup>

1. Xi'an Jiaotong Liverpool University, Suzhou, Jiangsu, 215123, China

2. Georgia Institute of Technology, United States

3. Beijing University of Posts and Telecommunications, Beijing, China

4. City University of Macau, Macau, China

**Received:** 10 September 2021; **Accepted:** 22 September 2021; **Published:** 22 October 2021

**Citation:** Yixuan Chen, Lingfeng Liu, Hao Liu, et al., Study on the Formalized Development of the Street Stall Economy-based on Domestic and International Experiences and Perspectives. *Journal of Economic Science Research*, 2021, 4(4), 3708. <https://doi.org/10.30564/jesr.v4i4.3708>

**Abstract:** The ground-floor economy has a long history as a significant part of the informal economy. Due to the dependence on its own social status and relationship to the government's political and economic objectives, it has developed precariously in recent years. In the face of post-epidemic problems, a shortcut is to learn from international experience. This paper used the structural theory and drew from the secondary data, demonstrating the background of informal economy and exploring the rational ways to maintain and develop street vending. Spatialization, legalization and network digitization are proven international approaches, which display the empirical and theoretical implications to urban practice and studies.

**Keywords:** Street stall economy, Post-epidemic, International experience, Spatialization, Legalization, Pluralistic autonomy, Network digitization

## 1. Introduction

Informal trading activity is an ingrained element of metropolitan area, along with the relatively low thresholds, risks and costs. Additionally, street vending, as the uncontrolled part of an informal economy, occupies

vacant sites and roads stated by Ghatak and Chatterjee<sup>[1]</sup>. In the process of rapid urbanization and globalization, most countries have experienced a shift in the treatment of the street hawkers from hostility to tolerance<sup>[2]</sup>. According to Huang<sup>[3]</sup>, exclusionary policies, mainly characterized by violent evictions and location restrictions, have been

---

\*Corresponding Author:

Yixuan Chen,

Xi'an Jiaotong Liverpool University, Suzhou, Jiangsu, 215123, China;

Email: [Yixuan.CHEN19@student.xjtlu.edu.cn](mailto:Yixuan.CHEN19@student.xjtlu.edu.cn)

DOI: <https://doi.org/10.30564/jesr.v4i4.3708>

Copyright © 2021 by the author(s). Published by Bilingual Publishing Co. This is an open access article under the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License. (<https://creativecommons.org/licenses/by-nc/4.0/>).

implemented less frequently in recent years. Especially in the post-epidemic period, encouraging the development of the street stall economy is the epitome of how countries preserve employment, protect people's livelihoods and promote economic recovery. Moreover, it is a vivid portrayal of how countries focus on economic and social development while ensuring epidemic prevention and control. For example, according to the Chinese government website <sup>[4]</sup>, at the conclusion of the third session of China's 13th National People's Congress, the premier stressed the need to revive the street stall economy, which has promoted the construction of related facilities.

Although there is room for encouragement and policy advocacy for the development of the post-epidemic ground stall economy, there are still a series of potential contradictions and conflicts that need to be managed and resolved by the government with a rational system and in an appropriate manner. Han <sup>[5]</sup> demonstrates that they include limited public space, need for regulation and safety, ineffective regulation and traditional shop operations. The current group of new ground stall owners stimulated by the street stall economy clearly poses a dilemma for urban governance: either promote them to compete with shop operators for a share of profits, or allow them to grow to compete with the original owners. According to Yuan <sup>[6]</sup>, in the stock market, the former may trigger different forms of unemployment and the latter may lead to social conflict. The drawbacks and social problems of the ground-stall economy will become increasingly apparent, and what urban governance needs to do is to prepare policies and long-term planning.

Based on the above realities, it is important to find reasonable ways for the street vending economy to develop and sustain, rather than just existing to alleviate employment during the epidemic. Therefore, Chen and Rui <sup>[7]</sup> think that authorities also face significant challenges - namely, how to revitalize the ground floor economy while preventing counterfeit products, fighting food safety crimes and preventing urban pollution. However, many of the previous references describe deeply the benefits as well as the disadvantages of the informal economy, but rarely integrate and provide global approaches to modern development. This essay will demonstrate some relatively effective modes that deserve to be emulated by countries around the world. With the aim of exploring feasible international solutions, this study is likely to fill the research gap and provide some reference for social research and policy designation by the authorities.

## **2. Approaches**

### **2.1 Spatialization**

The full and effective use of urban public space is a major initiative to improve the ground floor economy. Due to the non-viability of the ban policy and the incompatibility with the national goal of building a harmonious society and promoting people's livelihood, many countries currently adopt an inclusive and encouraging attitude and policy. Huang, Xue and Li <sup>[8]</sup> conclude that the emerging policy of tolerance is essentially a mixture of ambivalent politics, setting certain spatial areas where stalls are allowed, but placing most of these areas on the periphery, without taking into account the needs of the traders' clientele. As Hanser describes <sup>[9]</sup>, the behaviors may bring some conflicts in response, including resistance from stall vendors, even exaggerated bystander solidarity, challenging street-level administrative authority. Therefore, it is urgent to mitigate the conflicts that arise through spatial management.

Firstly, Singapore's ground stall management system is more mature, and the stalls are subsumed into urban planning, divided into prohibited, controlled or permitted areas. At the same time, trading centers of different sizes are set up, making full use of the time difference to make full use of the space <sup>[3]</sup>.

In addition to plan places reasonably, some easily overlooked spaces can be fully utilized. For instance, according to All India Institute of Local Self-Government <sup>[10]</sup>, one way to spatialize roads in India is to ban parking on both sides of the road and place the stalls in an organized manner. At the same time, the government will look for places to accommodate vendors as much as possible, including alcoves, niches, recesses, etc. In the absence of such sites, lands will be acquired from the edge of the road of private owners in accordance with the current policies, calculating the area to be occupied for the sale of cargo space and the allotment.

Creating regional characteristics is a crucial step in the process, especially building into important tourist attractions. According to Xie, Wang and Tang <sup>[11]</sup>, many countries around the world use special areas in cities to form ground stall bazaars, covering the country's most vibrant marketplace flavors. Thailand's weekend bazaar is known as the largest open-air bazaar in Southeast Asia, with 15,000 stalls that gather Thai specialties such as clothing, handicrafts and snacks. Additionally, the European "stall economy" has a long history of development and has been integrated into the culture of the city, becoming a national calling card. The typical examples of "stall economy" in Europe are flea markets,



Christmas markets and open-air vegetable markets for the grassroots. The earliest Christmas markets can be traced back to the 15th century. In solving problems between the economic development of the ground stalls and urban management, European countries regulate the place, time and scale of ground stall trading and implement strict planning and management to serve the public while maintaining the normal order of the city. As a result, this spatial management with national characteristics will increase the visibility of the city and attract tourists from all over the world, generating significant economic revenues.

## 2.2 Legalization

After sufficient flexibility in planning the extent of the space where the trader should be, its status and the related regulations should be confirmed.

First, something has to be done at the national level to regulate the legalized informal economy. Currently, the legal status of the hawker economy is not fully recognized, which is one of the dilemmas in regulating it in the post

epidemic era, demonstrated by Song <sup>[12]</sup>. For example, regulations and enforcement of road management, environmental protection, and street food safety need to be strengthened. The specific implementation method can refer to the U.S. practice. According to Xie, Wang and Tang <sup>[11]</sup>, the United States allows licensed operations and strictly regulates hawkers by law. Its legal provisions for the management of vendors are very detailed, specifying the responsibilities of each relevant department. The U.S. Department of Agriculture has issued a set of USDA Farmers Market Rules and Procedures and Operating Guidelines, mainly through fixed market trading locations and hours, strict food safety regulations and unified management of the AMS department to regulate the street stall economy. Authorities can consider encouraging stalls to go to the organizers in advance to apply, no stall fees. Then if the stall earns money, take the initiative to declare whether their stall makes money for tax purposes. In fact, it is a model to encourage the growth of self-employed.

In addition to the national level, individual vendors should also be conscious of their regulated activities. Roever and Skinner <sup>[13]</sup> state that in many areas, merchant



**Figure 1.** Emerging Europe; Bakery in London - Wrobel (2015)

Source: Wrobel, A. (2015) 'Bakery in London' Emerging Europe, Retrieved from: <https://emerging-europe.com/voices/the-great-london-food-scene/attachment/bakery-stall-in-borough-market-london/>

federations are used in place of collective activities. They act as a bridge between the state and individuals, facilitating the rationalization of the policy-making process and the training of traders. For example, the main reason for the exclusion of street vendors is linked to the lack of hygiene, which affects the process of attracting foreign investment to the city. The existing literature finds that inadequate knowledge of food safety and personal hygiene is a major cause of health problems, such as infrequent hand washing and insufficient cooling, according to Ghatak and Chatterjee <sup>[1]</sup>. This requires unions or NGOs to provide the necessary training to vendors before they can be licensed, proving that they pass a test on business skills and food handling procedures. Vendors need to be educated to gain a sense of social responsibility and expertise in order to gradually change their image in the minds of society as dirty and untidy. Only formalization at the national level and legalization at the individual level can seize this opportunity and grow sustainably.



OMB No. 0581-0229

### **USDA FARMERS MARKET 2019 Rules and Procedures and Operating Guidelines**

**Figure 2.** USDA Farmers Market rules and procedures and operating guidelines.

Source: USDA Farmers Market rules and procedures and operating guidelines. Retrieved from: <https://www.ams.usda.gov/sites/default/files/media/USDAFarmersMarketRulesandProceduresandOperatingGuidelines.pdf>

## **2.3 Pluralistic Autonomy**

In order to manage mobile vendors more effectively, in addition to formulating policies through the government, the community, the mobile vendors themselves and various NGOs can all participate in the relevant management process, forming a pluralistic governance situation and achieving joint and coordinated governance.

Public participation, through community assistance, is an important part of hawker management. The community is essentially a grassroots organization with self-management and co-ordination capacity, mainly by the residents, and is an important way for the government to bring policies to the people. In the case of mobile

vendors, communities can play a fundamental role in their management. Specifically, the government can use the community as the basic unit and bring a relative part of the mobile vendors in the area in terms of property and organization. Zhu, et al, <sup>[14]</sup> describes that community can support people with skills to set up stalls according to the demographic situation. Therefore, communities and their residents can manage certain vendors, which is closely related to their lives in a dynamic way. Furthermore, a monitoring mechanism can be established so that many disputes can be resolved in a timely manner, reducing unnecessary conflicts in the management of urban and regional mobile vendors.

As described in the legalization above, the community can provide a series of systematic training for mobile vendors, just like the Chamber of Commerce, which will further improve hawkers' quality and strengthen the relationship between the community and vendors. The system will reduce the natural resistance of mobile vendors to the management of the vendors and promote the community-based and grid-based management of mobile vendors. For example, communities in Singapore have played a strong role in the governance of vendors, providing training in the community and establishing 24-hour monitoring rooms. India has responded to the neoliberal zeitgeist by establishing a policy of partial community autonomy, reported by Ray, Clarke and Waley <sup>[15]</sup>. The establishment of these community systems, although with a smaller focus, has greatly increased the sense of belonging of the residents and inspired them to participate in the management of the vendors, which has laid the foundation for the management of mobile vendors.

In respect to stall themselves, they have a clear understanding of the stall economy. The realization of self-management contributes to the sustainable development of the local economy and avoids missing some potential problems. Firstly, representatives of hawkers can set up food stall industry associations to promote the local economy, establish communication channels between subjects and help them understand information in the first place. Secondly, members of the industry association can conduct regular inspections in order to maintain the hygiene and good community environment. According to Xie, Wang and Tang <sup>[11]</sup>, for businesses that perform well, financial subsidies and product promotion can be provided, while businesses that violate the rules will be subject to a certain degree of financial punishment or suspension of business for rectification.

In addition to autonomy of social subjects, markets also play an important role in the internationally managed



vending economy. According to Wang <sup>[16]</sup>, if the act of urban spatial governance is understood as the distribution and coordination of spatial rights in time and space, the negative externalities of the ground stall economy reflect the violation and seizure of public spatial rights by private spatial rights. Due to the special nature of the post-epidemic period, the state conceded a certain amount of public power. The transfer of power becomes a competitive act between the subjects of private rights. In fact, it is an affirmation of private rights and an allowance for the market competition mechanism introduced by private rights. For example, Singapore provides basic hawker facilities and regulations and gives hawkers a self-competitive market atmosphere. Stalls in advantageous areas are acquired by vendors with stronger economic power, and in order to increase customer traffic, vendors will generate their own service level and maintain the surrounding environment. Furthermore, Nowosielski and Nowosielska <sup>[17]</sup> state that markets in the Depok municipality, Indonesia creatively developed an open, self-organizing system to manage complex tasks involving market operations. Although the above measures have a great deal of theoretical basis, cooperation among stakeholders is still needed to maximize the benefits of informal economic activities in public space.

## 2.4 Network Digitization

Street stall economy not only reflects the city's social governance capacity, but also tests the ability to analyze economic data. In terms of digital networks, the main reference can be China's approach.

First of all, the vendor's purchase channels can be combined with the digitization of the network. Commodity food quality and safety issues are the pain points of the "stall economy", but also the management of the difficult points. According to CNR News <sup>[18]</sup>, Suning Group launched the "Night Shopping Partner" market support program for ground stalls. It provides 100 billion yuan of localized direct supply of traceable high-quality goods, involving local specialties, fresh produce, original agricultural products and other categories; open the national Carrefour, Suning small store stores 10,000 cold storage services. This range of Chinese e-commerce practices provides some assurance of food safety and a street-level economy.

Electronic payments play an indelible role in promoting facilitation. Digital payments are prevalent in parts of Asia, particularly China, and have proliferated globally during the epidemic. Alegado <sup>[19]</sup> explains that greater use of electronic transactions could bring up to 3 percentage points of growth to the German economy. As a result, this



**Figure 3.** Food Stall Under Autonomy - Admin (2014)

Source: Admin, S (2014) "Food Stall" Retrieved from: <https://startacus.net/culture/how-to-start-a-street-food-stall#.YTXENt--s2w>

convenient way of consumption can stimulate economic recovery and development. According to Yu and Pan<sup>[20]</sup>, in the case of this change in the mainstream consumption pattern, merchants should show QR codes to consumers for code payment, and should also provide after-sales service contact information, thus further formalizing and professionalizing the development.

Lastly, the use of networked knowledge can also be related to the supervision and control of the sector. Huang, et al.<sup>[21]</sup> states that in the past, the state organized the relevant departments for the management of vendors and the removal of work, in China called chengguan. However, this form of management was ineffective because of the mobility of vendors and the associated small bribery activities, which led to the failure to clean up public space. Relevant departments can assist in urban management through digitalization. On the basis of more “flexibility” and “humanity”, the government can further utilize its wisdom and ability to manage public services and effectively reconcile the interests of all parties. For example, according to Yingyun Intelligence<sup>[22]</sup>, authoritative agencies register ground stall owners through the small program for online management, and at the same time set up integrity scoring to encourage or preferential treatment for operators with good market integrity, and vendors with many complaints will be disqualified from operating. This set of practices requires a certain level of technology while minimizing the risk of network operations. It will take some time to fully achieve this networked coverage. However, if the goal is once achieved, it will bring great convenience to the relevant supervisory authorities and will regulate the daily business activities of the vendors.



**Figure 4.** customers were shopping at the temporary stalls in Xuanhua street, Jiyuan, Henan province - Zhao (2020)

Source: Zhao, X (2020) ‘Developing ‘Street Stall Economy’’, *dahe.cn Photo*, Retrieved from: <https://en.dahe.cn/2020/07-29/697485.html>

### 3. Conclusions

In summary, street stall is the most prominent subset of the informal economy stated by Onodugo<sup>[23]</sup>. Although it has a range of problems affecting the urban environment and food safety, it undeniably makes a significant contribution to enhancing economic vitality as well as urban smokiness. Improving the informal economy by taking into account what has worked in other countries - spatialization, legalization, pluralistic autonomy and digitization of networks. Make full use of unused space, while giving vendors a certain legal status. Main subjects work together in a competitive market condition. In the networked environment, the online and offline are connected, so that the “ground stall economy” and the “digital economy” can interact in a positive way. This approach requires close cooperation among all departments and the improvement and upgrading of relevant technologies. A complete and mature system can be formed to promote the sustainability of the hawker economy, not just a transient product to promote employment in the post-epidemic period. This study complements the study of the vending economy from an international perspective and has implications for the process of informal economy reform in the relevant sectors.

### References

- [1] Ghatak, I. and Chatterjee, S. ‘Urban street vending practices: an investigation of ethnic food safety knowledge, attitudes, and risks among untrained Chinese vendors in chinatown, Kolkata’, *Journal of Ethnic Foods*, 2018, 5(4), PP272-285. Retrieved from: <https://www.sciencedirect.com/science/article/pii/S2352618118301501>.
- [2] Recio, R.B. et al. ‘Revisiting policy epistemologies on urban informality: Towards a post-dualist view’, 2016, Retrieved from: <http://dx.doi.org/10.1016/j.cities.2016.08.018>.
- [3] Huang, G.Z. ‘How the ‘Street Stall Economy’ Helps Those Who Need It Most’, *Sixth Tone*, 2020, Retrieved from: <https://www.sixthtone.com/news/1005803/Howthe%E2%80%99StreetStalleconomy%E2%80%99HelpsThoseWhoNeedItMost>.
- [4] Chinese Government Website. ‘Li Keqiang praised the ground stall economy, small store economy: is the fireworks of the earth, is the vitality of China’, 2020, Retrieved from: [www.gov.cn/premier/2020-06/01/content\\_5516569.htm](http://www.gov.cn/premier/2020-06/01/content_5516569.htm).
- [5] Han, J. “A few suggestions on the development of the “stall economy””, *Development Research*

- Center of Jilin Government, 2020, Retrieved from: [http://fzzx.jl.gov.cn/yjcg/yjcg\\_2020/202006/t20200605\\_7256344.html](http://fzzx.jl.gov.cn/yjcg/yjcg_2020/202006/t20200605_7256344.html).
- [6] Yuan, B. "Problems related to the ground stall economy and countermeasures", 2020, Retrieved from: <https://www.fx361.com/page/2020/0627/6806341.shtml>.
- [7] Chen, L. and Rui, O. "Will street vending become a new economic force in China?" 2020, Retrieved from: <https://www.ceibs.edu/new-papers-columns/will-street-vending-become-new-economic-force-china>.
- [8] Huang, G.Z., Xue, D.S. and Li, Z.G. "From Revanchism to Ambivalence: The Changing Politics of Street Vending in Guangzhou" *Antipode*, 2014, 46(1), PP170-189.  
DOI: 10.1111/anti.12031.
- [9] Hanser, A. "Street Politics: Street Vendors and Urban Governance in China," *The China Quarterly. Cambridge University Press*, 2016, 226, pp. 363-382.  
DOI: 10.1017/S0305741016000278.
- [10] All India Institute of Local Self-Government 2014. Retrieved from: <http://mohua.gov.in/upload/upload-files/files/4Draft.pdf>.
- [11] Xie, H.L., Wang, W.F. and Tang, W. "The Sustainability of "Street-stall Economy"", *The Chinese Banker*, 2020 (9), pp. 128-131. Retrieved from: <https://search.ebscohost.com/login.aspx?direct=true&db=edscoj&AN=edscoj.yhj202009036&site=eds-live&scope=site>.
- [12] Song, S. "Street stall economy in China in the post-COVID-19 era: Dilemmas and regulatory suggestions", *Research in Globalization*, 2020, 2.  
DOI: 10.1016/j.resglo.2020.100030.
- [13] Roeber, S. and Skinner, C. "Street vendors and cities", *Environment and Urbanization*, 2016, 28(2), pp. 359-374.  
DOI: 10.1177/0956247816653898.
- [14] Zhu, J. et al. "History of Street-stall Economy and Its Development in the Regular Epidemic Prevention and Control", *Journal of Wuhan Commercial Service College*, 2020, 34(4), pp. 45-49. Retrieved from: <https://search.ebscohost.com/login.aspx?direct=true&db=edscoj&AN=edscoj.whsjjglgbxyxb202004009&site=eds-live&scope=site>.
- [15] Ray, N., Clarke, G. and Waley, P. "The rise of corporate retailing and the impacts on small-scale retailing: the survival strategies of Kirana stores and informal street vendors in Durgapur, India", *Singapore Journal of Tropical Geography*, 2020, 41(2), pp. 269-283.  
DOI: 10.1111/sjtg.12312.
- [16] Wang, S. "How to formalize the "informal"? --International Experience in Managing the Groundswell Economy and the Role of Spatial Planning (I)", 2020, Retrieved from: [https://mp.weixin.qq.com/s?src=11&timestamp=1630648465&ver=3291&signature=3Q5IH8fRS3oSaAEkR7EALZHV9JEEemqrVx-gqGmUcauANk8KYf2mKtWB5ne1PDsitc9KptKG-p10B5c-27bWAHbNyxJMrxQhjYq2ecJ\\*pRwEhp-DHtuUtY8iMFew6CvRjFTG&new=1](https://mp.weixin.qq.com/s?src=11&timestamp=1630648465&ver=3291&signature=3Q5IH8fRS3oSaAEkR7EALZHV9JEEemqrVx-gqGmUcauANk8KYf2mKtWB5ne1PDsitc9KptKG-p10B5c-27bWAHbNyxJMrxQhjYq2ecJ*pRwEhp-DHtuUtY8iMFew6CvRjFTG&new=1).
- [17] Nowosielski, M. and Nowosielska, A. "Cold, stony, dehumanized": Unexpected outcomes of revitalization on the sensory landscape and ambience of public space: The case of Cathedral Street (Ulica Tumaska) in Plock", *Urbani Izziv*, 2020, 31(1), pp. 66-77.  
DOI: 10.5379/urbani-izziv-en-2020-31-01-001.
- [18] CNR News, "Network platform to empower the "stall economy"", 2020, Retrieved from: <https://baijiahao.baidu.com/s?id=1668551406549603840&wfr=spider&for=pc>.
- [19] Alegado, S. "Philippine Central Banker Targets Street Stalls in E-Money Push", *Bloomberg.com*, p. N.PAG. 2021, Retrieved from: <https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=149512365&site=eds-live&scope=site>.
- [20] Yu, X. and Pan, H. "Research on the Problems and Solutions of "Street-Stall Economy". *Open Access Library Journal*, 2020, 7, 1-6.  
DOI: 10.4236/oalib.1106663.
- [21] Huang, G.Z., et al. "Governance of Informal Public Space in Urban China: A Post-modern Critique of Spatial Formalization of Urban Street Vending" *Urban Planning International*, 2019, 34(2).  
DOI: 10.22217/upi.2019.015.
- [22] Yingyun Intelligence "The legalization of the ground stall economy, digital operation is the right time", 2020, Retrieved from: [https://www.sohu.com/a/400615452\\_100264836](https://www.sohu.com/a/400615452_100264836).
- [23] Onodugo, V. A., et al. "The dilemma of managing the challenges of street vending in public spaces: The case of Enugu City, Nigeria", *Cities*, 2016, 59:95-101, Retrieved from: <https://www.sciencedirect.com/science/article/pii/S0264275116302244>.



## Woman Empowerment and Household Income in Kira Municipality, Uganda

Hope Natukunda<sup>1\*</sup> Peter Nareeba<sup>1</sup> Sawuya Nakijoba<sup>2,3,4</sup>

1. Department of Social Work and Social Administration, Uganda Christian University, Kampala, Uganda

2. Sectoral Department, Economic Policy Research Centre, Makerere University, Uganda

3. Institute for Humanities in Africa (HUMA), University of Cape Town, South Africa

4. Department of Economics and Development Studies, Islamic University in Uganda, Kampala, Uganda

**Received:** 26 September 2021; **Accepted:** 19 October 2021; **Published:** 26 October 2021

**Citation:** Hope Natukunda, Peter Nareeba, Sawuya Nakijoba, Woman Empowerment and Household Income in Kira Municipality, Uganda. *Journal of Economic Science Research*, 2021, 4(4), 3774. <https://doi.org/10.30564/jesr.v4i4.3774>

**Abstract<sup>1</sup>:** The empowerment of women is crucial for the development of a nation. This study is about women empowerment and household income in Kira Municipality of Uganda. The objectives were to establish the strategies of women empowerment, the effect of women empowerment on household income and the challenges to women empowerment. We adopted a cross-sectional survey design, considering a sample size of 72 respondents who were randomly sampled. Findings revealed that strategies for women empowerment included women being encouraged to join group saving groups. It was revealed that women were not adequately trained as dispute settlers, linkers, motivators, facilitators, and negotiators to help implement women empowerment projects in as far as empowering them was concerned. Regarding the impact of women empowerment, findings revealed that skills have been enhanced through training received from women empowerment implementers and programs have reduced employment among these women through skills attained. However, key challenges to women empowerment emerged including but not limited to There is inadequate finance and inappropriate funding of activities, limited access to credit sources to expand our activities, poorly trained community projects facilitators and unnecessary hinder project activities and political interests which affect women group leadership such as interference from community political forces. It is recommended that more efforts should be put to economic empowerment as a process of increasing women's access to economic resources and opportunities including jobs, financial services, property and other productive assets, skills development and market information. Lastly women should be encouraged to participate in enterprise activities to gain a greater economic role in decision-making. Exercising control over these financial matters enables women to optimize their own and the household's welfare.

**Keywords:** Women, Empowerment, Household, Income

<sup>1</sup> Disclaimer: The views expressed in this paper are those of the authors and do not necessarily reflect the Positions and Policies of their employer or the management.

\*Corresponding Author:

Hope Natukunda,

Department of Social Work and Social Administration, Uganda Christian University, Kampala, Uganda;

Email: [natukundaho@gmail.com](mailto:natukundaho@gmail.com)

DOI: <https://doi.org/10.30564/jesr.v4i4.3774>

Copyright © 2021 by the author(s). Published by Bilingual Publishing Co. This is an open access article under the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License. (<https://creativecommons.org/licenses/by-nc/4.0/>).

## 1. Introduction

Women's empowerment is a process of personal and social change, taking place over interlinked and mutually reinforcing psychological, political, social, and economic domains, and through which women individually and collectively gain power, meaningful choices and control over their lives <sup>[1]</sup>. It is not a linear, uncontested process but instead a journey characterized by negotiation and compromise, and uncertain outcomes <sup>[2]</sup>. Although it has attracted increased attention in recent years, there is no universally agreed definition of women's economic empowerment. Women's ability to succeed and advance economically and the power to make and act on economic decisions is core to the understanding of a number of development institutions <sup>[3]</sup>. Involving communities and empowering them to take control of decisions regarding their own development is both the means to achieve better development outcomes and an outcome in its own right. Empowerment is embedded in the whole approach and at all stages of the Community-driven development (CDD) results chain: "targeted community-driven approaches devolve control and decision making to poor women and men, which empowers them immediately and directly". It is both a final objective and a functional one to achieve other project objectives for example, to increase income and access to services. Thus, it is a process to achieve other outcomes and an outcome in itself.

The World Bank, defining its approach to empowerment for economic growth and poverty reduction, describes empowerment as "the expansion of assets and capabilities of poor people to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives". This highlights the dimensions of choice, action, and ability to influence institutions. Empowerment is about strengthening individuals' asset-based agency and their ability to change the institutional rules that shape human behavior and social interactions. Globally, different institutions have proposed their own measures of gender equality and women's empowerment, each reflecting their distinct emphases and perspectives. The United Nations Development Program's (UNDP) Gender Development Index, Gender Empowerment Measures, and Gender Inequality Index capture absolute levels of women's economic participation, economic opportunity, political empowerment, educational attainment, and health and wellbeing. The World Economic Forum's Global Gender Gap Index measures gender gaps in four dimensions: economic participation and opportunity, educational attainment, overall health, and political empowerment. The Economist Intelligence Unit's Women's Economic

Opportunity Index covers five dimensions of women's empowerment: labor policy and practice; women's economic opportunity; access to finance, education, and training; women's legal and social status; and the general business environment. The Organization for Economic Co-operation and Development's (OECD) Social Institutions and Gender Index focuses on social institutions that impact equality between men and women, and considers the four dimensions of family code, physical integrity, ownership rights, and civil liberties

In Africa, Community-driven development (CDD) interventions rest on the principle of empowering communities. Yet, the gender-specific impacts of CDD, especially on empowerment, have not received due attention in evaluation and, more generally, in the theoretical and empirical literature. There are several reasons for this. First, programs may not have gender-specific outcomes as explicit objectives. Second, even when they do indicate that they want to increase women's participation and inclusion, programs are not very specific about which dimensions of female empowerment they can plausibly affect, which activities need to be implemented to make a difference (and in what sequence), and in which timeframe one can reasonably expect results. On the other hand, women in Africa continue to face enormous obstacles. The growing recognition of their contributions has not translated into significantly improved access to resources or increased decision-making powers. The dynamism that women display in economic, cultural and social lives of their communities through their associations and informal networks has also not been channeled into creating new models of participation and leadership. More to that, the rate of economic and political participation should be determined by women's exercise of their free choice rather than the structural barriers related to their roles in society.

In Uganda, efforts to empower women are made through creating the conditions for women to be able to make choices, which implies that women may have different preferences than men, but also different abilities to make choices because of gender inequalities in bargaining power and access to resources as well as improving the ability of women to access resources and employment, higher productivity and earnings, and increases in the income, assets, expenditure, and consumption they control <sup>[4]</sup>. Women in Uganda represent 80% of the agricultural labor force, are responsible for about 80% of the food crop production, and continue to contribute about 60% of the labor for cash crop production. Women also work in non-farm activities to supplement household resources. This double workday



often means delegating domestic responsibilities to younger females in the household. According to the 2007 MDG Report by UNDP Uganda Country Office, the average Ugandan woman spends 9 hours a day on care labor activities such as fetching water, firewood and caring for the sick. The burden of care makes the woman particularly vulnerable when it comes to competing on the job market. Many NGOs have appeared interested in uplifting the economic standards of women.

Women empowerment is important at all levels of governance in all countries. Virtually, every international and bilateral development agency has proclaimed policies to integrate women better into economic and social processes<sup>[5]</sup>. Eliminating a significant part of a nation's work force on the sole basis of gender can have detrimental effects on the economy of that nation. Whereas the Uganda Constitution (1995, Article 33(4) provides for equal opportunities in political, economic and social activities, women continue to be excluded from positions of leadership and decision making. The majority of women in Uganda still deal with dual challenges and inequalities in both domestic and public spheres of activity, despite efforts by the NRM government and the NGOs to raise the economic well-being of most women by bringing them out of the home into the public domain. More so, very little information is found on the impacts of economic, political, and social empowerment of women in terms of increased household income. Therefore the study seeks to investigate the role of women empowerment on household income. Through NGOs, many women without much income have become involved in income-generating projects. This has in turn given them the opportunity to move from the private to the public domain. Based on this background the study investigated the effect of women empowerment on household income with specific reference to Kira Municipality.

## 2. Literature Review

Theoretically the study was guided by the Classical Development Perspective review, the Human Development Perspective. The Classical Development Perspective/theory is concerned about the empowerment of women as a function of economic development, dispensation of democracy, and the removal of social injustices that increase gender inequalities<sup>[6]</sup>. Studies have shown that there is a positive relationship between economic development and an equitable distribution of educational, occupational, and agricultural resources. The theory demonstrates that economic development empowers women by increasing social services to society and according women more time for child rearing and domestic work.

The Human Development Perspective: The Beijing Declaration (Section 13) considers the empowerment of women as the *sin qua non* of social political and economic development in any given nation: Women's empowerment and their full participation on the basis of equality in all spheres of society, including participation in the decision making process to power, are fundamental for the achievement of equality, development and space (Fourth World Conference on Women 4). In the past scholars believed that women's empowerment was enhanced by encouraging financial institutions to extend lines of credit to women. Educated women have the capacity to fight against cultural practices that condemn women to oppressed position in society<sup>[7]</sup>. Women who are highly educated gain more access to knowledge, information and new ideas<sup>[8]</sup>. Therefore the human development perspective relates women's empowerment to cultural practices of capacity building through education, training, and development.

The Historical Legacies Perspective considers the role of government, quasi-governmental bodies and non-governmental institutions as being critical to the empowerment of women in society. According to<sup>[9]</sup>, government has a duty in developing social, political, and economic programmes that empower women.<sup>[10]</sup> suggest that non-governmental organizations should come up with projects that give women the power to make decisions that influence positive change on their lives. Women who are allowed to participate in government managed projects have access to resources which they can use to alleviate poverty in their families<sup>[11]</sup>. Scholars worldwide argue that the modern state is characterized by the secularization of the public and this trend has enabled women to free themselves from the oppressive nature of the church and the family, to the extent that greater emphasis is now placed on rationality and individualism<sup>[6]</sup>.

Empirically, the study reviewed literature in line with study objectives, that is, strategies of empowering women, effect of women empowerment on household income as well as the challenges faced in women empowerment.

## 3. Methodology

This study adopted a cross-sectional survey design. It focused on exploring the effect of women empowerment on household income. Attention was on community based organizations (CBOs) and saving groups in Kira municipality. A cross section is one of the most used research designs as it explores a given phenomenon at length<sup>[12]</sup>, and also attains detail of variables without manipulation of the environment<sup>[13]</sup>. Hence was relevant for this study. In data collection, both quantitative and

qualitative approaches were employed. Mixed approach provided comprehensive data as weaknesses in one approach was overcome by strengths in the other method<sup>[14]</sup>. Mixed approaches also allowed rigorous quantitative analysis with complement opinions from respondents<sup>[15]</sup>. The qualitative approach was concerned with subjective assessment of attitudes, opinions, and behavior, while statistics were expressed quantitatively.

A total of 10 women groups constituted the target population for this study including women leaders and members in groups, and leaders in Kira municipality. The opinions of the chairperson, treasurer and secretary were sought for each group in addition to 5 members selected from each group. Thus the population for the study was 83 from which a sample size was selected. For purposes of this study and basing on Krejcie and Morgan (1970s)' table, a sample of 75 participants was obtained. Purposive sampling was used to select women leaders in Kira, and municipality leaders responsible for women economic development in Wakiso. This technique was used to select as key interview informants, knowledgeable and experienced about the phenomenon of interest<sup>[14]</sup>. This sampling technique was used to select at least two (2) women leaders (Chairperson, Treasurer, and/or Secretary) of women interest Groups. We used this technique to select officers from Kira responsible for women economic welfare. Simple random sampling is a strategy that adds credibility to a sample when potential purposeful sample is larger than one can handle where by it uses small sample sizes. Thus the goal is credibility, not representativeness or the ability to generalize<sup>[16]</sup>. This technique was used to select at least two (5) other members from each group. This approach was used because each member of the women groups was a representative of the other members. The distribution of these categories is as shown in Table 1 below.

**Table 1.** Sample Size selection and distribution

Category of respondent	Population	Sample size	Sampling technique
Women group leaders	30	28	Purposive sampling
Active women groups members	50	44	Simple random sampling
Municipality leaders	03	03	Purposive sampling
Total	83	75	

Source: Kira Records- Wakiso Division women Beneficiaries for 2019

The study generated its data from primary and secondary sources. Primary data consisted of opinions from youth leaders, youth members and officers from Wakiso district. Secondary sources included reports, books and previous articles. The study used survey

questionnaires and interviews to collect data. These data collection methods were used during the process of data collection. They are convenient for the researchers and respondents, and used in social science research<sup>[14]</sup>. The study utilized a self-administered questionnaire. A five Likert questionnaire were designed in accordance with the objectives of the study ranging from strongly disagree (1) to agree (5). A self-administered questionnaire is one of the most cost effective ways of collecting data<sup>[17]</sup>. An interview guide was also prepared in accordance with the objectives of the study. In-depth interviews were used to fully understand participant's impressions about the study.

### Empirical Model estimation process and techniques

The analysis of the women empowerment-income model was carried out in two steps that is, preliminary analysis and econometric analysis. Preliminary analysis involved the descriptive statistics and a correlation matrix. Descriptive statistics are important because they give a general overview of the data used in the study. The correlation matrix was used to examine the correlation among independent variables. This was carried out in an attempt to avoid spurious regression that might lead to Multicollinearity. The econometric analysis involved using SPSS software package employed because the dependent variable under study (income) was continuous. We estimate a simple general model as below.

$$Y = f(emp) \quad (1)$$

Empirically the model can be written as

$$Y_i = \beta_0 + \beta_1 emp_i + Z + \varepsilon_i \quad (2)$$

Where Y is the income, Emp is women empowerment as defined in Table 2.

Literature suggests that empowerment is not enough to determine income. There must be other variables that work with empowerment so as to determine the total income. Such variables include were controlled for using z. they include age group, education, marital status, religion among others. is the error term which is assumed to be normally distributed with zero mean and constant variance. Incorporating the control variables, then Equation (2) can be

$$Y_i = \beta_0 + \beta_1 emp_i + \beta_2 educ_i + \beta_3 marst + \beta_4 rel_i + \beta_5 age_i + \varepsilon_i \quad (3)$$

For diagnostic test, in any regression analysis, one may not be sure as to whether or not the results obtained represent the realities on the ground. In order to mitigate such uncertainty, it is important to use the estimation and testing tools by way of making sensible and accurate judgments of the results obtained. This was done by examining the signs and magnitude of the coefficients

**Table 2.** Definition and measurement of key variables

s/n	Variables	Description of the variables used
1	<b>Women empowerment</b>	Women's empowerment is the process of empowering a female individual. It may be defined in several ways, including accepting women's viewpoints or making an effort to seek them, raising the status of women through education, awareness, literacy, and training. In this study, <b>Women empowerment is looked at as the ability of a female individual to join any saving group for socio-economic benefits such as increase in income.</b>
2	<b>Income</b>	Income is money that a person or a business receives in return for working, providing a product or service, or investing capital. A person's income may also derive from a salary/wage, pension, a government benefit, or a gift. In this study income refers to money a female individual earns due to being empowered.
3	<b>Age group</b>	This is the age bracket for completed years of age by the household head. This is a discrete random variable Coded as 0= 18-29, 1= 30-39, 2=40-49 and 3=50 and above.
4	<b>Education</b>	This Highest education level completed by the household head. In this study, education was a dummy variable measured using highest levels of education/ grade attained in the Uganda. It ranged from zero to three with 0 = No formal education, 1 = completed Primary education, 2 =completed Secondary education and 3 =completed Post-secondary education either with a diploma, degree or masters degree.
5	<b>Religion</b>	This is the religious belief of the individual. This was a dummy variable. It assumes a value of 0 for Christian and 1 for Muslim and 2 for others such as traditionalists, pagans and any other sort.
6	<b>Marital status</b>	Marital status of the woman. This variable is = 0 If household head is Married and = 1 If household head is Unmarried (single/separated/divorced).

Note: All the variables are expressed as natural logs. This was done to easy interpretation as elasticities as well as removing outliers

of the regressors. The study also used the R-squared which is a measure of the overall goodness of fit of the regression line. Since this study used cross-sectional data then R-square is expected to be as low as below 0.5. Also, since the data are cross-sectional, the presence of outliers will be a norm than an exception. These would make the coefficients have incorrect signs. All the outliers were identified and dropped.

### Study area

The study was carried out in Kira Municipality. Kira got its municipality status in 2015. Geographically Kira Municipality is located in Wakiso District, Central Uganda Buganda Region approximately 10kms from Kampala City the Capital of Uganda. From the East Kira borders Mukono Municipal Council, to the north the Nakiyanja and Nangobe streams that flows into Lwajjali River forms the boundaries. In terms of topography, Kira Municipality is covering an area of approximately 98.83square Kilometers. It is composed of undulating terrain of flat-topped hills. The valleys are occupied by about six regimes of natural drainage channels that form administrative boundaries. In peri- urban areas, the topography is the major factor in determining the land use in that the valleys are mainly used for subsistence agriculture, while upper slopes are used for residence. According to Population census of 2014, Kira Municipality has a total population of 317,157 with a total number household 82,520 It is also

estimated that 88.5 males per 100 females, with a growth rate of (10.44%). The population is on the increase due to high population growth rate. The area was chosen because it is one of the most highly urbanized municipalities in Uganda, it lies in the central region of Uganda bordering Kampala the capital, and it has a growing population. Also, leveraging on its capital base, natural resource base, cultural resources and heterogeneous population, Kira has the potential to transform into a vibrant city given its strategic location in region coupled with the dynamic population and available natural resources<sup>[18]</sup>.

Validity and reliability were ensured validity of instruments was ascertained by first discussing the questionnaire and interview schedule drafts with the supervisors. This helped attain the tools' face validity. The content validity of the instrument was also found. After constructing the questionnaire, we contacted experts in order to get expertise judgment on the validity. Reliability, the degree to which variables are consistent with what they are intended to measure<sup>[19]</sup>. Cronbach's alpha which measures how well a set of items measures a single dimensional item is used to measure the reliability of the questions. The questionnaire was pre-tested and pre-test results entered into SPSS ver. 23. The alpha values were tested to ascertain the tools' reliability. The greater the alpha the superior the reliability measure of the instrument. An alpha of 0.81 was obtained and exceeded the minimum of 0.7 for internal consistency which was recommended by<sup>[20]</sup>.

We analyzed both quantitative and qualitative data using Statistical Package for Social Scientists (SPSS) version 23 for quantitative analysis and thematic analysis for qualitative data. Quantitative data analysis consisted of numerical values from which descriptions such as mean and standard deviations were made (Kombo & Tromp, 2010). Means and standard deviations were used under descriptive analysis to measure central tendencies and dispersion. Qualitative data collected from the interviews of key informants will be edited on a continuous basis to ensure completeness. Qualitative data collected was categorized according to emerging variables from each question in the interview guide and integrated as part of the findings with quantitative statistics. Thematic analysis was used to analyze, summarize, and generate conclusions<sup>[12]</sup>. Opinions were arranged under study objectives as themes, and checked basing on their frequency.

The goal of ethics in research is to ensure that no one suffers adverse consequences from the research activities<sup>[21]</sup>. The study protected rights of respondents by ensuring that no respondent was named during the research or subsequent thesis. The detail, purpose, and reasons for the study were explained to the respondents.

#### 4. Results and Discussions

In terms of response rate, we found out that out of the sample of 50 participants that out of 72 (96.0%) questionnaires were returned, only 03 (4.0%) key informants were interviewed. Generally 100% of sample fully participated. Thus, the overall response rate of 100% was reliable, and appropriate to generate dependable results from all women in Kira municipality. The score is in agreement with the recommendation that above 50% is recommendable response rate<sup>[22]</sup>. This further facilitated generation of quantitative and qualitative data about the study.

The bio-data information of study participants was established. This covered aspects of gender, age, education, marital status and religion of women.

Results in Table 2 regarding age bracket revealed that average age bracket was 30-39 years (63.9%) of all respondents while 16.7 belonged to the age group of 18-29 and those in the group of 18-29 years were 13.9. Only 5.5% were 50 and above. This shows women in Kira municipality covered all age brackets, potential for enhanced women empowerment. Regarding the highest level of education held by the respondents, a higher proportion (58.4%) had completed secondary school while 16.7% completed diploma of education and 15.3% had completed primary. Only 5.6% were degree holders and so were 2.8% who had not attended formal education. Of the

respondents 1.4% was of master's level. Therefore, they were in a good position to give reliable information about impact of woman empowerment on household income in Kira municipality.

**Table 3.** Bio-data information of Respondents.

Item	Category	Frequency	Percentage
Age-Group	18-29	12	16.7
	30-39	46	63.9
	40-49	10	13.9
	50 and above	4	5.6
	<b>Total</b>	<b>72</b>	<b>100.0</b>
Education	No formal education	2	2.8
	Completed primary	11	15.3
	Completed Secondary	42	58.4
	Completed Diploma	12	16.7
	Completed Bachelors	4	5.6
	Completed Masters	1	1.4
	<b>Total</b>	<b>72</b>	<b>100.0</b>
Marital status	Single	24	33.3
	Married	38	52.8
	Separated/divorced	10	13.89
	<b>Total</b>	<b>72</b>	<b>100</b>
Religion	Christian	57	79.2
	Muslim	15	20.8
	Others	0	0
	<b>Total</b>	<b>72</b>	<b>100</b>

Source: Field data, 2021

Regarding marital status, majority of the women were married (52.8%), while 33.3% were single. Of the respondents, only 13.9% had been separated from their husbands. These findings implied that the study considered women of different marital status to gather reliable information regarding women empowerment and its impact on a household income level. Results in the study also revealed that, majority of the respondents were Christians (79.2%) while 20.8% were Muslims. This implied that the study put into perspective religion to get a wider view of women empowerment and its impact on welfare of women in terms of increased income on household level.

#### Strategies for Women Empowerment

A higher proportion (90.9%) of respondents agreed (Mean = 3.99) that women are encouraged to join group saving groups. This implied that majority of women in Kira municipality have occasionally been involved in calls for savings groups which are essential for economic and social empowerment of women. This was consistently pointed out by all respondents since its standard deviation was below 1 (Std. Dev = 0.606). This indicated that



majority of women could agree that women empowerment is vital to enhancing their household income. As noted in Table 3, a mean score of 4.15 was obtained from opinions of participants on the aspect training centers are put place to assist women developing managerial and entrepreneurial skills. This implied that women were not certain while others disagreed with the assertion regarding training centers. This implied that administrators in Kira municipality ought to identify and put in place training centers to assist women developing managerial and entrepreneurial skills. This will further empower women socially and economically through increased income and employment. The opinions were consistent as reflected by a standard deviation that was below 1 (Std. Dev =0.399). Also, a large percentage of women (79.4%) seemed not to agree with perspective that women group leadership is trained as dispute settlers, linkers, motivators, facilitators, and negotiators to help implement women empowerment projects (Mean= 4.10), opinions consistently supported the assertion (Std. Dev = .626). This finding hence implied that there ought to be an effort to empower women group leaders in a number of areas including dispute settlement, linking, motivation, facilitation, and negotiation to empower them socially and economically Majority (66.9%) of respondents agreed with view that NGOS and other organizations focus on more professionalism and education of women in community (Mean= 3.83). The opinions on this assertion were found consistent since standard deviation that was below 1 (Std. Dev = .410). The findings implied that there have been a number of

community based organizations and non-governmental organizations that have had an impact on women empowerment in Kira municipality. We established that organizations have been empowering women through skilled and financing programs, however we noted that not all women have been empowered by the presence of these organizations in Kira municipality.

Results indicate that a mean of 3.70 representing 66.6% who agreed that more funding is put in place to help women groups expand activities. The finding revealed that there have been platforms put help finance women projects for example; interviewed respondents reported that they acquired credit form savings and credit organizations to operate their income generating projects.

A significant number of women (81.8%) revealed that women empowerment program implementers provide opportunities to access sources of credit for funding women activities (Mean= 3.98). However, these opinions were not consistent (Std. Dev= 1.383). It was established that often as women are empowered, implementers provide avenues for access of funds to finance the projects. Results implied that access to credit is a basis for woman empowerment in Kira municipality however there was uncertainty on how it was being carried out as reflected by the inconsistencies in standard deviation that was more than one

Relatedly, opinions from interviews closely agree with most of above assertions especially regarding view that there were strategies for women empowerment in Kira municipality.

**Table 4.** Strategies for women empowerment

Statements	Percentage (%)					MEAN	S.D
	SDA	DA	NS	A	SA		
Women are encouraged to join group saving groups	1.2	6.1	1.8	74.5	16.4	3.99	.732
Training centers are put place to assist women developing managerial and entrepreneurial skills	0.6	7.3	4.8	51.5	35.8	4.15	.857
Women group leadership is trained as dispute settlers, linkers, motivators, facilitators, and negotiators to help implement women empowerment projects	1.8	11.5	7.3	33.3	46.1	4.10	1.074
NGOS and other organizations focus on more professionalism and education of women in community	2.4	20.6	9.1	26.7	41.2	3.83	1.236
More Funding is put in place to help women groups expand activities	3.6	17.0	9.7	44.8	24.8	3.70	1.127
Women empowerment program implementers provide opportunities to access sources of credit for funding women activities	3.0	15.2	0.0	44.8	37.0	3.98	1.120
Women are trained in financial management	3.0	14.5	1.2	42.4	38.8	3.99	1.123

Source: Field data, 2021



In the views of one participant, she commented:

*“Yes. We have had opportunities, for example, some organizations come here and organize workshops, they skill us and teach us to utilize the available resources to increase our incomes”.*

Additionally, one leader further attested that:

*“Obviously, we have been interacting with women in different settings, and we have often focused on training them as well as providing them with opportunities to access credit”.*

Results generally show that respondents were consistent in showing that women empowerment was vital for improved welfare of women in Kira municipality as reflected by the above findings.

### Effect of woman empowerment on household income

Results in Table 4 show opinions regarding effect of woman empowerment as a tool for improving income and welfare of women in Kira municipality.

Results in Table 4 show that majority of respondents (64.2%) disagreed and a mean score of (Mean= 3.59) in regard to the view assertion that skill have been enhanced by training received from women empowerment implementers. These findings implied that although women empowerment has focused on skilled women, a higher proportion of women that participated in the study did not agree with the fact that they had acquired skills. This finding was also consistently supported by participants' opinions (Std. Dev= .326). This indicates that women empowerment program implementers needed to focus more on skilled these women if there is to be noticeable impact on their lives more especially in their incomes.

Results as indicated in Table 5, indicated that a higher

proportion of women (62.6%) were not certain on whether women empowerment programs had reduced employment among the women (Mean = 3.75). This implied that although, women empowerment aims at reducing unemployment among women in a bid to empower them economically or financially, most women, could not attest to this stamen which further revealed the need to focus on equipping women with appropriate skills for employment as well as provide platforms for funding of women projects. However, there were inconsistencies in the opinions of the employees on the assertion Std. Dev= 1.347).

Results show that a higher proportion of women revealed that their entrepreneurship skills had improved (Mean= 4.01, Std. Dev= .492). Results implied that women were able to start their own income generating businesses as a result of women empowerment which consequently improved their welfare.

As noted in Table 4, majority of respondents were not certain (Mean= 3.42) that through training and leadership, women have gained business management skills and the opinions of the respondents were consistent (Std. Dev. =.500). This implied that although, efforts are directed towards economic empowerment of women, there was still an observation that women did not think they had gained adequate business management skills. These findings further revealed the increased need to reach out to women for enhanced business management skills which consequently lead to improving incomes among women in Kira municipality.

Results further show that majority of women in Kira municipality, revealed that women groups received institutional support regarding skill development (Mean = 3.33). The opinions of the respondents were however not consistent since standard deviation was more than 1 (Std.

**Table 5.** Responses on effect of woman empowerment on household incomes

Statements	Percentage (%)					MEAN	S.D
	SDA	DA	NS	A	SA		
Skills have been enhanced by training received from women empowerment implementers	0.6	4.2	30.9	64.2	0.0	3.59	.605
Women empowerment programs have reduced employment among the women	0.0	23.6	12.7	50.9	12.7	3.53	.991
Our entrepreneurship skills have been improved	0.0	10.3	3.0	61.8	24.8	4.01	.834
Through training and leadership, we have gained business management skills	1.8	38.2	13.9	18.8	27.3	3.42	1.935
Women groups receive institutional support regarding skill development.	3.6	36.4	9.7	24.2	26.1	3.33	1.303
Groups are provided with funds to start income generating projects	1.8	21.2	7.3	52.1	17.6	3.62	1.061
Groups are able to set clear and coordinated women policies	0.0	10.3	7.3	63.6	18.8	3.91	.818

Source: Field data, 2021

= 1.453). This indicated that women that were organized in groups often received support from institutions regarding skill. We established that women were often trained in areas such as book keeping, financial management among others.

Table 4 results indicate that majority of the respondents agreed that women groups were provided with funds to start income generating projects (Mean = 3.62), which was consistently supported by participants at IDI (Std. Dev. = .302). This implied that women groups were provided with avenues for funding. This empowered them economically through enhanced income.

Results show that majority of the women supported the view that the groups are able to set clear and coordinated women policies (Mean= 3.91), however these opinions were not consistent (Std. Dev= 1.276). Results implied that women groups are still unable to set clear and coordinated women police which indicated that women are not adequately empowered in Kira municipality.

In a follow-up by interviews, several informants revealed that women empowerment has had an impact on the welfare of women. In their opinions, one interviewee had this to say:

*“well, we have strongly been empowered in terms of skills especially, financial management, we are able to record and do book keeping and keep track of transactions in order to not mess up the business”.*

In addition, mentoring was highlighted as one of the benefits of women empowerment. This perspective is attested in several opinions, one of whom revealed this:

*“Yes often workshops organized by organizations have enabled us to know how to become better entrepreneurs and managers of our lives and businesses. We are taught on how to adequately use resources, and also we are mentored on how to access finances for business”.*

Complementarily, it was established that, women empowerment as a tool for enhanced income was associated with pluses and challenges. Several related perspectives show level of women empowerment was valuable, but less strategized. These perceptions however varied between informants interacted with in Kira municipality and complement quantitative findings.

### Correlation and regression analysis

In order to prove the said effect of women empowerment on income, the study goes ahead to estimate a simple model using Ordinary Least Square (OLS) estimation technique. Before estimation, we did correlation matrix to detect multicollinearity. The problem of multicollinearity

arises when two or more variables in multiple regressions are highly correlated. The concern is that the coefficient changes erratically in response to a small change in the model or data. As a rule of thumb, if the coefficient of correlation among the explanatory variables is equal or more than 0.80, it indicates severe problem of Multicollinearity<sup>[23]</sup>. For our study, we found out that there was no multicollinearity. We then estimate a simple general model in Equation (3) above and the findings were summarized in the table below.

**Table 6.** Effect of women empowerment on income

Variables	Coefficients and probabilities
empowerment	0.709 (47.25***)
Marital Status: Married	-0.078 (-1.97**)
Religion: Muslim	0.382 (7.96***)
Others	-0.06 (0.08)
Age bracket: 30-39	0.078
40-49	(-2.12**)
50 and above	-0.185 (-3.15***)
Education level: completed	0.112
Primary education	(2.83***)
Completed Secondary education	0.176 (4.04***)
Post-Secondary education	0.126
Constant	2.265 (2.02**)
Number of Observations	75
Adjusted R-Squared	0.423
Probability >F	0.000

Probabilities in parentheses \*\*\*Significant at 1%, \*\* significant at 5%\*Significant at 10%

From Table 6 above, we can note that is a positive relationship between women empowerment and income. This means that in Uganda, increasing women empowerment is associated with 70.9% increase in home holding other factors constant. This is perhaps due to the fact that economically empowered women learning from each other how to improve their livelihood through incomes and savings, shift gender norms, contribute to better health and nutrition outcomes among others.

Religion dummy variable is positive and significant

at 1% in all estimated model. The finding entails that Muslim empowered women usually get more income compared to others. This is perhaps due to much earning vast opportunities. Empowered woman age of 30-39 experience increase in incomes. However, at the age of 40-49, the income declines. This is perhaps because of increase in responsibilities and more spending on health of children and parents, education of children. The same findings were discovered in line with education, the more an empowered woman gets educated the increase in income.

Results above show that majority (95.3%) of women who participated in the study agreed (Mean= 4.42) with the assertion that there are low education levels and inadequate training among both women leaders and women group members. These findings implied that although low education affects the level of women empowerment and hinders economic progress of women, for this, particular study, this was not the issue as most women disagreed with the challenge related to low education of women. This is in line with the findings of<sup>[24]</sup>.

Results, reveal that a high proportion of respondents (77.8%) did not confirm the view that women group members lack financial and managerial training necessary for running activities (Mean = 4.15). This implied that although, low level of women empowerment could be associated with lack financial and managerial training necessary for running activities, it was not the case in

this study. This was further consistently supported in the opinions of the employees (Std. Dev= .210). This further implied that low level of women empowerment was attributed to other factors besides lack of financial and managerial training as women had earlier indicated that women groups often acquire institutional support from program implementers.

Results show that a higher proportion of respondents agreed (86.3%) and a Mean score of 4.18 was obtained on the view that there is inadequate finance and inappropriate funding of activities. This finding reveals that without a doubt, one of the challenges facing women empowerment in Kira municipality is inadequate finance and inappropriate funding of activities. This was also constitutently supported by the opinions of the employees (Std. Dev= .412). We established that although, skilling, mentoring and other activities have been emphasized among women in Kira municipality, women are affected by the fact that they don't get finances to help grow their businesses while the programs to empower women also have inappropriate funding of activities.

As noted in Table 7, majority of respondents were not certain and could not confirm (Mean= 3.42) that failure to hold meetings to review our budget as soon as we get women empowerment funds has affected projects progress negatively, however their opinions of were inconsistent (Std. Dev. =1.61).

Results further show that majority of women in Kira

**Table 7.** Challenges hindering women empowerment

Statement	Percentage (%)					MEAN	S.D
	SDA	DA	NS	A	SA		
There is low education levels and inadequate training among both Women leaders and women group members	0.0	3.6	1.8	90.3	4.2	4.42	1.218
Women Group members lack financial and managerial training necessary for running activities	0.0	3.6	17.0	35.8	43.0	4.15	.210
There is inadequate finance and inappropriate funding of activities	0.6	7.9	4.2	56.4	30.9	4.18	.412
Failure to hold meetings to reviews our budget as soon as we get women empowerment funds has affected projects progress negatively	0.6	10.9	4.8	41.8	41.8	3.42	.197
Poorly trained community projects facilitators and unnecessary hinder project activities	0.6	4.2	3.0	57.0	35.2	3.89	1.610
There are political interests which affect women group leadership such as interference from community political forces	1.2	9.1	17.0	38.8	33.9	3.61	1.623

Source: Field data, 2021

Municipality, revealed that their poorly trained community projects facilitators and unnecessary hinder project activities (Mean = 3.89), the opinions of the respondents were however not consistent since standard deviation was more than 1 (Std. = 1.61). This implied that most of the facilitators and trainers in women empowerment programs were not trained adequately to provide adequate guidance to women for enhanced income especially at household level.

Results indicate that majority of the respondents also agreed with the assertion that there are political interests which affect women group leadership such as interference from community political forces (Mean = 3.61), which was consistently supported by participants at IDI (Std. Dev. = 0.623). This implied that most of the activities were interrupted by the interests of politicians which others did not lead to the intended purpose as far as women empowerment is concerned.

Responding to the challenges faced in women empowerment, one of the informants, said:

*"As implementers, we are faced with inadequate funding of activities, obviously after training, we would like these graduates of programs to get capital to begin with but at times it is limited or not there at all, this lets them go back and make trials and sometimes they fail....."*

In one of the opinions, an informant testified that:

*"Another challenge that is faced in the efforts to empower is to do with follow up, often even when these groups of women attend programs, they are rarely followed up, and now the problem can still be attributed to resources but also the seriousness of implementers, sometimes, it really affects progress".*

## 5. Conclusions and Recommendations

From the findings of the study, it was discovered that strategies for women empowerment included women being encouraged to join group saving groups. However, gap was observed in as far as training centers put in place to assist women developing managerial and entrepreneurial skills are concerned with many women disregarding the statement. More, so with less training of women, it was revealed that women were not adequately trained as dispute settlers, linkers, motivators, facilitators, and negotiators to help implement women empowerment projects in as far as empowering them was concerned. On the other hand however, it was observed that more funding was put in place to help women groups expand activities and that women empowerment program implementers provide opportunities to access sources of credit for funding women activities.

Regarding the impact of women empowerment, it was found that skills have been enhanced through training received from women empowerment implementers and programs have reduced employment among these women through skills attained. To also note was that, through training and leadership, women have gained business management skills which in addition to institutional support have led to improved welfare and income. However, key challenges to women empowerment emerged including but not limited to There is inadequate finance and inappropriate funding of activities, limited access to credit sources to expand our activities, poorly trained community projects facilitators and unnecessary hinder project activities and political interests which affect women group leadership such as interference from community political forces.

Based on the above, the study makes the following recommendations:

- i. The study revealed that the women's involvement in groups has enabled the members to expand their business and also increase income. Therefore, it is recommended that the NGOs and the other responsible stakeholders such as government should equip women with with extra business management skills and also try to meet women practical needs for basic literacy as well as advanced literacy, health, livelihood (for example, a training on caring for and maintenance of business would be useful to women.
- ii. More efforts should be put to economic empowerment as process of increasing women's access to economic resources and opportunities including jobs, financial services, property and other productive assets, skills development and market information.
- iii. Lastly women should be encouraged to participate in enterprise activities to gain a greater economic role in decision-making. Exercising control over these financial matters enables women to optimize their own and the household's welfare.

## References

- [1] O'Neil, T., Domingo, P., & Valters, C., Progress on women's empowerment. *London: Overseas Development Institute*. 2014.
- [2] Cornwall, A., Women's empowerment: What works?. *Journal of International Development*, 2016, 28(3), 342-359.
- [3] Golla, A. M., Malhotra, A., Nanda, P., Mehra, R., Kes, A., Jacobs, K., & Namy, S., Understanding and measuring women's economic empowerment. 2011.
- [4] Amu, N. J., *The role of women in Ghana's economy*.

- Friedrich Ebert Foundation. 2015.
- [5] Sell, M., & Minot, N., What factors explain women's empowerment? Decision-making among small-scale farmers in Uganda. In *Women's Studies International Forum*. 2018, Vol. 71, pp. 46-55.
  - [6] Inglehart, R., Norris, P., & Ronald, I., Rising tide: Gender equality and cultural change around the world. Cambridge University Press. 2003.
  - [7] Lipset, S. M., Democracy and working-class authoritarianism. *American Sociological Review*. 1959,482-501.
  - [8] Maslak, M. A., & Singhal, G., The identity of educated women in India: confluence or divergence?. *Gender and Education*, 2008, 20(5), 481.
  - [9] Namely, E. Natasha, M., Woodsong, C. MacQueen, M. K. and Guest, G, Qualitative Research methods. A data collector's field guide. A USAID publication for Family Health International, 2005, 51-76.
  - [10] Bersaglio, B., Enns, C. and Kepe, T., Women under construction: The United Nations' representations of women in the global conversation on the post-2015 development agenda. *Canadian Journal of Development Studies*, 2015, 36(1), 57-71.
  - [11] Gachuru, H.M. & Mwirigi, F.M., Challenges in the disbursement of the Women Enterprise Development Fund: A case of Mombasa County, Kenya. *International Journal of Social Sciences and Entrepreneurship*. 2014, 1 (10).
  - [12] Bryman, A., Social Research Methods. (5<sup>th</sup> Ed.). Oxford, Oxford University Press (OUP), 2016,181.
  - [13] Briggs, B., R., Issues affecting Ugandan indigenous entrepreneurship in trade. *African Journal of Business Management*. 2009,3 (12), 786-797.
  - [14] Creswell, J. W. and Plano Clark, V. L., *Designing and conducting mixed method research* (2nd ed.). Thousand Oaks, CA: Sage. 2011.
  - [15] Kothari, C.R., *Research Methodology; Methods and techniques* (2<sup>nd</sup> Ed.). New Age International Publishers, New Delh; India. 2004, 152-155, 57-59.
  - [16] Patton, M. Q., *Qualitative evaluation and research methods* (3rd ed.). Newbury Park, CA: Sage Publications. 2001.
  - [17] Kathleen Pichora-Fuller, M., Watts, K. L., & La More, C., Development of the listening self-efficacy questionnaire (LSEQ). *International Journal of Audiology*, 2011, 50(6), 417-425.
  - [18] Kira Municipal Physical Development Plan 2019 - 2040 –Draft final report.
  - [19] Amin, E.M, Social Science Research: Conception, Methodology and analysis. Makerere University, 2005, 2005-462 pages.
  - [20] Nyale N.M, Women empowerment and livelihoods: rural women registered in groups involved in horticulture production in Trans Nzoia County, Kenya. 2015.
  - [21] Cooper, D. R., and Schindler, P. S., *Business research methods*. McGraw- Hill Irwin, Pennsylvania State University. 2006.
  - [22] Bruno, G.S.F., Tanveer, M.C., Marelli, E. and Signorelli, M., The short- and long-run impacts of financial crises on women unemployment in OECD countries. *Applied Economics*, 2017, 49(34), 3372-3394.
  - [23] Gujarati, D. N., *Basic Econometrics*. New York: McGraw Hill, Inc. 3rd Edition. 1995.
  - [24] Mayoux, L., Research Round-Up Women's empowerment and micro-finance programmes: strategies for increasing impact. *Development in practice*, 2015, 8(2), 235-241.





## ARTICLE

# The Long-term Consequences of Ordeals: Evidence from the Chinese Sent-down Movement

Shuhong Peng\*

School of Public Finance and Public Administration, Jiangxi University of Finance and Economics, Jiangxi, China

Received: 24 August 2021; Accepted: 8 September 2021; Published: 22 October 2021

**Citation:** Shuhong Peng, The Long-term Consequences of Ordeals: Evidence from the Chinese Sent-down Movement. *Journal of Economic Science Research*, 2021, 4(4), 3618. <https://doi.org/10.30564/jesr.v4i4.3618>

**Abstract:** The Chinese sent-down movement between the mid 1950s to the late 1970s is a suffering period for Chinese sent-down youths. Using the treatment effect model and the ordered probit model, we examine the impact of sent-down experience on sent-down youths' income and happiness based on the sample of CGSS2003 and CGSS2006. By doing so, we can explore the long-term consequences of one's suffering experience. The overall sample regression results show that sent-down experience increase 42% of individuals' income, while reducing 13% of individuals' happiness. Sub-sample analysis results are robust to the conclusion that the sent-down experience makes a positive impact on income and a negative impact on happiness. This study provides objective evidence for the historical evaluation of sent-down movement, a new interpretation for the Easterlin paradox from the view of personality latitude, new empirical evidence for supporting the new human capital theory, and useful inspiration for the the current grass-roots employment policy for university graduates in China.

**Keywords:** Sent-down movement, Ordeals, Sent-down youth, Income, Happiness

## 1. Introduction

The Chinese sent-down movement is an important history. From 1962 to the end of 1970s, more than 17 million urban youths were sent to the countryside<sup>[1]</sup>. The sent-down movement put in so much of youth in exchange for unknown and suffering. Many families were

forced to break up. But it also makes the sent-down youth suffer hard exercise and outstand in all areas of society. The sent-down movement has changed the life path of a young generation and has affected the lives of hundreds of millions of urban residents.

Since the eighties of last century, a large number of novels and memoirs have described the sent-down youths'

---

\*Corresponding Author:

Shuhong Peng,

School of Public Finance and Public Administration, Jiangxi University of Finance and Economics, Jiangxi, China;

Email: [shuhong.peng@gmail.com](mailto:shuhong.peng@gmail.com)

DOI: <https://doi.org/10.30564/jesr.v4i4.3618>

Copyright © 2021 by the author(s). Published by Bilingual Publishing Co. This is an open access article under the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License. (<https://creativecommons.org/licenses/by-nc/4.0/>).

sent-down experience and its consequences<sup>1</sup>. Some sent-down youths think that it is due to the sent-down movement that they miss educational opportunities and have a painful memory. But some other sent-down youths believe that hard lives in the countryside have honed their willpower and environmental adaptability which lay the foundation for the future life path. The controversy of the sent-down movement has existed for a long time.

The academic study on the long-term impact of the sent-down movement is mainly from history and sociology subject and mostly concentrates on the macro economic and social consequences<sup>[2-5]</sup>. There are only a few quantitative studies on the long-term effects of the movement from the micro perspective<sup>[6-11]</sup>.

Zhou and Hou (1999), Xie et al. (2008) and Yang and Li (2011) investigate the impact of sent-down experience on youths' income, but their conclusions are different<sup>[6-8]</sup>. After comparing the income difference between the sent-down youth and non-sent-down youth in 1978, 1987 and 1993, Zhou and Hou (1999) find that the sent-down youth's income does not significantly affected by the sent-down experience<sup>[6]</sup>. Xie et al. (2008) analyzed data from the Survey of Family Life in Urban China in 1999 and find the sent-down experience has no effect on youths' income<sup>[7]</sup>. Yang and Li (2011) find that sent-down youths' average income is higher than non sent-down youths' average income by analyzing data from Chinese Household Income Project Survey in 1995 and 2002<sup>[8]</sup>. In addition, the existing literature also investigates the impact of sent-down experience on education level<sup>[6,7,9]</sup>, occupation choice<sup>[6,7]</sup>, age of first marriage<sup>[6]</sup>, age of first childbearing<sup>[6,10]</sup> and the level of trust<sup>[11]</sup>.

Adolescence is an important stage of life. The experience during this period will have an important impact on one's future development. Rustication is a suffering experience. How is the long-term impact of this experience? This paper employs the treatment effect model and the ordered probit model to investigate the impact of sent-down experience on sent-down youths' income and happiness by using CGSS2003 and CGSS2006 data. The research results show that the sent-down experience can significantly increase the individual's income, but also significantly reduce the individual's happiness. Our research has the following contributions to the existing literature.

Firstly, this study can provide new useful inspiration

for China's grass-roots employment policy for college graduates. In 1999, China began to implement a large-scale college enrollment expansion plan. In 2003, the first graduates after the college expansion began to enter the labor market. Since then, college graduates' employment situation has become grim year by year. The Chinese government attaches great importance to the problem of college graduates employment and issues a large number of relevant policies. The grassroots-oriented employment policy for college graduates is an important part of those policies. Although the current grassroots-oriented employment policy is not the same as the former sent-down movement, but there are some similarities between the two. From the view of policy motivation, the purpose is to solve the problem of excessive urban youth employment; from an individual perspective, both are the beginning of one's initial employment in a difficult environment. The initial employment choice has an important impact on the lifelong career development<sup>[12,13]</sup>. But as far as we know, there is no research about the impact of the grass-roots work experience on the lifelong career development of Chinese college graduates. Our study provides an indirect reference to this issue and can correctly evaluate Chinese grassroots-oriented employment policy for college graduates.

Secondly, this study can provide new empirical evidence to support the new human capital theory. Most sent-down youths are middle school graduates. The average age when they went to the countryside is 18 years old<sup>2</sup>. Far away from the family in cities and engaging in agricultural production in remote rural is a challenge for most sent-down youths. The sent-down experience can exercise the adaptability to surroundings and strong personality. Traditional human capital theory regards innate ability as a priori given and only concerns about the human capital of education, health and migration. In recent years, it is found that non cognitive skills, such as personality traits, have an important influence on one's labor market performance. That has led to the formation of new human capital theory<sup>[14-17]</sup>. As the measurement of personality traits and other non-cognitive skills is difficult, relevant research progress is limited. We can indirectly spy personality traits' impact on the labor market by studying the effect of sent-down experience on individual's income, which will add new empirical evidences for the new human capital theory.

Thirdly, this study can provide a new explanation for the Easterlin paradox. Easterlin (1974, 1995) proposed the famous Easterlin paradox, namely, usually within a country, the average happiness level of the rich is higher

<sup>1</sup> The famous novels about sent-down youths in the eighties of last century were: "Wasted Years", "There Is A Storm Tonight", "Bloody Evening"; Ninety's famous memoirs about sent-down youths were "Great Northern Wilderness Recorded", "No Regrets Youth", "We were Young", "Chinese Sent-down Youth's Dream"; the famous memoirs about sent-down youths since the new century were "Chinese Sent-Down Youth Oral History", "The Cry from Gobi Depths," "We Want to Go Home", "Silent Community".

<sup>2</sup> Calculated based on CGSS2003 and CGSS2006.

than the poor, but if the cross-country comparison, the rich country and the poor country's happiness level is almost the same<sup>[18,19]</sup>. The Easterlin paradox shows that the relationship between income and happiness is different in the individual and group level. The existing literature usually explains the Easterlin paradox from the relative income theory and the ignored variable theory. The former thinks that personal happiness is associated with their relative income in society. The latter considers that factors such as environment, inequality and other non-economic factors can influence happiness. The Easterlin paradox phenomenon will appear when economic factors and non-economic factors show a negative correlation<sup>[20,21]</sup>. The conclusion of this paper can be seen as a special Easterlin paradox that a youth with high income has a low sense of happiness. The hard sent-down experience exercised youths' strong personality, but also left a life of suffering memories. This personality characteristic is the cause of sent-down youths' high income and low sense of happiness. Our research provides a new explanation for the Easterlin paradox: the characteristics of personality.

The remainder of this paper is organized as follows. Section 2 provides a brief introduction to the background of the sent-down movement. Section 3 describes the model and data. Section 4 presents the estimation results. Section 5 is the conclusion and enlightenment.

## 2. Background

After the founding of new China, the government tried hard to popularize education which had achieved remarkable success in just a few years. From 1949 to the end of 1952, the number of primary school students increased from 23.49 million to 51.1 million; preschool children enrollment rate reached 49.2%; secondary school enrollment increased from 1.04 million to 2.49 million, an increase of 140%, of which junior high school increased by 168%, high school increased by 26%. Due to the lack of planning, the expansion of different levels of education is not consistent, resulting in a serious imbalance in the proportion of graduates. As a result, the government reduced the number of students enrolled in junior high schools and primary schools in 1953. Therefore, the number of graduates which were unable to pursue further education suddenly soared to 2.134 million in 1953, and it then increased year by year<sup>3</sup>. Although the urban industries had been developed rapidly in the early years of the new nation, but the new graduates' employment was still difficult. In 1953, the government began to implement the first five year plan-priority development strategy of heavy industries. In 1954, the state launched a large-

scale transformation of the city handicraft industry and the capitalist industry, which made the rapid decline of urban private economy and exacerbated the urban youth employment pressure. Under this pressure, the government began to promote the high school and junior high school graduates who were unable to further study to go to the countryside to engage in agricultural production<sup>[1]</sup>.

In 1955, Chairman Mao issued a call that "rural is a vast world, there can be a great achievement" and the Chinese government began to advocate the primary and secondary school graduates to go to the countryside for agricultural production. Since then, the sent-down movement officially began. In 1968, Chairman Mao issued an instruction: "It is necessary for the educated youth to go to the countryside and experience the poor peasant's life". Since then, the sent-down movement began to enter the second stage. In 1978, the State Council held a national conference about the sent-down youth. The meeting decided to gradually narrow the scope of the sent-down movement and didn't advocate the graduates to sent-down in cities with resettlement conditions. After more than one year, the situation had undergone tremendous changes and "the return to the city wind" sped up the settlement of the problem<sup>[1]</sup>. The sent-down movement began in 1955 and ended in 1978. It experienced two stages. In the first stage of 1955-1967, the sent-down youths were primary sent to the farms (including the Corps and the cadre school). It is a normal measure with the purpose of solving the city youths' employment. In the second stage of 1968-1980, the sent-down youths were primary sent to the rural production team. It is an abnormal political movement with the purpose of training successors<sup>[22]</sup>.

The sent-down youths were mainly junior and senior middle school graduates. They left their parents at a very young age and were forced to engage in hard agricultural production with both mental and physical suffering. The sent-down youth worked very hard together with the farmers. They not only worked for long hours, labor-intensive, but also were paid differently for the same work compared with the peasants. They were often short of money and needed the help of parents in the city. The sent-down youth's life was also very hard. They needed to be self-sufficient. The housing was in short supply. Many sent-down youths rent peasants' houses to live. Some needed to move several times a year. Some sent-down youths even lived in the barn, the ancestral hall, temple and warehouse etc. In addition to hard labor and embarrassing life, the sent-down youths were also facing persecution problems. During the Cultural Revolution, the legal was abused and the sent-down youth's personal safety was not guaranteed<sup>[1]</sup>.

<sup>3</sup> Data is from the "China Education Yearbook : 1949-1981".

### 3. Model and Data

#### 3.1 Model

##### 3.1.1 Treatment Effect Model

We study the impact of the sent-down experience on one's income based on the extended Mincer wage equation. The dependent variable is the individual's income and the core explanatory variable is the sent-down experience. The OLS regression will face the problem of endogeneity because the sent-down experience is not random, but is affected by the family background and so on. Therefore, we apply the treatment effect model proposed by Maddala (1983) to overcome the endogenous problem<sup>[23]</sup>. The treatment effect regression model is:

$$y_i = \beta X_i' + \lambda D_i + \varepsilon_i \quad (1)$$

In Equation (1),  $D_i$  is a dummy variable of the sent-down experience.  $X_i$  are control variables including education years, work experience, gender, political identity, regional, urban scale, industry type, employment unit type and so on.

The selection equation is:

$$D_i^* = \gamma W_i' + u_i, D_i = \begin{cases} 1, & \text{if } D_i^* > 0 \\ 0, & \text{else} \end{cases} \quad (2)$$

In Equation (2),  $W_i$  are factors determining whether to be sent down, including the father's education level variable and the gender dummy variable<sup>4</sup>.

$\varepsilon$  in (1) and  $u$  in (2) obey the bivariate normal distribution and their mean value are zero. The covariance matrix is  $\begin{bmatrix} \sigma^2 & \rho\sigma \\ \rho\sigma & 1 \end{bmatrix}$ ,  $\rho$  is the correlation coefficient of  $\varepsilon$  and  $u$ .  $\sigma^2$  is the variance of  $\varepsilon$ . The variance of  $u$  was standardized to 1.

The expected income difference between the sent-down experience and no sent-down experience is:

$$E(y_i | D_i = 1) - E(y_i | D_i = 0) = \lambda + \rho\sigma \frac{\phi(\gamma W_i')}{\Phi(\gamma W_i')[1 - \Phi(\gamma W_i')]} \quad (3)$$

4 In the sent-down movement, besides some very few people were encouraged by the revolutionary ideal to the countryside, the vast majority people were selected to the countryside. In that era, the concept of bloodline was prevalent. Revolutionary soldiers, revolutionary cadres, workers, poor peasants, lower-middle peasant families were known as the red five families; landlords, rich peasants, counterrevolutionaries, bad elements, rightists families were known as the black five families. A common identifiable feature of the black five families was that their fathers were generally more educated. Their children were generally subject to discrimination in entering a higher school, recruitment, joining the army and other areas. They were the most easily and motivated people to be sent down. The policy of that time allowed the multiple-child family to leave a child in the city. Taking into account the sent-down may be forever, parents were inclined to let their daughter to be sent down. Therefore, we use gender and father's education as explanatory variables for the choice equation in (2).

$\phi$ ,  $\Phi$  respectively represent the density function and cumulative distribution function of the standard normal distribution. As known from (3), the estimated result of the treatment effect model is more than that of the

OLS with  $\rho\sigma \frac{\phi(\gamma W_i')}{\Phi(\gamma W_i')[1 - \Phi(\gamma W_i')]}$ . If  $\rho = 0$ , there is no endogeneity, and OLS can be used to estimate. If  $\rho \neq 0$ , there is endogeneity, and we must use the treatment effect model to estimate. The treatment effect model can be estimated by Heckman's two step method and the maximum likelihood estimation method. The advantage of the two step method is easy to calculate. The disadvantage is that the estimation error in the first step is brought into the second step, resulting in efficiency loss. Therefore, we use the maximum likelihood estimation method to estimate all the parameters of the model simultaneously.

##### 3.1.2 Orderd Probit Model

The explained variable is happiness when we study the impact of sent-down experience on the youth's happiness. The CGSS's measure on happiness is "very unhappy", "unhappy", "general", "happy" and "very happy". The five options are assigned "1", "2", "3", "4" and "5" respectively. The happiness of the five options is from low to high with a natural order. In this case, the OLS method does not apply. We need to use the order probit model to deal with. The ordered probit model is one of the limited dependent variable models, which is a method to study the variation law of the unobservable latent variables by using the observed ordinal data to establish the model. In this paper, the explanatory variable of happiness can be regarded as a latent variable, and its latent variable structure is as follows:

$$h_i^* = \beta X_i' + \lambda D_i + \varepsilon_i \quad (4)$$

In Equation (4),  $D_i$  is a dummy variable representing the sent-down experience.  $X_i$  is a set of controlled variables, including education years, age, gender, marriage, Party members, the log of annual income, housing, regional, urban size, etc.  $\varepsilon_i$  is a random error term.  $h_i^*$  is an unobservable latent variable of happiness. It can only be inferred from the relationship between  $h_i^*$  and  $h_i$  which is observable. The relationship is:

$$h_i = \begin{cases} 1, & \text{very unhappy, if } h_i^* \leq r_1 \\ 2, & \text{unhappy, if } r_1 < h_i^* \leq r_2 \\ 3, & \text{so so, if } r_2 < h_i^* \leq r_3 \\ 4, & \text{happy, if } r_3 < h_i^* \leq r_4 \\ 5, & \text{very happy, if } r_4 < h_i^* \leq r_5 \end{cases} \quad (5)$$



$h_i$  is an observable discrete variable of the happiness with a rang of  $\{1,2,3,4,5\}$ .  $r_1 < r_2 < r_3 < r_4 < r_5$  is a new set of parameters to be estimated. It divides  $h_i^*$  into five continuous intervals. We assume  $\varepsilon_i \sim N(0,1)$ , then

$$\begin{cases} P(h_i = 1 | X_i) = P(h_i^* \leq r_1) = P(\varepsilon_i \leq r_1 - \beta X_i' | X_i) = \Phi(r_1 - \beta X_i') \\ P(h_i = 2 | X_i) = P(h_i^* \leq r_2) = P(\varepsilon_i \leq r_2 - \beta X_i' | X_i) = \Phi(r_2 - \beta X_i') \\ \dots\dots\dots \\ P(h_i = 5 | X_i) = P(h_i^* \leq r_5) = P(\varepsilon_i \leq r_5 - \beta X_i' | X_i) = \Phi(r_5 - \beta X_i') \end{cases} \quad (6)$$

The log likelihood function of the sample is:

$$LnL = \sum_{i=1}^n \sum_{j=1}^J h_{ij} Ln[\Phi(r_j - \beta X_i') - \Phi(r_{j-1} - \beta X_i')] \quad (7)$$

By maximizing the log likelihood function (7), we can estimate the parameter  $\beta$  in the order probit model. That is the effect of the sent-down experience on the sent-down youths' happiness.

### 3.2 Data

The data of our research are derived from the China General Social Survey (CGSS) conducted in 2003 and 2006 by the China Center for Data and Research of Renmin University of China. We only keep non-agricultural employment sample with positive wage and a birth year between 1936 to 1966<sup>5</sup>. We remove a small amount of sample points which have no clear answer on sent-down experience and some abnormal sample points. We get a sample with 5633 units after merging the 2003 and 2006 data. The sent-down youth sample size is 844 and non sent-down youth sample size is 4789. In the combined data sample, the original income data of 2006 is adjusted by the consume price index to the actual income for the base period of 2002<sup>6</sup>. The variables are illustrated as shown in Table 1.

**Table 1. Variable Description**

Variables	Variable Description
Sent-down experience	dummy variable; 1 for sent-down, 0 for non sent-down
Income	the logarithm of an individual's annual income
Happiness	discrete variable, the value of "1", "2", "3", "4", "5", respectively corresponding to "very unhappy", "not happy", "general", "happy", "very happy"
Years of education	by the education degree conversion; primary school or private school for 6 years; junior middle school for 9 years; senior middle school, technical school, specialized secondary school for 12 years; polytechnic college for 15 years; undergraduate for 16 years; graduate for 19 years
Work experience	the survey year minus the first job year
Sex	dummy variable; 1 for female, 0 for male
Political status	dummy variable; 1 for the Chinese Communist Party member, 0 for others
Housing	dummy variable; 1 for housing, 0 for non-housing
Region	China is divided into four regions: east, middle, west and northeast; set the west as the baseline group and three dummy variables for the east, middle and northeast respectively <sup>①</sup>
Urban size	the cities are divided into three types: large cities, medium-sized cities and small cities; large cities include municipalities and provincial capitals, the medium-sized cities refer to the urban districts of each prefecture-level city; we set the small city as the benchmark group and set two dummy variables respectively for the large city and the medium city
Industry type	dummy variable; 1 for the secondary industry, 0 for the tertiary industry
Unit type	dummy variable; 1 for public sector, 0 for enterprises
Father's education years	by the father's education degree conversion; primary school or private school for 6 years; junior middle school for 9 years; senior middle school, technical school, specialized secondary school for 12 years; polytechnic college for 15 years; undergraduate for 16 years; graduate for 19 years

5 In 1955, Mao Zedong issued a "rural is a vast world, where there is much to do" call. In 1978, the national sent-down youth conference decided to gradually narrow the scope of the sent-down movement and didn't advocate the graduates to sent-down in cities with resettlement conditions. Based on this, we set the period of the sent-down movement for 1955-1978. At that time, the primary school system was 5-6 years and the secondary school system was 4-6 years. If the primary school enrollment age was 7 years, the oldest person who had been sent down in 1955 should be born in 1936; the youngest person who had been sent down in 1978 should be born in 1966.

6 The annual income in the CGSS data for 2003 and 2006 are respectively the individual's annual income in 2002 and 2005.

① The eastern provinces (municipalities) include Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan; the middle provinces include Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan; the western provinces (autonomous regions and municipalities) include Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang; the northeastern provinces include Liaoning, Jilin and Heilongjiang.

Table 2 is descriptive statistics for all variables. From table 2, we can see that the annual income of the sent-down youth group is higher than the non sent-down youth group, but the happiness is opposite. These preliminary descriptive statistical results give us the following questions: Why is the income of the sent-down youth group higher? Has the sent-down experience affected the sent-down youth's income? Why does the sent-down youth group have lower sense of happiness? Has the sent-down experience affected the sent-down youth's happiness?

There are many factors which can affect income and happiness. The sent-down youth group and non sent-down youth group are different in these factors. From table 2, we can see that the sent-down youth group is obviously higher than the non sent-down youth group in the five variables of education degree, female proportion, non-party member ratio, big city proportion and father's education years. Therefore, to answer these questions, we must adopt a more rigorous econometric model to separate the impact of the sent-down experience.

**Table 2.** Descriptive Statistics of Variables

	Non Sent-Down Youth	Sent-Down Youth	Total
The logarithm of annual income	8.945 (0.872)	9.020 (0.836)	8.956 (0.867)
Happiness	3.334 (0.773)	3.280 (0.757)	3.326 (0.771)
Years of education	9.787 (3.209)	10.570 (2.744)	9.907 (3.155)
Work experience	31.305 (10.317)	30.870 (6.331)	31.240 (9.823)
Father's education years	4.726 (4.348)	6.197 (4.507)	4.951 (4.404)
Marriage (%): married	90.4	90.8	90.5
unmarried	9.6	9.2	9.5
Sex (%): female	47.8	54.4	48.8
male	52.2	45.6	51.2
Political status (%): Party member	21.2	19.6	20.9
non-Party member	78.8	80.4	79.1
Housing (%): yes	80.5	82.2	80.7
no	19.5	17.8	19.3
Region (%): east	44.6	48.3	45.1
middle	22.8	19.4	22.3
northeast	10.5	13.0	10.9
west	22.1	19.3	21.7
City (%): large city	39.0	51.5	40.9
medium-sized city	24.7	25.9	24.9
Small city	36.3	22.6	34.2
Industry (%): secondary industry	48.4	51.4	48.9
tertiary industry	51.6	48.6	51.1
Unit type (%): public sector	21.6	21.1	21.5
non-public sector	78.4	78.9	78.5

Note: Standard deviations are presented in parentheses.

## 4. Results

### 4.1 The Sent-Down Experience's Impact on Income

#### 4.1.1 The Results of Overall Sample Regression

Due to the presence of sample selection bias, we use the treatment effect model to study the sent-down experience's impact on one's income. Table 3 lists the results of overall sample regression. The upper part of Table 3 is the main equation regression results while the selection equation regression results are listed in the lower part. The correlation coefficient of the two equations' random error terms is less than zero and very significant. It indicates that there is indeed a serious problem of endogenous selection bias in the variable of sent-down experience. The OLS estimation will underestimate the effect of the sent-down experience. Therefore, it is necessary to use the treatment effect model to estimate. The regression results of the selection equation show that female and father's education years have a significant positive impact on the probability of being sent down. This further confirms our model, indicating that there is "blood relationships" concept in the sent-down movement. The children whose father's education is higher will have a greater probability of being sent down. The parents with more children tend to let the daughter go to the countryside and keep the son in the city.

From the regression results of the main equation, we can see that the sent-down experience has a very significant impact on income. The coefficient is 42% which is larger than other factors. Our research results support Yang and Li (2011)<sup>[8]</sup>, but not Zhou and Hou (1999)<sup>[6]</sup> and Xie et al. (2008)<sup>[7]</sup>. The reason why sent-down experience has a positive impact on income is that the hardship experience has honed young people's will and adaptability to the environment, forming strong and resilient personality characteristics. Research in recent years has shown that non-cognitive skills, such as personality traits, have an important influence on one's labor market performance<sup>[15,16]</sup>.

Among control variables, the education years' effect is significant, but the return rate is only 5.9%; the work experience's effect is not significant. The role of human capital is limited<sup>6</sup>. The gender and political status have significant effects. If other things being equal, women's

<sup>6</sup> This result is related to the sample in our analysis. The people in our sample were born between 1936 and 1966. The age of this group is relatively concentrated. Their work experience is not very different. After the reform and opening up, the rapid change of Chinese society makes the experience of specific work is limited. Educational disruption during the Cultural Revolution makes their education level is generally low. Their average years of schooling are less than 10.

income are 25.7% lower than men; the Party member's income are 15.9% higher than non-Party members. That is a sign of discrimination in Chinese labor market. The variables of region, city size, industry type and unit type have a significant effect. The people in the eastern region, large cities, tertiary industry and public sector have higher income. That is the performance of segmentation in Chinese labor market.

#### 4.1.2 The Results of Sub-Sample Regression

In order to test the heterogeneity and robustness of the sent-down experience's impact on income, we perform regression by sub-sample at different latitudes. It can be seen from Table 4 that, except for the sub-samples of the northeast and western regions, the sent-down experience has a significant positive effect on income in all the other sub-samples, while  $\rho$  is less than zero and statistically significant. That indicates that the sent-down experience's positive impact on income is very robust. From the comparison of the coefficients, we can see that the sent-

down experience has a greater impact on the income of women, party members, eastern region, medium-sized city, tertiary industry and non-public sector workers.

## 4.2 The Sent-Down Experience's Impact on Happiness

### 4.2.1 The Results of Overall Sample Regression

Table 5 lists the regression results of sent-down experience's impact on happiness based on the ordered probit model. We can see that the sent-down experience has a significant negative impact on one's happiness. Keep other things equal, the happiness of sent-down youths is lower 13% than non-sent-down youths.

Education years and age have a significant positive impact on happiness, but the effects are small. Similar to previous income effects, this may be due to the concentration of age groups and low level of education in the sample. Women, married and Party members' happiness are higher. Marriage has a very large impact on happiness; income and housing's impact are also great. It

**Table 3.** The Sent-Down Experience's Impact on Income (Overall Sample Regression Results)

Dependent variable: the logarithm of annual income	Coefficient	Robust standard error
Sent-down experience	0.422***	(0.070)
Years of education	0.059***	(0.004)
Work experience	0.002	(0.006)
The square of work experience	0.000	(0.000)
Female	-0.257***	(0.023)
Party member	0.159***	(0.024)
Eastern region	0.293***	(0.030)
Middle region	-0.033	(0.034)
Northeast region	-0.314***	(0.040)
Large city	0.221***	(0.028)
Medium-sized city	0.121***	(0.030)
Secondary industry	-0.119***	(0.024)
Public sector	0.267***	(0.027)
Constant term	8.126***	(0.108)
Dependent variable in selection equation: sent-down experience		
Female	0.173***	(0.046)
Father's education years	0.040***	(0.005)
Constant term	-1.285***	(0.042)
$\rho$	-0.326***	(0.047)
Sample size	4426	

Note: \*, \*\*, \*\*\*, respectively indicate 10%, 5%, 1% significant level.

**Table 4.** The Sent-Down Experience's Impact on Income (Sub-Sample Regression Results)

Dependent variable: the logarithm of annual income								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Male	Female	Non-Party members	Party members	Eastern region	Middle region	Northeast region	Western region
Sent-down experience	0.305*** (0.109)	0.455*** (0.082)	0.425*** (0.085)	0.461*** (0.122)	0.675*** (0.106)	0.387*** (0.144)	0.282 (0.225)	0.168 (0.177)
Other independent variables	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
Constant term	8.359*** (0.167)	7.665*** (0.141)	8.145*** (0.121)	8.132*** (0.236)	8.575*** (0.169)	8.241*** (0.206)	7.837*** (0.281)	7.806*** (0.233)
p	-0.268*** (0.07)	-0.333*** (0.057)	-0.327*** (0.054)	-0.362*** (0.105)	-0.508*** (0.069)	-0.336*** (0.092)	-0.225 (0.157)	-0.103 (0.116)
Sample size	2322	2104	3421	1005	2020	987	512	907
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
	Large city	Medium-sized city	Small city	Tertiary industry	Secondary industry	Non-public sector	Public sector	
Sent-down experience	0.388*** (0.144)	0.469*** (0.121)	0.444*** (0.119)	0.491*** (0.107)	0.357*** (0.087)	0.439*** (0.087)	0.343*** (0.102)	
Other independent variables	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	
Constant term	8.276*** (0.177)	8.308*** (0.192)	8.279*** (0.191)	8.050*** (0.136)	8.059*** (0.178)	8.199*** (0.122)	8.063*** (0.221)	
p	-0.365*** (0.114)	-0.323*** (0.081)	-0.278*** (0.062)	-0.398*** (0.069)	-0.263*** (0.059)	-0.327*** (0.057)	-0.312*** (0.080)	
Sample size	1935	1116	1375	2223	2203	3468	958	

Note: Standard errors are presented in parentheses. \*, \*\*, \*\*\*, respectively indicate 10%, 5%, 1% significant level.

**Table 5.** The Sent-Down Experience's Impact on Happiness (Overall Sample Regression Results)

Dependent variable: happiness	Coefficient	Robust standard error
Sent-down experience	-0.126***	(0.042)
Years of education	0.015***	(0.006)
Age	0.011***	(0.002)
Female	0.290***	(0.032)
Marriage	0.517***	(0.054)
Party-member	0.181***	(0.039)
The logarithm of annual income	0.344***	(0.021)
Housing	0.279***	(0.040)
Eastern region	-0.093**	(0.042)
Middle region	-0.072	(0.048)
Northeast region	-0.082	(0.060)
Large city	-0.187***	(0.039)
Medium-sized city	-0.092**	(0.041)
Sample size		5348

Note: \*, \*\*, \*\*\*, respectively indicate 10%, 5%, 1% significant level.



shows that the family and economic base are important sources of happiness. The eastern region's happiness is significantly lower, but there is no significant difference among other regions. The city is larger; the sense of happiness is lower.

#### 4.2.2 The Results of Sub-Sample Regression

In order to test the heterogeneity and robustness of the sent-down experience's impact on happiness, we perform

regression by sub-sample at different latitudes. It can be seen from Table 6 that, except for some sub-samples with no significant influence, the sent-down experience has a significant negative impact on happiness in other sub-samples. It indicates that the sent-down experience's negative impact on happiness is very robust. From the comparison of the coefficients, we can see that the sent-down experience has a greater negative impact on the happiness of men, married, non-party members, eastern region, large and medium-sized city workers.

**Table 6.** The Sent-Down Experience's Impact on Happiness (Sub-Sample Regression Results)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Male	Female	Unmarried	Married	Non-Party member	Party member	Non-housing	Housing
Sent-down experience	-0.152***	-0.098*	-0.065	-0.131***	-0.143***	-0.058	-0.080	-0.137***
	(0.059)	(0.059)	(0.117)	(0.044)	(0.047)	(0.089)	(0.105)	(0.045)
Other independent variable	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
Sample size	2778	2570	488	4860	4200	1148	1034	4314
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
	Eastern region	Middle region	Northeast region	Western region	Large city	Medium-sized city	Small city	
Sent-down experience	-0.171***	-0.142	0.074	-0.147	-0.129**	-0.134*	-0.116	
	(0.062)	(0.095)	(0.101)	(0.096)	(0.060)	(0.081)	(0.089)	
Other independent variable	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled	
Sample size	2424	1188	600	1136	2231	1331	1786	

Note: Standard errors are presented in parentheses. \*, \*\*, \*\*\*, respectively indicate 10%, 5%, 1% significant level.

## 5. Conclusions and Implications

The Chinese sent-down movement between mid 1950s to the late 1970s is a suffering period for Chinese sent-down youths. This paper employs the treatment effect model and the ordered probit model to investigate the sent-down experience's impact on sent-down youths' income and happiness by using CGSS2003 and CGSS2006 data. By doing so, we can explore the long-term consequences of one's suffering experience. The overall sample regression results show that sent-down experience increase 42% of individuals' income, while reducing 13% of individuals' happiness. Sub-sample analysis results show that the positive impact of sent-down experience on income and the negative impact of sent-down experience on happiness are very robust. The sent-down experience has a greater contribution to the income

of women, Party members, eastern region, medium-sized city, tertiary industry and non-public sector workers while it has a greater negative impact on the happiness of men, married, non-party members, eastern region, large and medium-sized city workers. The conclusions of our research have the following three important implications.

First, it is necessary to rationally rethink the history of the sent-down movement and take a correct view of the current grass-roots employment policy for university graduates. Although the sent-down movement made a large number of young people lose their educational opportunities at school and brought great pain to the individual, family and society, but this movement is a product under specific historical condition in China. It can not be evaluated separately from the specific policy background of disorderly education expansion, industrialization strategy of heavy industry priority

development and the Cultural Revolution in the early years of new China. In that specific era and historical background, even if the sent-down youth didn't be sent down and stayed in the city, they would be unemployed and become idle. Although the sent-down experience was very hard, it had exercised the young people's will and environmental adaptability. That can form strong and tough personality traits and obtain high returns in the future labor market. The current grass-roots oriented employment policy for college graduates is valuable in this sense, but we must pay attention to two points. Firstly, we must comply with college graduates' personal will and let them compare the revenue with opportunity costs to make the choice of whether go to the grass-roots unit. Secondly, we must break the institutional barriers for mobility. It is necessary to allow college graduates to go down to the grassroots, but also to make them can flow out from the grassroots.

Second, personality characteristics have an important impact on the performance of the labor market. The sent-down youths were mostly middle school graduates in adolescence. They came from the city to the remote and unfamiliar rural areas, engaged in heavy manual labor, coupled with life embarrassment. These hardships in adolescence would have an important impact on the formation of their personality characteristics. The new human capital theory in recent years has noticed that non-cognitive skills such as the personality traits formed in the acquired environment have an important influence on the performance of the labor market. However, due to the measurement problem of personality, the empirical evidence of new human capital theory is not sufficient. The results of this study show that the personality traits formed in the acquired environment have an important influence on the performance of the labor market, which is the indirect empirical evidence for the new human capital theory.

Third, the personality trait is a new explanation for the Easterlin paradox. The existing literature generally explains the Easterlin paradox from the relative income theory and the neglected variable theory. The former holds that one's happiness is positively related to his/her relative income in the society. The latter thinks that besides the economic factors, there are some non-economic factors such as environment and inequality that affect happiness. When the economic factor and the non-economic factor are negatively correlated, the Easterlin paradox appears. An important conclusion of this paper is that the sent-down youth's income is higher, but has a lower sense of happiness. That can be regarded as a special Easterlin paradox. The hardships of the sent-down experience

cultivate the sent-down youth a strong psychological quality, but also left a bitter life memory. This personality is the cause of sent-down youths' high income but low happiness sense. The interpretation of Easterlin's paradox from personality can be regarded as a new ignorant variable in the neglected variable theory. Its influence on income and happiness still needs further study.

## Funding

I acknowledge financial support from the National Natural Science Foundation of China (Grant No. 71763007) and the Science and Technology project of Jiangxi Provincial Education Department (Grant No. GJJ170339).

## References

- [1] Liu, X. M., *The History of Chinese Educated Youth: Tide*, Contemporary China Publishing House. 2009.
- [2] Pan, M. X., A Historical Assessment of the "UP to the Mountains, Down to the Villages" Movement, *Sociological Research*, 2005, 5: 154-181.
- [3] Jin, D. L. and G. Y., Jin, *The Research Collection of Chinese Educated Youths' Sent-Down Movement*, Shanghai Social Sciences Press, 2009.
- [4] Gu, H. Z., *The History of Chinese Educated Youths' Sent-Down Movement*, People's Daily Press, 2009.
- [5] Jin, G. Y. and D. L., Jin, The Study on Educated Young People Going and Working in the Countryside from the Documents of Local Chronicles, *Contemporary China History Studies*, 2015, 22(3): 112-122.
- [6] Zhou, X. G. and L. R. Hou, Children of the Cultural Revolution: The State and the Life Course in the People's Republic of China, *American Sociological Review*, 1999, 64(1): 12-36. DOI: 10.2307/2657275.
- [7] Xie, Y., Y. Jiang and E. Greenman, Did Send-down Experience Benefit Youth? A Reevaluation of the Social Consequence of Forced Urban-rural Migration during China's Cultural Revolution, *Social Science*, 2008, 37(2): 686-700. DOI: 10.1016/j.ssresearch.2007.08.002.
- [8] Yang, J. and S. Li, The Impact of Rustication on Sent-down Cohorts' Income, *Frontiers of Economics in China*, 2011, 6(2): 290-310. DOI: 10.1007/s11459-011-0133-5.
- [9] Chen, Y., Z. Y Fan, X. M Gu and L. A Zhou, Arrival of Young Talent: The Send-Down Movement and Rural Education in China, *American Economic Review*, 2020, 110 (11): 3393-3430. DOI: 10.1257/aer.20191414.
- [10] Song, S. G. and L. Zheng, The Impact of the Sent-

- Down Movement on Chinese Women's Age at First Marriage, *Demographic Research*, 2016, 34(28): 797-826.
- [11] Liang, P. H. and J. L. Li, No Regrets Youth? The Long-term Impact of the Sent-Down Experience on Social Trust, *World Economic Papers*, 2014, 2: 90-109.
- [12] de Grip, A., Bosma, H., Willems, D. and van Boxtel, M., Job-Worker Mismatch and Cognitive Decline, *Oxford Economic Papers*, 2008, 60: 237-253. DOI: 10.1093/oep/gpm023.
- [13] Baert, S., B. Cockx and D. Verhaest, Overeducation at the Start of the Career: Stepping Stone or Trap? *Labour Economics*, 2013, 25: 123-140. DOI: 10.1016/j.labeco.2013.04.013.
- [14] Nyhus, E. K. and Pons, E., The Effects of Personality on Earnings, *Journal of Economic Psychology*, 2005, 26(3): 363-384. DOI: 10.1016/j.joep.2004.07.001.
- [15] Almlund, M., A. L. Duckworth, J. J. Heckman, and T. Kautz. Personality Psychology and Economics. In E. A. Hanushek, S. Machin, and L. Woessmann (Eds.), *Handbook of the Economics of Education*, 2011, Vol. 4, Chapter 1, 1-181, Elsevier B.V.
- [16] Heckman, J. J., R. Pinto and P. A. Savelyev, Understanding the Mechanisms through Which an Influential Early Childhood Program Boosted Adult Outcomes. *The American Economic Review*, 2013, 103(6): 2052-2086. DOI: 10.1257/aer.103.6.2052.
- [17] Li, X. M. and X. Q., Zeng, The New Human Capital Theory, *Economic Perspectives*, 2012, 11: 120-126.
- [18] Easterlin, R. A., Does Economic Growth Improve the Human Lot? Some Empirical Evidence. New York: Academic Press, 1974, pp:89-125.
- [19] Easterlin, R. A., Will Raising the Incomes of All Increase the Happiness of All? *Journal of Economic Behavior & Organization*, 1995, 27(1): 35-48. DOI: 10.1016/0167-2681(95)00003-B.
- [20] Easterlin, R. A., Happiness and Economic Growth: the Evidence, in Glatzer, W. et al.(eds): *Global Handbook of Quality of Life: Exploration of Well-Being of Nations and Continents*, 2015, pp: 283-299.
- [21] Clark, A.E., P. Frijters and M.A. Shields, Relative Income, Happiness and Utility: An Explanation for the Easterlin Paradox and Other Puzzles, *Journal of Economic Literature*, 2008, 46(1): 95-144. DOI: 10.1257/jel.46.1.95.
- [22] Zhang, Z. M. and W. L. Mai, Historical Investigation and Reflection on the Sent-Down Movement, *Journal of Henan Normal University*, 1998, 25(5): 40-44.
- [23] Maddala, G. S., *Limited-Dependent and Qualitative Variables in Econometrics*. Cambridge: Cambridge University Press, 1983.

## ARTICLE

# Impact of Institutional Quality on Multilateral Aid in Nigeria

Ezebuilo Romanus Ukwueze<sup>1\*</sup> Uchenna Casmir Ugwu<sup>2</sup> Ogochukwu Anastasia Okafor<sup>3</sup>

1. Department of Economics, University of Nigeria, Nsukka, Enugu State, Nigeria

2. Bio-Resources Development Centre, Ubulu-Uku, Delta state, Nigeria

3. School of Business Education, Federal College of Education (Technical), Umunze, Anambra State, Nigeria

**Received:** 20 April 2021; **Accepted:** 13 September 2021; **Published:** 28 October 2021

**Citation:** Ukwueze E.R., Ugwu U.C., Okafor O.A., Impact of Institutional Quality on Multilateral Aid in Nigeria. *Journal of Economic Science Research*, 2021, 4(4), 3116. <https://doi.org/10.30564/jesr.v4i4.3116>

**Abstract:** The linkage between quality of institutions and economic performance of nations has generated a lot of interest among scholars, due to their influence on development of many countries and effective use of resources including foreign aid from multilateral organizations. Two strands of theories emerge on the institutions-multilateral aids nexus: those for benefits of aid to growth and development; and those for harms caused by aid. The research objective is to investigate the impact of institutional quality on multilateral aid in Nigeria. To do this, the study applied auto-regressive distributed lag (ARDL) bounds testing approach. Data for the study were sourced from the ICRG data, WGI data, QoG database, Transparency International, and World Development Indicators (WDI). The findings show that institutional quality variables do not have any influence on the multilateral aid in Nigeria, except the ‘independence of judiciary’ which appeared statistically significant. In the short-run analysis, the disequilibrium in the long-run equilibrium is corrected for in the next quarter period by about 25%; almost all the variables are statistically and significantly influencing multilateral aid. It is therefore recommended that donor agencies should consider other factors that negatively influence official development assistance (ODA) such as politics, location and colonial history.

**Keywords:** Institutional quality, Multilateral aid, Transparency, Rule of law, Corruption, Political capture

## 1. Introduction

Capital formation has been identified in Development theories as a determining factor for economic transformation of developing countries, just as aid has been identified as a major source of capital formation for economic

growth and development<sup>[1]</sup>. Historically, aid or what is called Official Development Assistance (ODA) could be traced back to the United Nations Charter of the conference of San Francisco on June 26<sup>th</sup> 1945. The motive behind ODA (foreign aid) has been to remove poverty on

---

\*Corresponding Author:

Ezebuilo Romanus Ukwueze,

Department of Economics, University of Nigeria, Nsukka, Enugu State, Nigeria;

Email: [ezebuilo.ukwueze@unn.edu.ng](mailto:ezebuilo.ukwueze@unn.edu.ng)

DOI: <https://doi.org/10.30564/jesr.v4i4.3116>

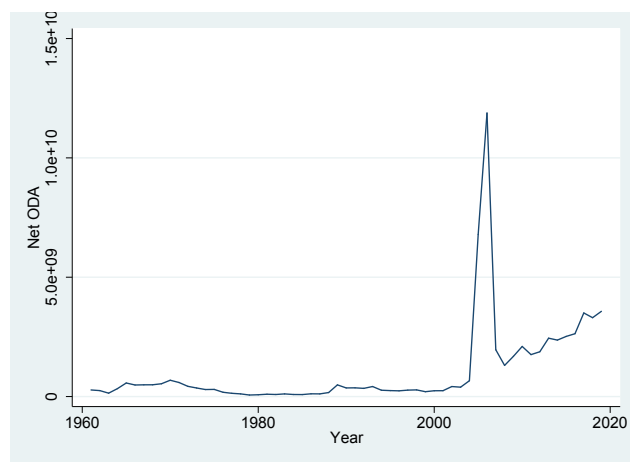
Copyright © 2021 by the author(s). Published by Bilingual Publishing Co. This is an open access article under the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License. (<https://creativecommons.org/licenses/by-nc/4.0/>).



the face of the earth, raise savings and investment, raise growth, and raise living standard in developing countries. Aid comes to developing countries through two ways: multilateral and bilateral aid.

Bilateral aid can be explained as ODA undertaken directly with a developing country by a donor country<sup>[2]</sup>. It includes transactions with Non-governmental organizations (NGOs) which are active in developmental programmes as well as other transactions related to internal development like administrative costs, debt relief and spending on development awareness. It has been accepted by experts that bilateral ODA is given on the basis of political motives of the donor country rather than on the reforms for institutional quality in the aid-receiving country for its own sake<sup>[3]</sup>.

Multilateral aid, on the other hand, involves an international agency(ies) lending helping hands in any or some developmental projects in recipient countries. Multilateral aid is usually given by multilateral agencies or organizations. A multilateral organization is an international organization made up of member nations/governments, with collective goal to govern the organization and primarily supply its funds.



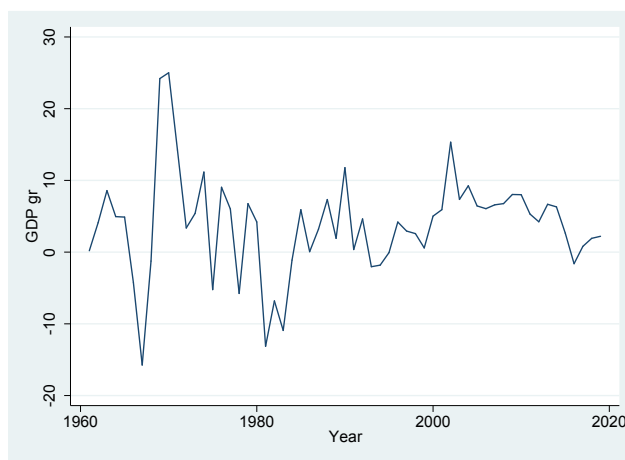
**Figure 1.** Net ODA received and GDP growth rate in Nigeria 1961 - 2019

Source: Computed by authors from WDI database (2020)

From Figure 1, the net official development assistance has been somewhat plummeting over the years until about 2005 when Nigeria was the second largest recipients of ODA, and ranked among the tenth highest recipients in Africa, between the periods of 2009 to 2011<sup>[4]</sup>. Total net bilateral development aid in these same periods stood at US\$1657 million, US\$2062 million, and US\$1813 million respectively. The level of the ODA was very high but declined at about 2008 following the global financial

crisis. After this high level, it grew again but gently and continues to grow even as in 2020.

However, the annual growth rate of the economy (shown in Figure 2) has much fluctuations and never showed a steady-state growth. It could be asserted that the aid had not shown much significant impact on growth rate of Nigerian economy, as it did not show any significant positive result on the chart.



**Figure 2.** Annual GDP growth rate in Nigeria 1961 - 2019

Source: Computed by authors from WDI database (2020)

There is an argument on the premise that the quality of institution is essential in providing an enabling environment for economic prosperity to the poorer proportion of populations in Nigeria. Studies such as<sup>[5-7]</sup> have emphasized on the need for strong institutional quality to guarantee sustainable growth and development. The basic impediments to Africa and Latin America economic progress is in the uncertainty and manipulation white spaces in the judicial system, corruption, bribery, tax evasion, ill-defined property rights and the existence of inefficient institutions as ill-conceived arrangements cause those countries to be risky and unattractive<sup>[8-12]</sup>.

In most developing countries, institutions are mainly of a nature developing redistribution activities instead of production activities, creating monopolies instead of competitive conditions, restricting opportunities instead of developing them, these institutions rarely lead to investments that will increase productivity<sup>[13]</sup>. In addition, wealth accumulation in Africa is likely to be affected by institutional characteristics such as the distribution of political and civil rights, the quality of the legal system and government effectiveness<sup>[14]</sup>.<sup>[15]</sup> alluded that African countries lose \$90 billion annually through illicit financial flow to overseas with bulk of it coming from Nigeria and institutional weakness is one of the major reasons for this setback.

Several studies have shown that revenues from the exploitation of natural resources could hamper growth mainly by weakening institutions<sup>[16]</sup>. This phenomenon, which is better known as the “curse of natural resources” partly relies on the arguments explaining that these additional and unexpected resources provide disincentives for governments to undertake institutional reforms, and are a source of rent-seeking behaviors. Some studies have concluded that foreign aid may also represent a resource curse. Foreign aid transfers have been considered as windfalls in several other studies, and thus as a source of rent-seeking.<sup>[17]</sup> Interestingly point out that aid and natural resources share a common feature inasmuch as they can both be captured by rent-seeking leaders. Similarly, researchers<sup>[18]</sup> also stress that aid and resource rents share the general character of “windfall gains” that disrupt political and economic incentives although some important differences can be noted between them.<sup>[19]</sup> also explain that aid transfers and natural resources both have the character of windfalls since poor countries can benefit from them without much effort and both have the ability to generate rent-seeking.

We should note that government accountability is about the obligations of a government to insure good-quality institutions in return for taxation resources obtained from citizens. The rationale of the arguments explaining the impacts of aid on institutions related on this accountability is based upon the relationship at the equilibrium between the supply of tax revenues and the demand for quality institutions by taxpayers. The expectation is that as long as citizens remain subject to taxes, they are entitled to claim back the effective use of these funds, which are guaranteed by quality institutions. The interesting point to consider here is that aid potentially breaks this equilibrium since it provides the government with funds from outside the country, the consequence being that governments become less accountable to citizens as regards institutional strengthening. Therefore, taxes stemming from citizens are no longer accompanied by the same demand for quality institutions, insofar as the state’s financing demand is reduced by the greater availability of external resources (aid).

Evidence from available literature indicates that although a few studies have assessed the influence of quality institutions in underdeveloped countries, even fewer researches have been undertaken on country-specific study of impact of quality of institutions on multilateral aid. The goal of this study is to investigate the impact of institutional quality on multilateral aid in Nigeria.

## 2. Review of Relevant Literature

The second-best theory of institutional quality states that in the face of limiting factors that inhibit the achievement of the optimal, attaining a greater level of optimization circumstances is not assured to be superior to a situation in which fewer requirements are satisfied.<sup>[20]</sup> are the ones that initially formalized the theory leading to its adoption in many works. According to them, should a variable which impedes the accomplishment of one of the Paretian conditions enters into a general equilibrium system the varying Paretian conditions, although still attainable (second best optimum situation), are no longer desirable. However, the optimal state if eventually achieved may be labeled a second-best optimum given that it is accomplished subject to a limitation which, by description, inhibits the fulfillment of a Paretian optimal.

Another theory is the big push theory which advocates a comprehensive lump-sum of investment package which will push a nation to economic development, on the condition that a given minimum amount of resources must be devoted for developmental programs, and on a condition that the program must be successful.<sup>[21]</sup> was the first to propose the theory while<sup>[22]</sup> later contributed to its development. Rosenstein stressed that less developed countries need large amounts of investments to attain economic development from their current condition of backwardness.<sup>[23]</sup> argued that foreign aid has likened to the big push policy used in the post-World War reconstruction of Europe as it supplied international capital, while<sup>[24]</sup> argued that unless there are reformed institutions and policies, the big push would not be achieved using foreign aid.

Multilateral agencies, in order to prevent political capture, are presumed to possess some degrees of freedom from states’ control<sup>[25]</sup>. Extant literature shows evidently bilateral channels as, clearly, more amenable to political capture when compared to multilateral channels, with adverse consequences for development. Experts have supported the claim of bilateral donors’ interests directly skewed such that allocation of aid favors strategic behavior and political motives, as compared to country’s need or potential for development impact<sup>[26,27]</sup>. Another economist<sup>[28]</sup> asserts that political motive of the donors usually slows chances for growth of economy in comparison with aid through multilateral channels.

Africa has presented a peculiar scenario in terms of aid and political patronage of aid donors. Researchers like<sup>[29-32]</sup> have argued that political patronage has become a regular feature of political trend in Africa. The concept of patronage politics is used to describe a system where rulers buy their position and remain in power by supplying

steady streams of 'rental' returns to maintain respect and supports and be able to influence their anticipated opponents. Many countries in Africa have been affected by and mismanagement of this 'patronage' system has led to untold and unpleasant results: in most countries in Africa, more than half of the incumbent heads of state from their political autonomy to 1991 were imprisoned, executed, assassinated, or forced into exile.

A large number of studies have argued that aid feeds directly into this patronage system<sup>[33-36]</sup>. This is obvious since donor agencies or countries do not and are often unwilling to completely monitor aid<sup>[37-40]</sup>, hence autocrats usually capitalize on this and bolster their regime through it<sup>[41-44]</sup>. The size of amount of ODA used to sponsor patronage systems usually leads autocrats to change some foreign policies in favour of the specific goal to meet<sup>[45]</sup>.

Applying panel data of developing countries,<sup>[46]</sup> retrieved from<sup>[47]</sup>, revealed a direct linkage between institutional performance and foreign aid in developing economies (also supported by<sup>[48-51]</sup>.<sup>[52]</sup> used simultaneous equation model and Generalized Method Moments (GMM) in their study of the effect of foreign direct investment (FDI), foreign aid and government on sustainable development. The study showed that aid supports human capital and sustainable development, while FDI plays more or less negative role due to resource outflow.<sup>[53]</sup> studied several determinants of bureaucratic quality and their effects were estimated applying the International Country Risk Guide (ICRG) data. Their finding shows that the bureaucratic services quality is inversely related when the proportion of a country's foreign aid rises relative to Gross National Product (GNP). The differential effect of aid can be dependent upon the destination country's characteristics or institutional quality such as the composition of public expenditure, corruption, and inequality among others. Furthermore, the argument has been that development aid to less developed nations does not often reach the actual people due to poor institutional quality of developing nations<sup>[54]</sup>.

However, some other researchers assert that foreign aid has played catalytic roles in democratic reforms. The demise of the Cold War made multilateral and bilateral donors become more emphatic on applying stringent conditions for aid, and donor interests became more explicitly political. There are two factors that helped donors to increasingly enforce political conditions on aid in the 1990s<sup>[55]</sup>. The first case is that donors observed that only changes in macroeconomic policies cannot remove structural barriers to economic growth and development, as could exemplified in economically inefficient regulations and opaque implementation of the rule of

law. Using the new concept of "good governance", donor agencies designed aid clauses that demanded institutional changes (reforms) from governments in return for funds<sup>[56-58,42]</sup>.

Second, when the Soviet Union collapsed, recipient countries had less ability to maneuver the conditions; it was difficult for them to evade donor conditions, and had to lose great power to bargain with respect to donors<sup>[29,45,58-60]</sup>. Many researchers have observed that resources from aid are not uniform and vary across countries, regions and continents. Aids have numerous objectives and modalities; some fit into the theories posited in the literature<sup>[61-63]</sup>. As noted by<sup>[64,65]</sup>, donors' amounts given to non-governmental organizations (NGOs) and/or to a project director directly, as example, are most likely to achieve intended targets as opposed to assistance made through budget directly to a government ministry because the latter may be spent like every other item in the budget.

Using GMM techniques for 78 countries using panel data econometrics for the period of 1984-2004<sup>[66]</sup>, analyzed the link between aid volatility and per capita economic growth with particular emphasis on institutional performance. They found that performance of ODA and per capita economic growth was dependent on quality of institutions and a negative linkage between volatility of aid and economic growth of a country. They concluded that aid effectiveness is better in a country with strong institutions. Similar views by<sup>[67,68]</sup>, stated that effectiveness of aid is better achieved in an environment where the quality of institution is high. Despite the enormous funds dispatched to developing countries by international agencies, results have not been achieved in recipient countries, and this creates doubts whether foreign aid is effective for transforming African economies<sup>[50]</sup>.

<sup>[69]</sup> examined whether grants sway growth as countries implement good economic policies. The study revealed that good policies help nation to achieve the targets of aid. The finding is in accordance with<sup>[51]</sup> assertion that good policies and proper management of economy are as important if not of greater importance as foreign aid for developing countries. Some studies have laid credence to the theoretical underpinning that many nations have been fungible in their usage of funds through swapping funds from the aid sectors where they are meant to non-earmarked sectors<sup>[70-72]</sup>.<sup>[73]</sup> investigated the best approach to introduce in making financial aid effective for Ghana and suggested that there should be good planning between the government and donor partners to ensure the multi-donor budgetary support (MDBS) is successful.

The problem of aid effectiveness, according to<sup>[74]</sup>, is that donor funds flow to economies whose policies hamper

growth and impoverish the citizens.<sup>[75]</sup>, also asserted that leaders of these governments create incentives to make institutions of low quality which create avenues for crises to engender more inflows of aid.<sup>[76]</sup> asserted that economies with feeble institutional framework have poor economic growth which leads to difficulties in dealing with political and economic shocks and crisis. In the past decades, funding nations and multinational agencies (e.g. the World Bank), have donated whopping sum of over \$1 trillion USD yearly as ODA to enhance economic development in Africa alone<sup>[77]</sup>; in spite of this monetary assistance, many of these countries have not improved their economic conditions. According to<sup>[78]</sup>, enhancement of institutions is very important to reduce disparity for the reason that better, more democratic institutions assist governments to ensure the basic necessities of life of the poor. This is to say that quality institutions and governance effectively reduce poverty and inequality by redistributing income via progressive tax system and by reducing the sway of the political office holders through clampdowns on corruptive tendencies. When these strong institutions are absent, aid efforts have to be devoted to raising institutional quality and good governance prior to effectively dedicating them to plans for economic development. As good macroeconomic policies, including GDP per capita and income inequality, are considered important for aid allocations, aid would have the ability to reduce poverty<sup>[79]</sup>.

<sup>[80]</sup> revealed that aid to African economies reduces poverty in addition to raising economic growth. Their study empirically evaluated time series data between 1968 and 1999, and concluded that the policy regimes concerning trade and inflation could influence the size of aid received. Institutional political factors including the state of democracy, or regime type have frequently been investigated as they relate with foreign aid effectiveness. According to<sup>[81]</sup>, foreign aid is not effective under elitist regimes, but is effective under totalitarian regimes. Researchers have itemized three varieties of regimes, namely, egalitarian, elitist, and laissez-faire were investigated on how they would utilize foreign aid<sup>[82]</sup>. The outcome showed that elitist regime would ensure only the welfare of the ruling coalition by transferring these funds to few high-income political elites. An egalitarian regime tries to maximize the welfare of a fixed group of citizens with relatively low endowments and tends to ameliorate poverty indicators, while the laissez-faire regime usually maximizes the welfare of a minimum and substantial proportion of the population and utilizes aid to lower distortionary taxes.

Adding to the measurement issues, the mixed findings

(on the link between aids and democracy) may have to do with the condition that some autocrats face riskier elections than others. For example, as there is a higher probability that an autocrat will surrender power, or coerced into better redistribution of government resources more equitably through elections, there is a little chance that donors will be able to promote liberalization. It has been asserted explicitly by<sup>[83]</sup> that aid can only affect democratic regime when the risk of an incumbent losing office is low. He further explains that when this risk is low—using measures of a winning coalition size and economic growth—foreign aid has a direct effect upon democratic governance. Specifically, recent theories suggest that citizens of aid origin are moved by some moral thinking and clearly assume that altruistic motives are behind people's support for aid to poor countries and disapprove of giving aid to unsavory regimes.

Aid inflows increase government spending, in many cases, a phenomenon which economists describe with the concept of *flypaper* effect, meaning that funds from grants and aids induce public expenditures, while revenues coming from taxes lead to less public expenditures<sup>[84]</sup>.<sup>[85]</sup> found out that aid raises the government size and government outlays and hampers the urge to drive taxes for more revenues. This result contravenes market-oriented plans which many donor nations would like the poor countries to adopt. He further concluded that aid induces corruption, because it thwarts incentive drives of politicians to follow good policies.<sup>[86]</sup> asserted that the aid recipient countries receive the funds as 'transfers' they do not spend it well and these governments do not work hard to alleviate suffering or poverty because they believe that more aid will flow in. When aids are handed over to corrupt governments and also kleptocratic elites, "corruption-poverty spirals" become common, deterring economic growth<sup>[87]</sup>. According to<sup>[88]</sup>, recipients of large funds from aid strategically reduce quality of institutions and administrative capacity, and thus create an environment for rent-seeking behavior and creating what he called "*Zairean disease*". When countries depend more on aid than any other source of funds, infighting and struggles to control resources among political class over huge flow of resources from aid is intensified and corruption levels heightened.

Given all these facts, literature on the influence of corruption and other institutional quality on aid effectiveness have been rife with mixed results. Therefore, we do not have clear consensus on the linkage between institutional quality indicators and aid. Most researches reviewed focused on cross-country assessment and little or no country-specific study has been undertaken. Therefore,



it becomes imperative to investigate the influence of foreign aid on institutional quality in Nigeria, especially as she has accumulated so much from aid and yet has been branded the “headquarter of poverty” in the world.

### 3. Methodology and Data

#### Theoretical Framework

The RN-DI (recipient-need and donor-interest) model by<sup>[89]</sup> is the framework for this study. The RN-DI model suggests that agencies which give aid have underlying factors which affect their aid allocation decisions. Donor nations’ interest is focused either on donors’ interests or recipients’ needs. While donor-interest model is assumed to fit bilateral aid, while the latter model explains multilateral flow<sup>[90]</sup>. The combination of the DI and RN perspectives is used to study varying factors influencing foreign aid, including humanitarian concerns, foreign relations (political interest), and economic interests. It is inadequate as another dimension (namely, policy performance variable) has been added to the study of the determinants of multilateral aid flow. Hence, while donor-interest illustrates the economic, strategic, and political interests of the donor; recipient-need explains the social, economic, and human development needs of the aid-receiving countries, and policy performance explains the economic fundamentals of the recipient nation<sup>[91]</sup>.

Therefore, in the current study, we will pay greater attention to policy performance variables. The model is estimated using longitudinal data for Nigeria between 1980 and 2016. The variables used were gotten from the Quality of Governance database and World Development Indicators of the World Bank. The methodology applied was Auto-Regressive Distributed Lag (ARDL) bound cointegrated model propounded by<sup>[92-94]</sup>. This econometric method is free from imposition of the restrictive assumption that the variables in the model must have the same order of integration, unlike other approaches, and is robust in small samples. The ARDL model yields consistent long-run coefficients which are asymptotically normally distributed irrespective of whether the independent variables are I(1) or I(0)<sup>[94]</sup>.<sup>[95]</sup> shows that this model produces long-run unbiased estimates and reliable t-statistics even if some variables are endogenous. Further, bound test approach appears more appealing than rival tests in the small sample size cases with many parameters.

#### Model Specifications

Based on the theoretical explanations above, we specify the model as for the study as follows:

$$\text{LOG\_ODA} = F(\text{LOG\_GDPPC}, \text{LOG\_POP}, \text{Ind\_judi}, \text{free\_speech}, \text{free\_express}) \quad (1)$$

Econometrically, it becomes

$$\text{ODA} = \beta_0 + \beta_1 \text{GDPpc} + \beta_2 \text{POP} + \beta_3 \text{ind\_judi} + \beta_4 \text{free\_speech} + \beta_5 \text{free\_express} + \varepsilon_t \quad (2)$$

The variables are defined as: ODA = multilateral aid as sourced from Development Indicators published by the World Bank’s

GDPPC = per-capita GDP

POP = population

Ind\_judi = independence of the judiciary, a binary variable indicating if the judiciary is independence or not. This variable is obtained from the quality of governance database.

Free\_speech = index of freedom of speech obtained from the quality of government database

Free\_assoc = index of freedom of expression also extracted from the quality of governance

Where the coefficients  $\beta_0$  and  $\beta_1$ ,  $\beta_2$   $\beta_3$   $\beta_4$   $\beta_5$  are the parameters that characterize the equation and their specification is the objective of the regression exercise.

The model will be estimated using the ARDL form as presented in Equation 3.

$$\begin{aligned} \Delta \text{ODA}_t = & \alpha_0 + \sum_{i=1}^p \beta_n \Delta \text{GDPpc}_{t-i} + \sum_{i=1}^p \delta_i \Delta \text{POP}_{t-i} + \\ & \sum_{i=1}^p \gamma_k \Delta \text{Ind\_judi}_{t-i} + \sum_{i=1}^p \vartheta_i \Delta \text{free\_speech}_{t-i} + \\ & \sum_{i=1}^p \psi_p \Delta \text{free\_Assoc}_{t-i} + \lambda_1 \text{GDPpc}_{t-1} + \lambda_2 \text{POP}_{t-1} + \lambda_3 \text{Ind\_} \\ & \text{judi}_{t-1} + \lambda_4 \text{free\_speech} + \lambda_5 \text{free\_assoc}_{t-1} + \mu_t \end{aligned} \quad (3)$$

### 4. Results and Discussion

#### Unit Root Tests

**Table 1.** Summary of Philip Peron Unit root test result of the series

Variables	test critical vaule (5% level)	Philip-Peron test	Order of Integration
LOG_ODA	-1.943012	-2.525195	I(0)
LOG_GDPpc	-3.447072	-4.948135	I(1)
LOG_POP	-1.943364	-20.8175	I(0)
Ind_judi	-1.943449	-2.298222	I(0)
Free_speech	-2.885249	-7.011193	I(1)
Free_Assoc	-1.943449	-2.167206	I(0)

Source: Authors computation with Eviews 9

The results of the stationarity test for the series used at

both levels and in first difference are presented in Table 1. The Philip-Peron stationarity test was also applied and the result indicates that all the variables were stationary at level except GDPPC and freedom of association as their absolute value of Philip Peron test statistic for GDPPC and Freedom of association exceeded the critical value only with one difference. No variable is  $I(2)$ , hence, we adopted the ARDL bound test approach to check for long run relationship in the model.

### ARDL Bound Test Results

The ARDL Bound test's critical value is dependent on selected lag length. In this case, the optimal lag (p) was determined empirically based on Hannan Quinn Criterion (HQC).<sup>[96]</sup>'s critical values are adopted.

**Table 2.** the ARDL bound test for the model

Test Statistic	Value	K
F-statistic	3.642357	5
Critical Value Bounds		
Significance	10 Bound	11 Bound
10%	2.08	3
5%	2.39	3.38
2.5%	2.7	3.73
1%	3.06	4.15

Source: Authors computation using Eviews 9.0

Table 2 shows the bound test's F-statistics of 14.48909 is greater than the critical upper bound value (3.79) at 5% significant level. This clearly shows a long-run relationship among the variables.

### Empirical Results

Based on the ARDL results as presented in Table 3, long-run linkage between multilateral aid and institutional performance variables in Nigeria are not statistically significant. This means that major institutional quality variables in Nigeria do not significantly affect the level of multilateral aid coming into Nigeria except independence of the judiciary which negatively and significantly affects multilateral aid in Nigeria against a priori expectations. The results show that, apart from independence of the judiciary, that is statistically significant at 5 percent level of significance, other institutional quality variables do not influence multilateral aid in Nigeria significantly. Hence, unit improvement in the independence of judiciary index in Nigeria, decreases multilateral aid by about 15%, holding all other factors constant, implying that judiciary is not free to act on its own and enforce law of contracts.

From expectations, institutional quality variables are major determinants of multilateral aid as can be seen by the policy performance variables argument in the RN-DI model applied by<sup>[91]</sup>. These institutional variables which serve as watch-dogs to donor agencies ought to be the major factors in the determination of aids to economies.

The study objective is to investigate the impact of institutional quality on multilateral aid in Nigeria and from the results obtained, it can be affirmed that most institutional quality variables apart from independence of the judiciary do not significantly affect multilateral aid in Nigeria. This result is quite contrary to economic expectation and even contrary to the empirical arguments of the RN-DI model as exemplified by the findings of<sup>[90]</sup>.

**Table 3.** Estimated Long-run Coefficients Based on ARDL (3, 2, 0, 1, 0, 2)

Dependent variable (ODA)	Coefficient	Standard Error	t-statistic	P-value
GDPPC	1616856.67876	32345474.411033*	0.689352	0.4921
POP	68383374.731743	42260513.202294*	1.618139	0.1087
Ind_judi	429716717.491084	557644526.209210*	0.770593	0.4427
Free_speech	914891612.172300	505703705.822906*	1.809146	0.0733
Free_assoc	-647040599.800278	434085031.927801*	-1.490585	0.1391
C	-8712618228.654552	3347047699.857476*	-2.603076	0.0106
R <sup>2</sup> = 0.540220	Adjusted R <sup>2</sup> = 0.482747			
S.E of regression = 5.60E+08 F-statistics = 9.399617				
Prob (F-statistics) = 0.0000 Durbin Watson (DW) = 2.084650				

(\*) denotes Heteroscedasticity and Autocorrelation (HAC) consistent standard errors

\*\* Denote significant at 5% level;

Source: Authors computation using Eviews 9.0

However, the result is a further proof that multilateral aids to Nigeria are based on other factors that are non-economic in nature. These factors could be more political than rational, and may explain why Nigeria still received huge sums of foreign aid even during the ruthless military regimes.

The coefficient of multiple determination ( $R^2$ ) measures the goodness of fit of the fitted regression line to a set of data. From the model result, the  $R^2$  value of 0.56720 shows that about 57 percent of the variations in the dependent variable (ODA) are explained by variations in the model independent variables. This is reasonably adequate as it is above 50 percent. In similar manner, the F statistics of 9.399617 and its probability of 0.000000 shows that the independent variables are jointly statistically significant and therefore reliable even though they are individually insignificant; the Durbin Watson's value of 2.084650 shows the regression is not spurious.

The next step is to analyze the short-run dynamic impact of institutional quality on multilateral aid. Short-run dynamics of the equilibrium relationship were obtained through the error correction model and the results are presented in Table 4. The error correction term measures the speed at which the dependent (endogenous) variable adjusts to change in the explanatory variables before converging to its equilibrium level.

**Table 4.** Short run Results and Diagnostics Tests results for the model

Dependent Variable (ODA)	Coefficient	Standard Error	t-statistic	P-value
D(ODA(-1))	0.536188	0.073156	7.329394	0.0000
D(ODA(-2))	0.118721	0.044010	2.697556	0.0082
D(GDPPC)	0.000071	0.000026	2.710830	0.0079
D(GDPPC(-1))	-0.000043	0.000024	-1.793504	0.0758
D(POP)	-0.752351	0.490258	-1.534603	0.1279
D(Ind_judi)	0.827361	0.451685	1.831720	0.0699
D(free_speech)	0.053496	0.020035	2.670070	0.0088
D(free_speech(-1))	3.806772	1.441800	2.640291	0.0096
D(free_assoc)	0.012270	0.006407	1.915039	0.0583
CointEq(-1)	-2.534299	1.052750	-2.407314	0.0178

Source: Authors computation using Eviews 9.0

Table 4 reports the results of short dynamics of institutional quality and multilateral aid relationship. The negative and statistically significant estimate of CointEq(-1) validates the established long-run relationship among the variables. The findings also indicate that the estimate of CointEq(-1) is -0.820480 and is statistically significant at 5 percent level. This implies that about 25 percent of the deviations from long run equilibrium are

corrected in the next quarter period.

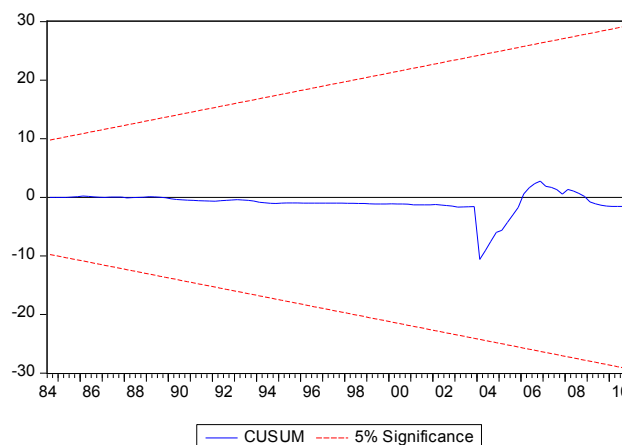
The results of the short-run analysis also indicate that most of the variables are statistically significant even though they were insignificant in the long-run. This indicates that institutional quality significantly affects multilateral aid in Nigeria only for the short-run period even though they do not have long-run statistically significant effect on multilateral aid.

**Table 5.** Diagnostic Tests

Test	F-statistic	Prob. Value
$\chi_{Serial}$	0.700571	0.4987
$\chi_{Arch}$	3.324792	0.0003
$\chi_{Ramsey}$	3.154448	0.0021

Source: Authors computation using Eviews 9.0

The post estimation (diagnostic) tests on the Table 5 also indicate that no problem of serial correlations was identified, as the null hypothesis of serial correlation is rejected. There is also no misspecification error. However, there is a problem of heteroskedasticity in the model which was corrected by presenting Heteroscedasticity and Autocorrelation (HAC) consistent standard errors. Also, the CUSUM figure presented on Figure 1 below explains that the model is stable at 5 percent level of significance.



**Figure 3.** CUSUM test result

## 5. Conclusions

From the results presented above, it has been observed that there exists a long-run relationship between multilateral aid and institutional variables in Nigeria. It could also be observed that the institutional variables do not statistically influence the multilateral aid for the long-run period as the variables are not statistically significant at 5% level of significance. However, only independence of judiciary has a significant influence at

5% level of significance. Also, from the results presented, the short-run results show that the institutional variables significantly influence multilateral aid in Nigeria. The results also indicated no evidence of serial correlation, misspecification error; but showed that the problem of heteroskedasticity exists in the model, but were corrected with Newey-West's Heteroscedasticity and Autocorrelation (HAC) consistent standard errors. The implication of the findings is that the institutional quality variables do not affect multilateral aid in Nigeria, as assumed a priori. This means that the RN-DI model applied by<sup>[89]</sup> does not hold for Nigeria implying that there could be other factors affecting multilateral aid. It is therefore recommended donor agencies should consider other factors that may be at work against official development assistance (ODA) such as politics, location and colonial history.

### Author Contributions

Ogochukwu and Uchenna had the responsibility of reviewing literature. Ezebuilo did the data analysis, discussions and edited the work.

### Conflict of Interest

This study has no conflicting interest of any sort.

### References

- [1] Ogundipe, Adeyemi A.; Ojeaga, Paul and Ogundipe, Oluwatomisin M. (2014). Is Aid Really Dead? Evidence from Sub-Saharan Africa, *International Journal of Humanities and Social Science*, Vol. 4, No. 10(1); August 2014, pp.300-314.
- [2] OECD (2015) *Multilateral Aid 2015: Better Partnerships for a Post-2015 World*. Paris: OECD.
- [3] Charron, Nicholas (2009). Exploring the impact of foreign aid on corruption: Has the 'Anti-Corruption' aid been effective? QoG Working Paper Series, 29, The Quality of Government (QoG) Institute, University of Gothenburg.
- [4] Olanrele, Iyabo A. and Ibrahim, Taofik Mohammed (2015). Does Developmental Aid Impact or Impede on Growth: Evidence from Nigeria, *International Journal of Economics and Financial Issues*, Vol. 5, No. 1, 2015, pp.288-296.
- [5] Thorbecke, E. (2013). Institutions for inclusive growth and development in sub-Saharan Africa. A paper presented at the JICA Conference, University of London.
- [6] Iheonu, C., Ihedimma, G., Onwuanaku, C. (2017). Institutional quality and economic performance in West Africa. Munich Personal RePEc Archive. Paper No. 82212.
- [7] Parks, B., Buntaine, M., Buch, B. (2017). Why developing countries get stuck with weak institutions and how foreign actors can help. [www.google.com/amp/s/www.brookings.edu](http://www.google.com/amp/s/www.brookings.edu).
- [8] Luiz, J.M. (2009). Institutions and economic performance: implications for African development. *Journal of International Development*. 21.
- [9] Fosu, A., Bates, R., Hoeffler, A. (2006). Institutions, governance and economic development in Africa: an overview. *Journal of African Economies*. 15 (1), 1-9.
- [10] Baliaoune, L.M. (2005). Institutions, social capital, and economic development in Africa: an empirical study. International Centre for Economic Research Working Paper No. 18.
- [11] Birdsall, N. (2007). Do no harm: aid, weak institutions and the missing middle in Africa. *Development Policy Review*. 25 (5), 575-598.
- [12] Charnock, G. (2009). Why do Institutions matter? global competitiveness and the politics of policies in Latin America. *Capital ve Class*. 33 (2), 67-99.
- [13] Yildirim, A. (2015). Institutional structure and international competitiveness: a review on Turkey. Unpublished Ph.D Thesis, Mugla: Muğla Sıtkı Koçman University, Institute of Social Sciences.
- [14] Epaphra, M., Kombe, A.H. (2018). Institutions and economic growth in Africa: evidence from panel estimation. Institute of Accountancy Arusha, Tanzania, February, 2018.
- [15] Owasanoye, B. (2019). Nigeria major contributor to Africa's \$90 billion illicit financial outflow. 2019 Africa Union (AU) anti-corruption day in Lagos. <https://allafrica.com/stories/201907120008.html>?
- [16] Sala-i Martin, X., and A. Subramanian (2003). Addressing the Natural Resource Curse: An Illustration from Nigeria, NBER Working Papers 9804, National Bureau of Economic Research, Inc.
- [17] Djankov, S., J. Montalvo, and M. Reynal-Querol (2008). The curse of aid, *Journal of economic growth*, 13(3), 169-194.
- [18] Acemoglu, D., S. Johnson, and J. Robinson (2004). Institutions as the Fundamental Cause of Long-Run Growth, NBER Working Papers 10481, National Bureau of Economic Research, Inc.
- [19] Dalgaard, C.-J., and O. Olsson (2006). Windfall Gains, Political Economy, and Economic Development, Discussion Paper 223, Working Papers in Economics.
- [20] Lipsey, R. G., & Lancaster, K. (1956). The general theory of second best, *The review of economic stud-*



- ies, 24(1), 11-32.
- [21] Rosenstein-Rodan, P. N. (1943). Problems of industrialization of eastern and south-eastern Europe, *The Economic Journal*, 53(210/211), 202-211.
- [22] Shleifer, A., and Vishny, R. (1989). Management Entrenchment: The Case of Manager Specific Investments, *Journal of Financial Economics* 25, 123-139.
- [23] Mosley, Paul, Hudson, John and Horrell, Sara (1987). Aid, the public sector and the market in less developed countries, *Economic Journal*, Vol. 97, Issue 387, 616-41.
- [24] Farah, A. (2009) Foreign aid and the 'big push theory: Lessons from sub Saharan Africa, *Stanford Journal of international relations*.
- [25] Gulrajani, N. (2016). Bilateral and Multilateral Aid Channels: Strategic Choices for Donors, ODI Report.
- [26] Sippel, M. and Neuhoﬀ, K. (2009) 'A history of conditionality: lessons for international cooperation on climate policy', *Climate Policy*, 9(5): 481-494 (<http://doi.org/10.3763/cpol.2009.0634>).
- [27] Nunnenkamp, P. and Thiele, R. (2006). Targeting Aid to the Needy and Deserving: Nothing But Promises? *TWEC World Economy*, 29(9): 1177-1201.
- [28] Girod, D. (2008). Cut from the Same Cloth? Bilateral vs. Multilateral Aid, in *Annual Meeting of the International Political Economy Society*. Philadelphia.
- [29] Bratton, M., & van de Walle, N. (1997). *Democratic experiments in Africa: Regime transitions in comparative perspective*. Cambridge: Cambridge University Press.
- [30] Roniger, L. (1994). Civil society, patronage and democracy, *International Journal of Comparative Sociology*, 35 (3-4), 3-4.
- [31] Keefer, P. (2003). *Clientelism, development, and democracy*. Typescript: World Bank.
- [32] Robinson, James and Verdier, Thierry (2002). The political economy of clientelism, *Scandinavian Journal of Economics* 115(2), DOI: 10.1111/sjoe.12010.
- [33] Alesina, A., & Weder, B. (2002). Do corrupt governments receive less foreign aid? *American Economic Review*, 92 (4), 1126-1147.
- [34] Bauer, P. (2000). *From subsistence to exchange*. Princeton, NJ: Princeton University Press.
- [35] Bates, R. H. (1994). The impulse to reform in Africa. In J. A. Widner (Ed.), *Economic change and political liberalization in Africa* (pp. 13-28). Baltimore, MD: The Johns Hopkins University Press.
- [36] Collier, P. (1997). The failure of conditionality. In C. Gwyn (Ed.), *Perspectives in aid and development*. Washington, DC: Overseas Development Council.
- [37] Ahmed, F. Z. (2012). The perils of unearned foreign income: Aid, remittances, and government survival. *American Political Science Review*, 106 (1), 146-165.
- [38] Brautigam, D. (2000). *Aid, dependence, and governance*, Stockholm: Almqvist and Wiksell.
- [39] Brautigam, D., & Knack, S. (2004). Foreign aid, institutions, and governance in sub-Saharan Africa. *Economic Development and Cultural Change*, 52 (2), 255-285.
- [40] Jablonski, R. (2014). How aid targets votes: The impact of electoral incentives on aid Distribution, *World Politics*, 66(2): 293-330.
- [41] World Bank. (2001). *Aid and reform in Africa*. Washington, DC: World Bank.
- [42] Van de Walle, N. (2001). *African economies and the politics of permanent crisis, 1979-1999*, New York: Cambridge University Press.
- [43] Easterly, W. (2002). The cartel of good intentions: the problem of bureaucracy in foreign aid, *Journal of Policy Reform*, 5 (4), 223-250.
- [44] Robinson, J. (2003). *Politician-proof policy*. Paper Prepared for World Bank 2004 World Development Report.
- [45] Clapham, C. (1996). *Africa and the international system*. Cambridge: Cambridge University Press.
- [46] Drometer, M. (2013). *Institutional Quality and Foreign Aid*, Ifo Institute for Economic Research at the University of Munich.
- [47] Younis, F. (2015). *Institutional Quality, Foreign Aid and Economic Performance*, Munich Personal RePEc Archive (MPRA), Online at <https://mpra.ub.uni-muenchen.de/74147/> MPRA Paper No. 74147, posted 30 September 2016 09:11 UTC.
- [48] Burnside, C., & Dollar, D. (2000). Aid, policies, and growth. *American Economic Review*, 90(4), 847-868.
- [49] Durberry, R., Gemmell, N., & Greenaway, D. (1998). New evidence on the impact of foreign aid on economic growth (No. 98/8). CREDIT Research paper.
- [50] Whitaker, M. T. (2006). *The impact of foreign aid on economic growth*. Bachelor of Arts in Economics Thesis Submitted to the Economics Faculty McAnulty College of Liberal Arts Duquesne University Pittsburgh, Pennsylvania.
- [51] Abuzeid, F. (2009). Foreign Aid and the "Big Push" Theory: Lessons from Sub-Saharan Africa. *Stanford Journal of International Relations*, 11(1), 16-23.
- [52] Kosack, Stephen and Tobin, Jennifer (2006: Funding self-sustaining development: the role of aid, FDI and government in economic success, in: *International*

- Organization, 60:205- 243.
- [53] Knack, S. (2000). Aid Dependence and the Quality of Governance, Policy Research Working Paper, Washington, D.C: World Bank.
- [54] Mosley P, Ellis W, Johnson T. (2000). Aid, Poverty Reduction and the 'New Conditionality'. The Economic Journal 14(2) 114-123.
- [55] Gibson, C., Hoffman, B., & Jablonski, R., (2014). Did Aid Promote Democracy in Africa? The Role of Technical Assistance in Africa's Transitions", University of California, San Diego. <http://ryanjablonski.files.wordpress.com/2014/05/did-aid-promote-democracy-in-africa.pdf> (Accessed: 17/02/2019).
- [56] Nelson, J. M. (1990). Economic crises and policy choice: The politics of economic adjustment in the Third World. Princeton, NJ: Princeton University Press.
- [57] Ihonvbere, J. O. (1996). Where is the Third Wave? A critical evaluation of Africa's non-transition to democracy, *Africa Today*, 43, 343-368.
- [58] Goldsmith, A. (2001). Foreign aid and statehood in Africa, *International Organization*, 55 (1): 123-148. <http://dx.doi.org/10.1162/002081801551432>.
- [59] Crawford, G. (2001). Foreign aid and political reform. London: Palgrave.
- [60] Dunning, T. (2004). Conditioning the effects of aid: Cold War politics, donor credibility, and democracy in Africa. *International Organization*, 58 (2), 409-423.
- [61] Tarp, F. (ed.) (2000). Foreign aid and development. London: Routledge.
- [62] Findley, M. G., Powell, J., Strandow, D. and Tanner, T. (2011). The Localized Geography of Foreign Aid: A New Dataset and Application to Violent Armed Conflict. *World Development* 39(11), 1995-2009.
- [63] Resnick, D. and van de Walle, N. (Eds.) (2013). Democratic trajectories in Africa: Unravelling the Impact of Foreign Aid, Oxford: Oxford University Press.
- [64] Wright, J. and Winters, M. (2010). The Politics of Effective Foreign Aid, *Annual Review of Political Science*, 13:61-80, 10.1146/annurev.polisci.032708.143524.
- [65] Dietrich, Simone (2013). Bypass or Engage? Explaining donor delivery tactics in foreign aid allocation, *International Studies Quarterly*, 57(4): 698-712.
- [66] Kathavate, J., & Mallik, G. (2012). The impact of the Interaction between institutional quality and aid volatility on growth: theory and evidence, *Economic Modelling*, 29(3), 716-724.
- [67] World Bank, Europe & Central Asia Region (1998). Infrastructure Sector, Project appraisal document on a proposed credit in the amount of SDR 7.5 million equivalent to Albania for an urban land management project (No. 17694). World Bank.
- [68] Burnside, C., & Dollar, D. (2000). Aid, policies, and growth. *American economic review*, 90(4), 847-868.
- [69] Easterly, W, Levine, R. and Roodman, D. (2004). Aid, Policies, and Growth: Comment. *American Economic Review*, 94: 774-780.
- [70] Pack, H., & Pack, J. R. (1993). Foreign aid and the question of fungibility, *The Review of Economics and Statistics*, 258-265.
- [71] Khilji, N. M., & Zampelli, E. M. (1991). The fungibility of US assistance to developing countries and the impact on recipient expenditures: a case study of Pakistan. *World Development*, 19(8), 1095-1105.
- [72] Heller, P. S. (1975). A model of public fiscal behavior in developing countries: Aid, investment, and taxation, *The American Economic Review*, 65(3), 429-445.
- [73] Quartey, P. (2005). Innovative ways of making aid effective in Ghana: tied aid versus direct budgetary support, *Journal of International Development*, 17(8), 1077-1092.
- [74] Bauer, P. W., & Hancock, D. (1993). Efficiency and technical progress in check processing. *Economic Review*, Federal Reserve Bank of Cleveland, 29, 24-38.
- [75] Azam, J. P, & Laffont, J. J. (2003). Contracting for Aid, *Journal of Development Economics* 70(1), 25-58.
- [76] Osabuohien, E. S., & Ike, D. N. (2011). Economic Transformation and Institutional Framework in Nigeria-Lessons from Botswana and South Korea, In 52nd Annual Conference of Nigerian Economic Society on Planning and the Transformation of the Nigerian Economy, Covenant University, Ota, Nigeria.
- [77] Moyo, D. (2009). Dead aid: Why aid is not working and how there is a better way for Africa. Macmillan.
- [78] Reuveny, R., & Li, Q. (2003). Economic openness, democracy, and income inequality: an empirical analysis. *Comparative Political Studies*, 36(5), 575-601.
- [79] Mosley, P., Hudson, J., & Verschoor, A. (2004). Aid, poverty reduction and the 'new conditionality'. *The economic journal*, 114(496), F217-F243.
- [80] McGillivray, M., Feeny, S., Hermes, N., & Lensink, R. (2006). Controversies over the impact of development aid: it works; it doesn't; it can, but that depends.... *Journal of International Development: The Journal of the Development Studies Association*, 18(7), 1031-1050.

- [81] Islam, N. (2003). What have we learnt from the convergence debate? *Journal of economic surveys*, 17(3), 309-362.
- [82] Boone, P. (1996). Politics and the effectiveness of foreign aid. *European economic review*, 40(2), 289-329.
- [83] Wright, J. (2009). How foreign aid can foster democratization in authoritarian regimes, *American Journal of Political Science*, 53 (3), 552-571.
- [84] Devarajan, S. and Swaroop, V. (1998) "The Implications of Foreign Aid Fungibility for Development Assistance", Development Research Group, Washington, D.C: World Bank.
- [85] Remmer, K.L. (2004) "Does Foreign Aid Promote the Expansion of Government?", *American Journal of Political Science*, vol.48, 1, pp.77-92.
- [86] Pedersen, K.R. (2001) "The Samaritan's Dilemma and the Effectiveness of Development Aid, *International Tax and Public Finance*, 8, pp.693-703.
- [87] Kasper, W. (2006). Make poverty history: Tackle corruption, The Centre for Independent Studies, No.67.
- [88] Knack, S. (2000). Aid dependence and the quality of governance, Policy Research Working Paper, Washington, D.C: World Bank.
- [89] McGillivray, Mark (2003). Aid Effectiveness and Selectivity: Integrating Multiple Objectives into Aid Allocations, *DAC Journal*, 4 (3): 27-40.
- [90] Maizels, A. and Nissanke, Machiko (1984). Motivations for aid to developing countries, *World Development*, 12(9), pp. 879-900.
- [91] McGillivray, M. (1992). The Impact of Foreign Aid on the Fiscal Behaviour of Asian LDC Governments: A Comment on Khan and Hoshino, *World Development*, 22 (1994): 2015-17.
- [92] Pesaran, H. M; Shin, Y and Smith, R. J. (1996). Testing for the existence of long-run relationship, *Cambridge Working Papers in Economics* 9622, Faculty of Economics, University of Cambridge.
- [93] Pesaran, M.H. and Shin, Y. (1999). An Autoregressive Distributed Lag Modeling Approach to Cointegration Analysis, In: Strom, S., Holly, A., Diamond, P. (Eds.), *Centennial Volume of Rangar Frisch*, Cambridge University Press, Cambridge.
- [94] Pesaran, M. H.; Smith, R. J. and Shin,Y. (2001). Bounds Testing Approaches to the Analysis of Level Relationships, *Journal of Applied Econometrics*, 16, 289-326.
- [95] Harris, Richard and Sollis, Robert (2003). *Applied time series — modelling and forecasting*, Southern Gate. Chichester: John Wiley & Sons Ltd, The Atrium.

## ARTICLE

# The Impact of Money Supply on the Economy: A Panel Study on Selected Countries

**Javier de Oña García Matres Tuan Viet Le\***

Thomas H. Albinson School of Business, West Virginia Wesleyan College, Buckhannon, WV 26201, USA

**Received:** 28 September 2021; **Accepted:** 29 October 2021; **Published:** 30 October 2021

**Citation:** Matres JOG, Le TV, The Impact of Money Supply on the Economy: A Panel Study on Selected Countries. *Journal of Economic Science Research*, 2021, 4(4), 3782. <https://doi.org/10.30564/jesr.v4i4.3782>

**Abstract:** This study investigates the impact of money supply on economic growth rate, inflation rate, exchange rate and real interest rate. We used a panel of 217 countries from 1960 to 2020 and four different models to address these questions. The empirical results support the quantity theory of money. In addition, the study found evidence for a negative relationship between real interest rate and inflation and between money supply and real interest rate. Finally, our results show that lagged money growth rate is positively correlated with GDP growth rate but money growth rate is negatively correlated with GDP growth rate.

**Keywords:** Money supply, Economic growth, Inflation, Real interest rate, Real exchange rate

## 1. Introduction

Most monetarists believe that there is a positive correlation between money supply and inflation rate in the long run. And there is no significant relationship between money supply and economic growth rate. In addition, the value of a country's currency will decrease as well as the exchange rate should its central bank keeps printing money. Nonetheless, the Keynesian economists postulate that there is a positive relationship between money supply and economic growth in the short run should markets experience sticky prices and wages. Economists have

studied this topic for a long time and are still searching for an ultimate answer. This study aims to provide more evidences regarding these arguments at a global scale.

The study uses a panel of 217 countries in the world ranging from 1960 to 2020 to empirically test the impact of money supply on economic growth rates, exchange rates and real interest rates. This study addresses four specific questions:

- (1) Does an increase in money supply boost economic growth?
- (2) Does an increase in money supply lead to increase in inflation rate?

---

\*Corresponding Author:

Tuan Viet Le,

Thomas H. Albinson School of Business, West Virginia Wesleyan College, Buckhannon, WV 26201, USA;

Email: [le\\_t@wvwc.edu](mailto:le_t@wvwc.edu)

DOI: <https://doi.org/10.30564/jesr.v4i4.3782>

Copyright © 2021 by the author(s). Published by Bilingual Publishing Co. This is an open access article under the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License. (<https://creativecommons.org/licenses/by-nc/4.0/>).



(3) Is exchange rate of a currency correlated with money supply?

(4) How does money supply affect real interest rates in an economy?

This paper differs from previous ones in several aspects. First, while most of papers in the literature used cross-sectional or pooled time-series data, this study uses a panel data set that allows us to take care of heterogeneity issue across countries and lessen omitted variable bias. Second, our data are more up to date and cover the longest time range.

## 2. Literature Review

There is a rich literature on the effects of money supply on an economy. Researchers have used different sets of data from different times and different econometric methodologies. The empirical results are mixed. Some studies show evidence that money supply is positively correlated with inflation rate and economic growth. Some show no relationship or negative ones. <sup>[7]</sup> used a sample of 53 countries from 1973 to 1981 and found evidence that growth and inflation are negatively correlated. He also suggested that changes in the growth rate of money have no effect on the capital stock in the long run. <sup>[3]</sup> used data from a sample of about 160 countries from 1969 to 1999 and showed that in the long run, there is a strong positive relationship between inflation and money growth. Yet, such relationship is due to countries with hyperinflation. When it comes to countries with low inflation (less than 10%), the relationship is weak or even doesn't exist. They also found that velocity accelerates with increasing inflation, thereby leading to inflation rates exceeding the growth rates of the money stock. Other studies found evidences to support supports the quantity theory of money, which states that money supply and price level in an economy are in direct proportion to one another <sup>[4-6,10,12-14,18]</sup>.

Regarding the relationship between money supply and economic growth, <sup>[2]</sup> studied a group of selected countries in the ASEAN area including Thailand, Indonesia, Singapore, Malaysia, Philippines, Vietnam, Lao PDR and Cambodia from 1995 to 2013. The results show a positive relationship between money supply and economic growth while demand deposits have a negative relationship with GDP growth. <sup>[1]</sup> found similar results using data from Nigeria. Other studies also found evidence for a positive relationship between money supply and economic growth <sup>[8,9,11,15-17]</sup>.

## 3. Data

This section describes data used in this study. The source of the data is the World Bank Database as described in Table 1. Data was collected on a sample of 217 countries from 1960 to 2020.

**Table 1.** Variables and Sources

Variable	Sources
GDP Growth Rate	World Bank Database
Money Supply	World Bank Database
Inflation Rate	World Bank Database
Unemployment Rate	World Bank Database
Real Interest Rate	World Bank Database
Foreign Direct Investment	World Bank Database
Government Expenditure	World Bank Database
Gross Fixed Capital Formation	World Bank Database
Real Exchange Rate	World Bank Database
Corruption	World Bank Database

When studying the impact of money supply on economic growth, there are other variables that could affect and change GDP as well. So, we included as many relevant and significant explanatory variables as possible. The number of variables studied in this research is 11, and they are GDP growth rate, money supply, real interest rate, unemployment rate, gross fixed capital formation, foreign direct investment, level of education, level of corruption, government expending and exchange rate. We used lagged GDP growth rate to control for any potential endogenous issues.

## 4. Econometric Methods

This section discusses empirical methods. To answer the research questions, it is important to look at different aspects of the economy that are related to the question. Thus, this study has four different models that seek to address the impact of specific explanatory variables on different dependent variables.

In the first model, we examine the relationship between money supply growth rate and GDP growth rate. The first model is as follows:

$$\begin{aligned} \text{GDP Growth rate}_{it} = & b_0 + b_1 \text{ Money Supply Growth Rate}_{it} + b_2 \text{ Money Supply Growth Rate}_{it-1} + b_3 \text{ Money} \\ & \text{Supply Growth Rate}_{it-2} + \beta_4 \text{ GDP Growth Rate}_{it-1} + \beta_5 \\ & \text{Real Interest Rate}_{it} + \beta_6 \text{ Unemployment Rate}_{it} + \beta_7 \\ & \text{Gross Fixed Capital Formation}_{it} + \beta_8 \text{ Foreign Direct} \\ & \text{Investment}_{it} + \beta_9 \text{ Level of Corruption}_{it} + \varepsilon_{it} \end{aligned} \quad (1)$$

This model seeks to identify the impact of money supply growth rate on GDP growth rate. Money supply growth rate is the main of interest independent variable. Real interest rate should affect GDP growth rate because if it decreases households and firms will invest more and it will help the economy grow and vice versa. If unemployment is low, there is more people working and total output increases, and vice versa. Gross fixed capital formation includes land improvements; plant, machinery, and equipment purchases; and the construction of roads, railways, and the construction

of infrastructures like schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. In addition, foreign direct investment affects GDP because if foreign firms invest in a country and produce goods and services in such country, they are helping the economy grow. The level of corruption has an impact on how the economy does as well because a corrupted government would seek their benefit and hurt the economy. If they steal money or apply fiscal or monetary policies that benefit them instead of the country, total output and growth will be affected in a negative way.

In the second model, we investigate the relationship between money supply growth rate and inflation rate. The second model is the following:

$$\text{Inflation Rate}_{it} = b_0 + \beta_1 \text{Inflation Rate}_{it} + b_2 \text{Money Supply Growth Rate}_{it} + b_3 \text{Money Supply Growth Rate}_{it-1} + \beta_4 \text{Real Interest Rate}_{it} + \beta_5 \text{Gross Fixed Capital formation}_{it} + \beta_6 \text{Foreign Direct Investment}_{it} + \beta_7 \text{Government Expending}_{it} + \varepsilon_{it} \quad (2)$$

This model looks at inflation and some of the variables that have an impact on it such as money supply growth rate, real interest rate, gross fixed capital formation, foreign direct investment and government expending. If a country increases money supply, there will be more money available in the economy, which will lead to an increase in prices (inflation). In addition, as seen before in the previous model, interest rate, gross fixed capital formation and foreign direct investment are related to economic growth, which also leads to inflation.

In the third model, we study the correlation between money supply growth rate and exchange rate. The third model is the following:

$$\text{Real Exchange Rate}_{it} = b_0 + b_1 \text{Money Supply Growth Rate}_{it} + b_2 \text{Real Interest Rate}_{it} + b_3 \text{Gross Fixed Capital Formation}_{it} + \beta_4 \text{Foreign Direct Investment}_{it} + \varepsilon_{it} \quad (3)$$

This model looks at how exchange rate is correlated by money supply growth rate, real interest rate, gross fixed capital formation and foreign direct investment. If money supply increases, the currency of that country will depreciate, and this will make exports rise. Gross fixed capital represents a country's assets and foreign direct investment if other countries believe it is worth it to invest, and both variables can affect exchange rate.

Finally, in the last model we look at the relationship between money supply growth rate and real interest rate. The model is as follows:

$$\text{Real Interest Rate}_{it} = b_0 + b_1 \text{Money Supply Growth Rate}_{it} + b_2 \text{Government Expending}_{it} + b_3 \text{Foreign Direct Investment}_{it} + \varepsilon_{it} \quad (4)$$

This last model uses money supply growth rate, government expending and foreign direct investment to predict real interest rate. In theory, if money supply

increases interest rate will decrease and output will increase. In addition, government expending and foreign direct investment are related to real interest rate because investment depends on interest rate and the amount of government expending determines if interest rate increases or decreases.

## 5. Empirical Results

### 5.1 OLS Regressions

Table 1 describes sources of data. Table 2 is the correlation matrix and Table 3 provides summary statistics of all variables used in this study.

We begin with the baseline OLS regressions results. The first columns of Tables 4, 5, 6, and 7 provide the empirical results for the OLS regressions for all four models discussed in the previous section. According to Table 4, the signs of the coefficients are what it was expected for most of the explanatory variables. Yet, money supply growth rate appears to have the opposite sign than expected. One possible reason for the negative sign of money supply growth rate is that when an economy is not doing so well and GDP decreases, the central bank usually increases money supply to help the economy. Thus, money supply growth rate and GDP growth rate have a negative relationship but lagged money supply is positive because it takes time for the monetary policies to have an impact on output. The coefficient of money supply growth rate is -0.059 and it is statistically significant at the 1% level. The coefficient of lagged money supply growth rate is 0.048 and it is statistically significant at the 1% level.

Regarding the second model, the coefficients of real interest rate, FDI and gross fixed capital formation are statistically significant and relevant. The sign of interest rate is negative as it was expected because if interest rates are low, investment increases and the economy will grow. Yet, the sign of gross fixed capital formation being negative does not correspond to the theory because if it increases, GDP will increase and so will inflation. In addition, it is important to say that even though money supply growth rate is not statistically significant in this model its coefficient is positive as expected.

The third model measures the impact of money supply, interest rate, FDI, and gross fixed capital formation on real exchange rate. Out of these variables, the results show that only real interest rate and FDI are statistically significant. Foreign direct investment seems to be the most significant and relevant explanatory variable, but its coefficient does not correspond with the theory. The results show a negative relationship between FDI and exchange rate, but in theory if FDI increases, the demand for the currency increases and the exchange rate appreciates or rises.

**Table 2.** Overall Summary Statistics

	Observations	Mean	S.D.	Minimum	Maximum
GDP Growth Rate	9,504	3.82	6.19	-64.05	149.97
Money Supply	7,462	45.12	36.36	0	400.41
Inflation Rate	7,897	24.33	339.50	-30.24	23,773.13
Unemployment Rate	5,610	8.09	6.16	0.11	37.97
Real Interest Rate	4,144	5.69	15.63	-97.69	628.32
Foreign Direct Investment	7,983	5.57	47.33	-1268.17	1,704.59
Government Expenditure	7,930	16.11	8.01	0	147.73
Gross Fixed Capital Formation	7,397	22.31	8.18	-2.42	95.32
Real Exchange Rate	3,591	116.28	115.00	18.73	3,520.35

**Table 3.** Correlation Matrix

	GDP Growth Rate	Money Supply Growth Rate	Inflation Rate	Unemployment Rate	Interest Rate	FDI	Gov. Expenditures	Exchange Rate	Fixed Capital Formation
GDP Growth Rate	1								
Money Supply Growth Rate	-0.14	1							
Inflation Rate	0.02	-0.20	1						
Unemployment Rate	-0.09	-0.08	-0.11	1					
Interest Rate	0.02	-0.27	-0.03	0.07	1				
FDI	0.18	-0.14	0.06	0.18	0.10	1			
Gov. Expenditures	-0.15	0.23	-0.10	0.54	-0.20	-0.01	1		
Exchange Rates	-0.05	0.08	-0.26	-0.28	-0.01	-0.06	-0.25	1	
Fixed Capital Formation	0.17	-0.03	-0.14	0.38	-0.11	0.39	0.15	-0.21	1

**Table 4.** Regression Results of Model 1

Independent Variables	OLS	Fixed-Effects Model
Intercept	2.269 (0.883)	0.4565 (1.818)
Lag GDP	0.312*** (0.098)	0.208*** (0.042)
Money Supply Growth Rate	-0.059*** (0.022)	-0.054*** (0.013)
Money Supply Growth Rate <sub>(t-1)</sub>	0.048*** (0.015)	0.024* (0.013)
Money Supply Growth Rate <sub>(t-2)</sub>	0.014 (0.012)	0.007 (0.011)
Unemployment Rate	-0.073*** (0.025)	-0.324*** (0.116)
Real Interest Rate	-0.0039 (0.015)	0.013 (0.021)
Foreign Direct Investment	0.048** (0.019)	0.101*** (0.022)
Gross Fixed Capital Formation	0.035** (0.017)	0.021 (0.028)
Corruption	0.273 (0.28)	-1.551*** (0.549)
N	621	621
R <sup>2</sup>	0.28	0.26

\*\*\*p<0.01, \*\*p<0.05, \*p<0.1 Numbers in parenthesis are robust standard errors.

(Dependent Variable = GDP Growth Rate)

**Table 5.** Regression Results of Model 2

Independent Variables	OLS	Fixed-Effects Model
Intercept	65.12 (29.74)	62.95 (19.90)
Inflation Rate <sub>(t-1)</sub>	0.344 (0.256)	0.312*** (0.014)
Money Supply Growth Rate	0.717 (0.652)	1.057*** (0.256)
Money Supply Growth Rate <sub>(t-1)</sub>	0.294 (0.385)	0.233 (0.231)
Real Interest Rate	-2.18** (1.084)	-3.394*** (0.315)
Foreign Direct Investment	-0.291** (0.146)	-0.357 (0.525)
Gross Fixed Capital Formation	-0.659** (0.303)	-0.792* (0.489)
Government Expenditure	-0.898 (0.56)	-1.077 (1.042)
N	2836	2836
R <sup>2</sup>	0.199	0.192

\*\*\*p<0.01, \*\*p<0.05, \*p<0.1 Numbers in parenthesis are robust standard errors.

(Dependent Variable = Inflation Rate)

Finally, the fourth model aims to examine the relationship between interest rate and money supply growth rate. The results show that the coefficients of money supply growth rate is statistically significant at the 1 percent level. The sign of the coefficient of money supply is negative as it was expected, because an increase in money supply will lower interest rate and vice versa.

**Table 6.** Regression Results of Model 3

Independent Variables	OLS	Fixed-Effects Model
Intercept	106.72 (8.29)	97.75 (7.29)
Money Supply Growth Rate	0.416* (0.234)	0.386*** (0.144)
Real Interest Rate	-0.415** (0.191)	-0.335*** (0.089)
Foreign Direct Investment	-1.354*** (0.318)	-2.197*** (0.351)
Gross Fixed Capital Formation	0.574 (0.402)	1.132*** (0.317)
N	1641	1641
R <sup>2</sup>	0.12	0.12

\*\*\*p<0.01, \*\*p<0.05, \*p<0.1 Numbers in parenthesis are robust standard errors.

(Dependent Variable = Real Exchange Rate)

**Table 7.** Regression Results of Model 4

Independent Variables	OLS	Fixed-Effects Model
Intercept	3.73 (1.19)	-1.93 (1.40)
Money Supply Growth Rate	-0.347*** (0.042)	-0.336*** (0.022)
Government Expenditure	0.082 (0.09)	0.469*** (0.088)
Foreign Direct Investment	0.49 (0.031)	-0.025 (0.050)
N	3246	3246
R <sup>2</sup>	0.06	0.05

\*\*\*p<0.01, \*\*p<0.05, \*p<0.1 Numbers in parenthesis are robust standard errors.

(Dependent Variable = Real Interest Rate)

## 5.2 The Fixed-Effects Model

As this study uses a panel set of data of different countries over a long period of time, one can argue that the OLS estimators may not capture the impacts of unobserved characteristics of observations. The unobserved features may correlate with the explanatory variables in our models. According to <sup>[19]</sup>, one way to deal with it is to difference the data in adjacent time periods

then apply pooled OLS. The alternative is to use a Fixed-Effects regression, which is more efficient when the error terms are not serially correlated. Another option is to use a Random-Effects estimator, which is suitable if the unobserved feature is not correlated with explanatory variables.

Given the long period in the dataset, we believe the Fixed-Effects estimator is more efficient than the pooled OLS's. In addition, the Fixed-Effects estimator is unbiased as it is likely that the unobserved characteristics correlate with the explanatory variables in the models. Furthermore, we checked whether the Random-Effects specification is more appropriate than the Fixed-Effects one or not. To carry out this task, we used the Hausman (1978) specification test. The result is  $\chi^2(7) = 152.39$  and Prob.  $> \chi^2 = 0.000$ . It rejects the Random-Effects specification. Thus, we argue that the Fixed-Effects regressions provide results that are more appropriate.

The second columns of Tables 4,5,6, and 7 show the results for the Fixed-Effects models. According to Tables 4,5,6, and 7, the Fixed-Effects and OLS regressions have similar results regarding signs and significant levels of main independent variables. Overall, these results support what we obtained from the OLS regressions.

## 6. Conclusions

This study investigates the relationship between money supply growth rate and economic growth rate, inflation rate, real exchange rate and real interest rate. We used a panel of 217 countries in the world ranging from 1960 to 2020, the OLS, and the Fixed-Effects regressions to empirically test four different models. The results show a negative relationship between money supply growth rate and economic growth rate in the first year but a positive relationship in the second year. We also found evidence for a negative relationship between real interest rate and inflation and between real interest rate and money supply as expected from the literature. In addition, our results support the argument of the quantity theory of money. In the long run, an increase in money supply might lead to an increase in inflation rate.

The results suggest that an increase in money supply may support the economy in the short run but may create inflation in the long run. Policymakers and central banks may not want to overuse an expansionary monetary policy to avoid inflation scenarios.

## References

- [1] Adetunji. M and Isa.M (2011), "Money Supply, Inflation and Economic Growth in Nigeria" *Asian-African*



- Journal of Economics and Econometrics*, Vol 11, No 1, pp 221-237.
- [2] Chaitip. P et al. (2015), "Money Supply Influencing on Economic Growth-Wide Phenomena of AEC Open Region" *International Conference of Applied Economics*, Vol 24, pp. 108-115.
  - [3] De Grauwe. P and Polan. M (2005), "Is Inflation Always and Everywhere a Monetary Phenomenon?" *Scand. J. of Economics*, Vol 107(2), pp. 239-259.
  - [4] Drabicki. J and Takayama. A (1984), "The Stability of a Neoclassical Monetary Growth Model" *The Economic Studies Quarterly*, Vol 35, No 3.
  - [5] Dwyer, G. P. Jr. and Hafer, R. W. (1999), "Are Money Growth and Inflation Still Related?", Federal Reserve Bank of Atlanta Economic Review 84, 32-43.
  - [6] Emerson. J (2006), "The Quantity Theory of Money: Evidence from the United States" *Economics Bulletin*, Vol. 5, No. 2 pp. 1-6.
  - [7] Fischer. S (1983), "Inflation and Growth" *National Bureau of Economic Research*, No 1235.
  - [8] Friedman, B, and Kuttner, K. (1992), "Money, Income, Prices, and Interest Rates.", *The American Economic Review*, 82: 472-492.
  - [9] Herwartz, H., and Reimers H.-E. (2006), "Long-Run Links among Money, Prices and Output: Worldwide Evidence", *German Economic Review*, Vol. 7: 65-86.
  - [10] Jansen, E. (2004), "Modelling Inflation in the Euro Area", ECB Working Paper no. 322, Frankfurt.
  - [11] Majid, M. Z. A. (2007), "Causal Link between Money, Output and Prices in Malaysia: An Empirical Re-Examination", *Applied Econometrics and International Development*, 7(1).
  - [12] Miyao, R. (1996) "Does a Cointegrating M2 Demand Relation Really Exist in the United States?", *Journal of Money, Credit, and Banking* 28 (3), 365-380.
  - [13] Moosa, I. A. (1997) "Testing the long-run neutrality of money in a developing economy: The case of India.", *Journal of Developmental Economics* 53, 139-155.
  - [14] Moazzami, B. and Gupta, K. L. (1996) "The quantity theory of money and its long-run implications.", *Journal of Macroeconomics* 17, 667-682.
  - [15] Owoye O, Onafowora AO. (2007) "M2 Targeting , Money Demand and Real GDP Growth in Nigeria: Do Rules Apply?" *Journal of Business and Public Affair*, 1(2): 25-34.
  - [16] Ramachandra, V. S. (1986) "Direction of Causality between Monetary and Real Variables in India-An Extended Result.", *Indian Economic Journal*, 34: 98-102.
  - [17] Sims C.A. (1992). "Money Income, Causality", *American Economic Review*, 62: 540 -542.
  - [18] Whitesell, W. (1997) "Interest Rates and M2 in an Error Correction Macro Model." *Finance and Economics Discussion Series* 59, Washington: Board of Governors of the Federal Reserve System.
  - [19] Wooldridge, J. M., (2019). *Introductory Econometrics: A Modern Approach*, 7<sup>th</sup> Edition, Mason, Ohio: South-Western Cengage Learning.





**BILINGUAL  
PUBLISHING CO.**  
Pioneer of Global Academics Since 1984

Tel: +65 65881289  
E-mail: [contact@bilpublishing.com](mailto:contact@bilpublishing.com)  
Website: [ojs.bilpublishing.com](http://ojs.bilpublishing.com)

ISSN 2630-5240



9 772630 524218