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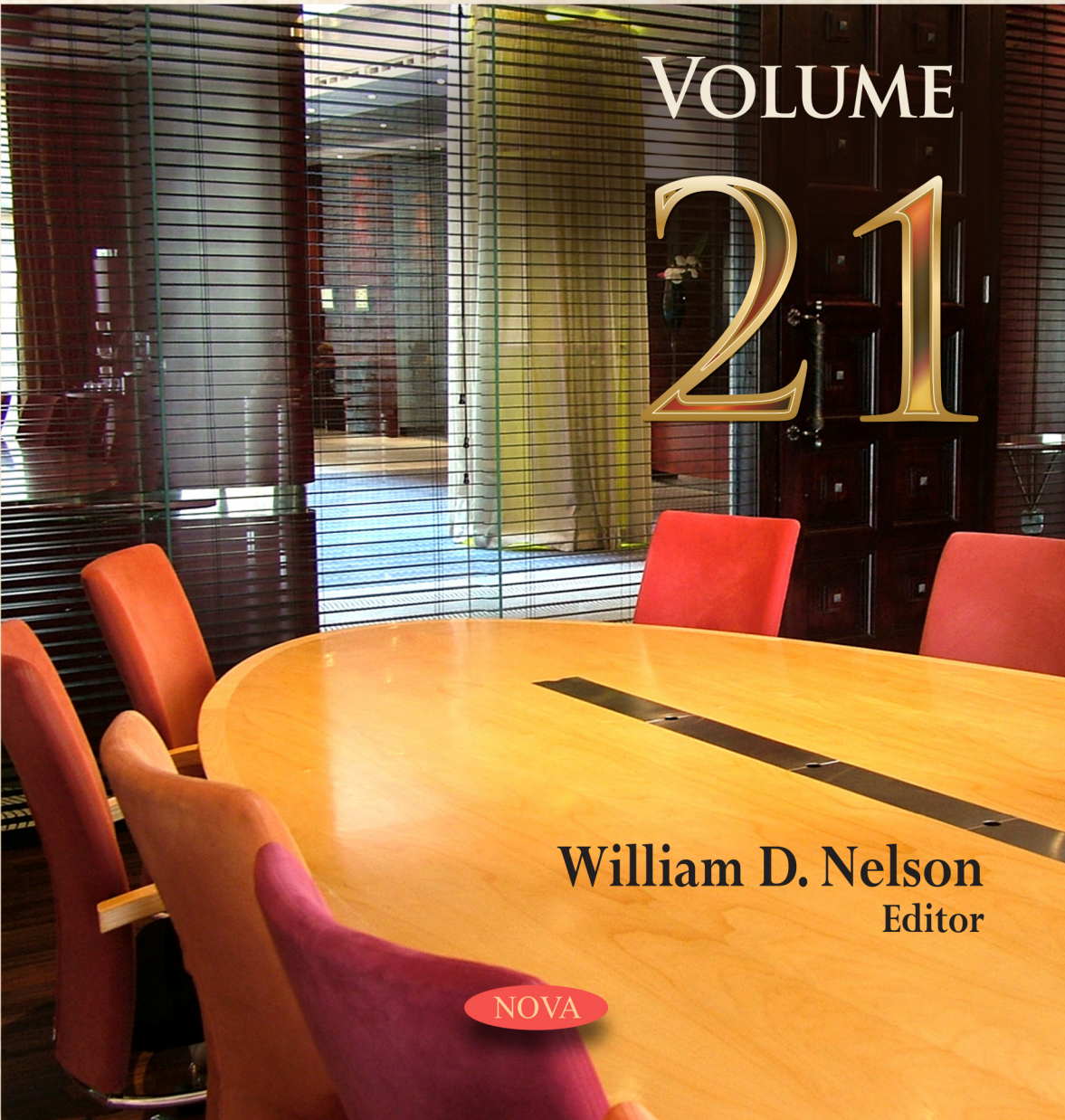

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William D. Nelson
Editor

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Contents

Preface

This volume includes eight chapters that detail recent advances in business and management. Chapter One examines the link between industrialization and economic growth through a three-single-country analysis of their manufacturing output. Chapter Two details the impact of digitalization on women's entrepreneurship. Chapter Three outlines research on strategic and operational analysis methods in the contemporary operational environment using integrated methods and analyses.

Chapter Four analyzes the evolution of agribusiness from a transdisciplinary research framework based in a circular economy to determine strategies for its successful application for sustainability of agribusiness and biorefineries of the 21st century. Chapter Five aims to understand the investment strategy of migrant workers (options and sector of choice) to model their investment trajectory on local investment. Chapter Six maps out the emotional intelligence, experiences, perceptions and subsequent actions of higher education leaders in a change process, and also charts the perception of leaders on how employees respond to change.

Chapter Seven builds on Maslow's hierarchy of needs and draws on human behaviour and human psychology on leadership management to propose a new theory linking the success of change initiatives and organizational performance. Lastly, Chapter Eight presents Fintech as a solution to financial inclusion in India.

Chapter 1

The Link between Industrialization and Economic Growth: A Three-Single-Country Analysis – Granger Causality

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Abstract

Rather than the impact of industrialization on economic growth, this research study aims to contribute to the body of knowledge by examining the link between industrialization and economic growth through a three-single-country analysis of their manufacturing output. These countries were chosen based on early industrialization, late industrialization, world powers as well as the availability of data.

The independent variables in this study include manufacturing output, inflation rate, exchange rate, domestic credit, and service exports, whereas the dependent variable is gross domestic product at constant price. The nations included in this research study are the United Kingdom, the United States of America, and Japan; the study took a comparative approach between the USA and Japan, while the UK was employed for robustness testing. For the nations in this study, a secondary quarterly time series collected from the Federal Reserve Economic Data (FRED) and the National Bureau of Statistics was used in this research study.

The econometric technique used in this research study is the Vector Autoregressive model (VAR) by applying the Granger-Causality on STATA 17, the study examines the link between variables, Autoregressive Distributed Lag (ARDL) model and Phillips-Pearson

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were used to test for unit root, the study used Johansen technique to test for cointegration and to investigate the dynamic influence of errors on the variable's system, the Impulse Response Function (IRF) and variance decomposition is utilized in this study.

The empirical investigation for the comparative approach indicates that for USA and Japan there exists a bi-directional relationship between economic growth and industrialization in the model. In order to establish if the industrial sector is still the main driver of economic growth, the research study used the variance decomposition approach to determine the extent of shock of the variables on economic growth, from the USA dataset, 7% was explained by export of services and 4% by manufacturing output which indicates that the service sector is gaining more audience as a sector when compared to the manufacturing sector, thus the industrial sector does not stand as the main engine of economic growth for USA. In contrast, 15% was explained by manufacturing output and 7% explained by export of services, thus the industrial sector still stands as the main engine of economic growth for Japan.

This research study established that industrialization happens at different times and places across countries, therefore, countries can choose to focus on their competitive advantage to know how best to position themselves in the world economies which may have an impact on their economic growth.

Keywords: VAR, Granger-causality, industrialization, economic growth, manufacturing output, inflation, exchange rate, domestic credit, export of services, competitive advantage

JEL Classification: C22, C87, E23, O25, O47

Introduction

Industrialization and Economic Growth

One of the most significant drivers of growth for many nations has long been recognized as industrialization and considered by many governments as the key to quick growth, especially in the wake of the industrial revolution, which sparked rapid growth in many different nations. Most frequently at the expense of other sectors like agriculture, many government initiatives have been designed to support the growth of the industrial sector (Wong, Yip, and Kong, 1998, pp.522–540).

Industrialization is still essential today as developing nations attempt to catch up with more developed ones and raise the living standards of their people. Even while industrialization is still necessary, the obstacles it must overcome may be more difficult than in the past. International rivalry has changed due to the rise of global value chains (GVCs). Access to information and technology is impacted by how dominant multinational corporations are in the global economy. It is more difficult for late industrializers to penetrate markets for manufactured goods due to China's growing status as a global hub of business (Szirmai et al., 2013).

Three different stages of development may be used to describe most industrialized nations: the dominance of agriculture, the formation of a manufacturing sector, and the advent of the service-producing sector as a significant contributor to economic growth. According to the theory of economic structural change, as per capita income grows, the primary sector becomes less significant, and although the manufacturing sector may at first gain pace, it eventually loses ground to the steadily expanding service sector (Alhowaish, 2014).

New, more environmentally friendly patterns of innovation, manufacturing and energy consumption are required to address the problem of climate change and global warming. When the poorest countries are striving to catch up by industrializing, while advanced economies struggle to remain competitive while reducing carbon emissions and increasing resource scarcity, it is crucial to examine each country and its international policy carefully to determine when and where industrialization will take place globally (Szirmai et al., 2013).

Industrialization refers to the long-term structural change of a traditional economy into a modern economy, fueled by high-productivity manufacturing activities. It has come to be associated with the so-called "great take-off," or the era beginning in the middle of the eighteenth century during which Britain, then other European countries, and finally the USA (United States of America) saw historically high economic growth. In the twentieth century, China, Japan, and the East Asian Tigers followed (Szirmai et al., 2013).

Industrialization has constantly increased output and employment levels, resulting in unparalleled wealth growth. The industrial revolution has placed industrialization at the centre of structural changes. Therefore, encouraging the industrial sector's development may be essential for attaining sustainable development (Pacheco-López and Thirlwall, 2014).

According to Simon Smith Kuznet's (1966) historical study of contemporary economic growth, the main aspect of transformation was the

transfer of resources from agriculture to industry. While the post-war experience of emerging nations demonstrates a strong correlation between industrialization and growing wealth, it also indicates significant disparities because of resource endowments and governmental actions. There is disagreement over the causes of these relationships. Industrialization may be ascribed to several things, including the necessity to shift the supply composition in response to changes in domestic demand and the exploitation of comparative advantage in labour-intensive sectors. Such historical tendencies have changed over the last ten years as certain nations have advanced industrialization to counteract worsening trade conditions, while favoured primary producers have been plagued by "Dutch disease" and a propensity to deindustrialize (Hollis Burnley Chenery, Robinson, and Syrquin, 1988).

The fact that the numerous hypotheses claiming to explain industrialization cannot be experimentally assessed and debunked presents another insurmountable challenge to their explanation. Karl Popper (Popper, 2013) provided a compelling argument in favour of the notion that hypotheses are only scientific to the extent that they may be refused. The issue with industrialization scholars is that it is always possible to create a tale that fits the facts and then put it up as the explanation for this phenomenon without having to run the danger of experimental rebuttal (Simandan, 2009). According to Kaldor (1967), since the industrial sector has the greatest potential for productivity increase, it is this sector that primarily drives economic expansion. The industrial sector may then propel the economy with the right policies, transforming a sluggish recovery into a return of the economy.

Developing an economy usually begins with industrialization because it is the foundation for economic growth. Development activities, like industrialization, need a well-planned, systematized approach. These efforts are frequently conscious since they are geared toward certain macroeconomic goals, beginning with economic development. In the industrial sector, primary and secondary production are usually divided. While secondary production involves converting and transforming raw materials into finished products, the primary production process involves mining and exploitation of mineral resources, (Nwogo and Orji, 2019).

Modes of Industrialization

Different industrialization plans and techniques have been used in various eras and locations with differing degrees of success. The government's initial policies supporting the development of industry in Europe and the United States were mercantilist and protectionist. However, these policies later became influenced by laissez-faire or free market ideologies, which allowed for the free circulation of industrial goods through foreign trade.

Following the Second World War, emerging countries in Latin America and Africa embraced an industrialization approach known as import substitution, which involves putting up protectionist obstacles to trade together with direct subsidies or the nationalization of indigenous companies. A different approach of export-led growth was adopted during the same period by several economies in East Asia and portions of Europe. To develop export-oriented sectors, this strategy placed a strong emphasis on purposeful international trade pursuit. It also partially depended on keeping a weak currency to increase the appeal of exports to overseas consumers. In general, the industrialization that substitutes imports has underperformed export-driven development.

Finally, communist countries throughout the 20th century frequently began a variety of purposeful, centrally planned industrialization projects that were virtually completely unrelated to either local or international trade markets. The Great Leap Forward in China and the first and second five-year plans in the Soviet Union are examples of this (Rasure, 2021).

A Wrap of Industrialization History

Britain was the first nation to industrialize, and it rose to the top of the global economic technology rankings. It served as a model for other nations. In the eighteenth century, manufacturing took over as the primary factor boosting economic expansion. There was a global rush to industrialize (Szirmai et al., 2013). European nations like France, Belgium, and Switzerland were the first to adopt an industrial approach. Belgian industrialization, which was focused on coal mining, engineering, and textiles, followed the British model exactly between 1815 and 1850. The south of the country's abundant mineral resources was beneficial to it. With no iron or mineral resources, a small internal market, or a landlocked economy, Switzerland was a landlocked country, it achieved success by concentrating on high-tech goods including

exquisite silks, needlework, and watchmaking. France adopted the British model but made changes based on its own starting circumstances. It employed more of its artisanal and artistic abilities, concentrated more on high-end and luxury items, and simultaneously overused and abused its resources (CRAFTS, 1977; Pollard, 1990; Tunzelmann, 1995).

The United States pursued a radically different path to industrialization in the nineteenth century, one that was based on primary exports, an abundance of land and resources, and labour scarcity. Due to a lack of labour, extremely capital-intensive production methods were favoured. An influx of qualified workers from Europe helped Britain quickly and inventively take over as the technical leader in the nineteenth century. Labour was saved by technological progress. The United States' productivity development was so quick that by the end of the nineteenth century, it had surpassed that of Britain. Since then, the USA has continued to lead in technology (Szirmai et al., 2013).

Germany, Russia, and Japan are well-known examples of latecomers to industrialization. Gerschenkron and Press (1962) made a convincing case that late adopters benefit from current technology that has been created in the top industrial economies without having to shoulder the full burden of the risks and expenses associated with research and development (R&D). These are the "benefits of backwardness," according to Gerschenkron. Latecomers benefit from global technological spillovers, as the phrase "latecomers" is used in modern economics. By copying, imitating, reverse engineering, and making connections with other scientists, professionals, and technologists (knowledge spillovers), they can gain access to cutting-edge information and technology while avoiding having to cover all the R&D costs associated with using foreign inputs and equipment (rent spillovers). Gerschenkron asserts that major financial corporations and government policies played a greater impact in late industrialization than in early industrialization. Governments focused on development set out to remove historical barriers to industrialization and challenge the early industrializing nations' dominance in the economy, politics, and armed forces.

The economy of tropical colonies and non-colonized nations remained mostly agrarian or mining-based, whereas Japan, an Asian latecomer, and the western world industrialized. Demand for basic goods from emerging nations increased because of industrial progress in the West. The potential for commerce increased because of technological developments in transportation, infrastructure, and communication. Consequently, the colonial division of labour was established. While developing countries acquired finished manufactured goods from industrialized economies, advanced economies

imported basic agricultural and mining resources from rising economies. Industrialization came to be associated with wealth, economic expansion, technological innovation, political power, and global dominance. Even development as a concept was linked to industrialization. It was commonly accepted that the main driver of growth and development was industrialization (Szirmai et al., 2013).

Because the industrial production system has extended around the world, industrialization should be considered a unified global process. Only when seen as a component of this continuing, global process of technology dissemination can specific national experiences with industrialization be fully understood. However, this does not imply that experiences vary across nations. Depending on their starting points and when they join the global race for industrialization, individual nations take different pathways to industrial growth (Pollard, 1990).

Industrialization in the United Kingdom

Several factors or events combined in Britain brought about the first Industrial Revolution. One of these was the eighteenth-century agricultural revolution. The agricultural transition that was marked by changes in farming practices and stock breeding increased food output significantly. Now, British agriculture could feed more people for less money and with fewer resources. Even average British households could afford to buy manufactured goods because, in contrast to the rest of Europe, they did not have to spend most of their income on food.

In addition, the second part of the eighteenth century saw a significant increase in population, creating a labour pool of excess workers for the new factories of the developing British industry. A prospective labour force for industrial firms was also offered by rural labourers in cottage industries. Britain had a strong central bank, sophisticated credit facilities, and income from commerce and cottage industry in addition to other advantages. The use of paper instruments to facilitate capital transactions was so commonplace throughout Europe. Important mineral resources, such as iron ore and coal, which are used in industry, were abundant in Britain.

Industrialists in Britain had a variety of marketplaces where they could sell their products right away. From 1660 to 1760, British exports more than doubled. The capacity to create the goods that were in high demand overseas at a low cost was essential to Britain's successful industrialization. Additionally, the best international markets were not in Europe, where nations safeguarded their developing industries, but in the Americas, Africa, and the

East, where consumers preferred durable, affordable clothing to expensive, luxurious goods (Patrick Karl O'Brien and Hartwell, 2001).

Industrialization in the United States of America

In 1800, agriculture was the main industry in the USA. In America, there were no cities with a population larger than 100,000, and six out of every seven workers were farmers. However, the population increased from 5 to 30 million by 1860, making it greater than Great Britain. Like in western Europe, the first use of machinery in the industry was made possible by borrowing from Great Britain. However, American technical innovations soon caught up with or even surpassed those of the British. For instance, the Harpers Ferry arsenal produced muskets using interchangeable components that allowed Americans to forgo the more expensive technique in which specialized artisans assembled individual parts created separately.

Unskilled labour forced American industrialization into a pattern that required a lot of capital. Factory owners made significant investments in equipment that would enable unskilled people to generate substantial amounts of labour. Britain never saw quick automation since it was more advantageous to pursue a labour-intensive economy due to the availability of trained artisans there. The so-called American method revolutionized manufacturing by lowering labour expenses, which was crucial in a culture with few trained craftsmen. America was a big country, unlike Britain. Due to the unacceptably inflated cost of moving commodities, the lack of efficient internal transportation infrastructure was a barrier to American economic growth.

The good news is that this shortcoming was eventually fixed. Buildings for connecting east and west included thousands of kilometres of roadways and waterways. The expansion of the American transportation network was primarily facilitated by the railroad. There were just 100 miles of railroad tracks in the whole nation in 1830 and by 1860, that number had increased to more than 27,000 miles. With the advent of the transportation revolution, the Northeast, the first industrial hub in the United States, was able to sell its manufactured goods to the whole country (Hindle and Lubar, 1998).

Industrialization in Japan

The creation of a diverse structure between traditional and modern industries, as well as Japan's strong military identity, is what stands out most about its industrialization through the middle of the 20th century. Some people credit Japan's present economic success to the long-lasting political, social, and economic upheaval known as the Meiji Ishin, which occurred in the late

nineteenth century. Numerous *coups d'état* took place during this time to topple the Bakuhan government, which had ruled since 1600. In its stead, a government that gave the emperor back control was established in 1868.

The new leaders concentrated their efforts on building a "wealthy country and mighty army" (Cfukoku kyydhei) to help ward against the spreading colonialism they observed in Asia around them. They achieved this by passing a constitution in 1889 that granted control to the military and bureaucracy, enacted conscription and required education, and promoted industrialization by importing Western technology and scientific knowledge. The growth of large-scale industries in communication, transportation, finance, commerce, weapons, chemicals, and mining was closely related to military expansion. Numbers of these sectors served as the foundation for significant conglomerates (zaibatsu), including Sumitomo (Bank, Metals, Rubber, and Construction) and Mitsubishi (Bank, Heavy Industries, Motor, Petrochemical, and Trading).

The expanding productivity and real pay gaps between the modern and traditional sectors referred to as the "differential structure," had already started to affect agriculture and the traditional sector by the middle of the 1930s (Honda, 1997).

Manufacturing

Manufacturing is the process of creating products for use or sale using labour, tools, machines, biological and chemical processes, or formulations. The term may be used to describe a variety of human endeavours, from high-tech to handcrafted, but it is most frequently used to describe industrial production, in which raw materials are transformed into final products on a huge scale. These final items may be sold to wholesalers, who may then sell them to retailers and then to clients and end users, or they may be utilized to create other, more sophisticated commodities, such as cars, home appliances, or airplanes.

In all economic systems, there are alternatives to manufacturing (Umar Sherrif, 2016). Over two-thirds of industrial GDP is attributed to manufacturing. The most crucial subsectors of manufacturing are food processing, fundamental metallurgy, machinery and equipment, and chemical goods. World-class manufacturing is done in the production of machinery, airplanes, electrical devices, and automobiles. The government provides considerable subsidies to several of these businesses (World Trade Organization, 2004).

During the second half of the eighteenth century, Britain experienced significant technological advances in the manufacturing of textiles and the use of steam power, which profoundly impacted observers at the time and in the years that followed. To characterize these changes in the past, the phrase "Industrial Revolution" was first used in the nineteenth century. (Maddison 1987, 2007; Crafts 1983). The phrase "Industrial Revolution" is appropriate in some contexts. It depicts the introduction of completely new manufacturing technology that spread over the world and had a significant impact on how things were produced on a worldwide scale. Modern manufacturing's development has resulted in significant changes to the global economy's structure as well as consistently rising labour productivity and economic well-being (Maddison 2001)

Industrialization has many different causes. Several factors might lead to the process. Like how the effects of industrialization vary across different geographic areas and historical periods (Simandan, 2009). Based on this reason, this study focuses on a three-single-country analysis, countries were picked based on data availability and world impact.

Economic Growth

Understanding why there are such significant and persistent differences in living standards between countries is one of the most important and difficult aspects of development strategy. We still have a long way to go before we fully understand why growth experiences differ so greatly between nations, why growth fluctuates so wildly over time (both favourably and unfavourably), and why only a small number of developing nations have seen their incomes converge to those seen in developed nations. This is true even though there is a wealth of literature on the factors that contribute to economic growth (Kar et al., 2013).

Although it is a simple idea, economic development may be challenging to quantify. An increase in the quantity and quality of goods and services produced and consumed by society is referred to as economic growth. When we view social history from a long-term perspective, we can observe that economic prosperity and continuous economic growth are relatively recent achievements for humanity. (Roser, 2013). Commonly, economic growth is measured as the rate of growth of a nation's gross domestic product on an annual basis (GDP). Given that there are more important welfare,

consumption, and health measures to consider, why should we pay attention to this uninteresting number?

Since the industrial revolution, developed country economies have grown, enabling the whole population to enjoy a level of life that only a tiny number of people could afford a century ago when per capita GDP was a small percentage of what it is now (Philippe Aghion, Howitt, and Bursztyn, 2009). Consequently, a country's development rate throughout time conceals its many periods of success and failure (Easterly et al., 1993; Ben-David and Papell, 1998; Pritchett, 2000; Jerzmanowski, 2006; Jones and Olken, 2008; Kerekes 2012.). While all "developed" economies' growth is well characterised by a single rate of growth and a "business cycle" centred on that trend (at least up to the present crises), this is not the case for the majority of the world's nations (Aguiar and Gopinath, 2007). In emerging countries, significant and quick shifts in development are typical. Growth accelerations, decelerations, or crashes are common phenomena in developing nations (Rodrik, 1999, 2003; Hausmann et al., 2006; Aizenman and Spiegel, 2010).

In most countries, economic development is highly unpredictable and unstable in the medium term, so policymakers and businesses are less concerned about the infinite horizon level than what will happen to production growth over the medium term (five to ten years) (Pritchett and Werker, 2012).

The Research Problem

The importance of manufacturing-based industrialization in promoting economic growth and development has been acknowledged since the early 1900s. According to Thoburn (2016), the manufacturing sector has the characteristics listed below, which help to explain why it is such an essential indicator of economic growth:

- There has historically been a greater productivity growth in manufacturing than in other industries, outpacing both agriculture and services in terms of productivity growth.
- More options for specialization exist in the manufacturing sector than in other sectors.
- The manufacturing sector has a stronger connection to other economic sectors.
- Since most industrial products are transportable, developing this industry creates access to global markets, which boosts demand.

A key component of development studies has always been the examination of the relationship between industrialization and economic expansion. Economic growth has been linked to an expanding manufacturing sector in Europe since the industrial revolution. The majority of the countries presently categorised as "advanced" or "developed" were formerly industrial superpowers with significant industrial sectors and high employment rates in the manufacturing sector. But in the last 50 years, things have altered. Every region of the world is experiencing deindustrialization or a declining percentage of both manufacturing value-added and manufacturing employment. It's crucial to look at how the manufacturing sector has changed in relation to economic growth (Montagu, 2017).

The Research Questions and Justification

Even though several studies examined the impact of industrialization on economic growth (Kiely, 2016; Kenechukwu Obioma et al., 2015; Mujtaba and Jena, 2022) including one by the World Bank (2012), examine the industrial sector's performance or the business climate. In this study, which considers three nations that went through the industrial revolution, the link between industrialization and economic growth is discussed.

The distinguishing factor of this study is its ability to infuse both historical and current data in its analysis as well as take into consideration other macroeconomic variables (inflation, exchange rate, domestic credit, and export of services) in other to make the analysis unbiased. Why are successful economic take-offs so rare if industrialization is the key to economic development? Why can't emerging nations keep up with the rest of the world? Does the growth of the economy have a causal link with other macroeconomic factors like inflation, the exchange rate, domestic credit, and the export of services?

The following research issues should be addressed in further detail:

1. Does industrialization and economic growth have a causal link in both directions as opposed to only having an impact?
2. Do any of the other macroeconomic factors mentioned above show a Granger causal link with economic growth?
3. Is the industrial sector still the main engine of growth, given the increase in the service sector which has led to deindustrialization?

Objectives

This study's long-term purpose is to investigate the link between manufacturing output, inflation, the exchange rate, domestic credit, export of services, and economic growth in three developed nations (United Kingdom, United States of America, and Japan).

- To identify the bidirectional causal link between industrialization and economic growth.
- To examine the causal links between other macroeconomic factors related to economic growth.
- To assess if the industrial sector is still the main engine of economic growth, given the raise in the service sector which has led to deindustrialization.

Therefore, the study adds to the body of knowledge by providing up-to-date data on the causal link between industrialization (represented by manufacturing output) and economic growth, as well as the relationship between economic growth and other macroeconomic factors (inflation, exchange rate, domestic credit, and export of services). The inclusion of services export will help in measuring the rate at which these developed countries have deindustrialized over the years using a quarterly dataset between 1994 and 2021 which will be sourced from FRED and countries' National Bureau of Statistics.

Structure of the Study

The research work is structured into four sections. Section one covers the introduction to the major terminologies used in the research work which are industrialization, economic growth, and manufacturing sector, the researcher dived into the history of industrialization across the three countries set to be used for this study which is United Kingdom (UK), United State of America (USA) and Japan, research problems, questions, and qualifications as well as problem specification.

Section two covers the literature review used in this study, starting with the concept of industrialization and economic growth, the theories of economic growth, supporting theories that provided a link between economic growth and the other independent variables, and empirical works of literature that provided details on both the pros and cons of each independent variables, the researcher stuck to the use of current empirical works of literature as much as possible.

Section three covers the methodology adopted for this study, the researcher used the VAR model, and analysis of regression, unit root test, normality test, Granger-causality test, impulse-response, and variance decomposition was done using STATA 17. The researcher adopted the comparison method amongst two of the three countries and the third country was used as a robustness check which can be found in Appendix 1. Section 4 covers the conclusion of this research study.

Limitations

The United Kingdom's data for the export of services is incomplete due to missing variables from 1994q1 to 1996q4, which had an impact on the country analysis. Conclusions can only be country specific not generalized since every country experienced industrialization at a different pace and time.

Literature Review

In the two and a half centuries after Britain had its Industrial Revolution, the process of industrialization has not been adopted evenly in all nations, nor has it progressed at the same rate or at the same time in all countries, but it has had the greatest influence on all of them. The researcher will provide a brief conceptual framework to assist clarify the connection between industrialization and economic growth as a starting point for this literature study. After which there will be a deep dive into the applicable theories of economic growth for the study and empirical literature review of the independent variables as an engine of economic growth.

Concepts of Industrialization and Economic Growth

Concepts of Industrialization

Several definitions have been given to industrialization, and all have been able to integrate it into economic growth. In 1992, Hewitt et al. defined industrialization in three different ways: as the production of all things not directly cultivated on the soil, or as the sector that includes mining, manufacturing, and energy production. The most exciting description for our purposes is the third one, which describes the industry as "a certain way of organizing production and indicates there is a constant process of technical and social growth which perpetually enhances society's capacity to create a

wide range of goods." According to this view, industrialization is seen as a complete process that affects society by producing an unprecedented number of products and services, which in turn spurs economic growth. While Van cap (2002) infused a transition and defined industrialization as the process through which a community, a nation, or the entire globe transitions from being an agrarian society to one focused on producing commodities and services. Assembly lines usually take the role of workshop personnel, and mass production using machines often replaces individual human labour.

Industrialization was described by O'Sullivan and Sheffrin (2007) as the transformation of an agrarian economy into an industrial economy via economic and sociocultural progress. They contend that three distinct industrial processes—modernization, the development of massive energy sources, and the manufacturing of metals—produce change. These mechanisms have a close connection to economic expansion. According to them, the sociological process of rationalization occurs together with industrialization.

Over time, several strategies have been used to promote industrial growth. Import substitution, export promotion, unbalanced growth, and balanced growth are a few of these. Anthony Clunies Ross, Forsyth, and Huq (2009) identified two diverse ways to define industrialization: a change in a nation's output pattern and labour force composition toward manufacturing or secondary industries. It might also be explained in terms of income levels above a certain threshold. Given these definitions, we can see that the industrialization of an economy amounts to the growth or development of such an economy.

Concept of Economic Growth

Economic growth has been described as an increase in per capita income over time (Anthony Clunies Ross, Foresyth, and Huq, 2009; Jhingan, 2005; Abbott, 2003). (Balami, 2006) asserts that economic growth is typically measured by gross domestic product as a proxy and that it can be viewed as an increase in the economy's capacity to produce goods and services that improve the welfare of the population. The growth process is a continuous process in which goods and services are produced in greater quantities in an economy, such as the Gross Domestic Product (GDP).

Growth needs to boost human well-being and outpace population growth to be relevant. Therefore, growth is considered a continual process of increasing the economy's productive capacity and, as a result, growing national income, which is characterized by higher rates of per capita output

and total factor productivity, notably labour productivity. Balami further argued that there are three methods for measuring economic growth: nominal growth, real output growth rate, and growth represented as per capita values.

In addition, Balami asserted that there are three ways to gauge economic expansion: nominal growth, real production growth rate, and per-capita growth.

Theoretical Framework

Economic Growth Theories

Since the advent of rigorous economic analysis during the period of the classical economists, especially William Petty and David Ricardo, economists have been deeply concerned with all aspects of economic growth, including its origins, forms, and effects. Economic growth is a challenge that has, of course, been around for much longer in the actual world. The prospect, if not the reality, of economic growth, lingered in the back of some assumptions even from history. This section is dedicated to explaining two economic growth theories which are close enough to explain what the research topic seeks to achieve.

Kaldor Growth Theory

The research by Nicholas Kaldor, which was released in 1966, examined the causes of the UK's slow economic growth during that time. Kaldor conducted a theoretical, analytical, and comparative analysis with a focus on the manufacturing sector's contribution to economic growth (Kaldor, 1966). Since it offers the foundation for the speculative formulation that was eventually recognized as Kaldor's growth laws, Kaldor's 1966 research has become a significant source of information.

The manufacturing sector is of crucial importance to the economy's growth, according to Kaldor's growth laws. He also argued that the post-war growth of developed economies (from 1952–1954 to 1963–1964) showed a link between industrial development and a country's overall economic success. This assertion served as the foundation for Kaldor's first law, which contends that rising manufacturing production and rising Gross Domestic Product (GDP) are significantly correlated. The first law is that the manufacturing industry acts as the primary catalyst for economic growth.