Chapter 2

Review of Literature

Chapter 2

Review of Literature

2.1 Introduction

A literature review aims to present a comprehensive summary of the existing knowledge on a specific topic; it evaluates and compares the main findings and contributions of past and present research in that area, and by doing so, it enables the recognition of gaps or possibilities for further exploration (Rowley & Slack, 2004). This section presents a synthesis of empirical findings from studies conducted across different regions, countries, and groups of countries.

The subsequent sections of this chapter are structured as follows.: Section 2.2 is the review based on income inequality and its determinants; Section 2.3 is the review related to income inequality, democracy, and governance; Section 2.4 is related to the review for income inequality and its determinants in India; and Section 2.5 is the research gap, followed by the conclusion in Section 2.6**.**

2.2 Income Inequality and Its Determinants

Teng *et al.* (2024) in the research paper 'Impact of natural resources on income equality in Gulf Cooperation Council: Evidence from machine learning approach' investigated the effect of gas and oil rents on income inequality in six (6) Gulf Cooperation Council (GCC) countries, such as Kuwait, Bahrain, Oman, the United Arab Emirates (UAE), and Saudi Arabia, from 1980 to 2020. The aggregate analysis revealed that oil and gas rents are a major factor in acute income inequality in such countries. While the disaggregate analysis revealed that the increase in rent from oil and gas raises the share of top 1 and 10 percent earners, it reduces the share of 40 percent and the bottom 50 percent earners significantly.

Sawadogo & Ouoba (2024) in the paper 'Do natural resources rents reduce income inequality? A finite mixture of regressions approach' examined how natural resources influence income inequality in a sample of 73 developing countries over the period from 2005 to 2020. The study applied a finite mixture regression approach. The findings indicated

that the impact of rents from natural resources on income inequality differs among five specific regimes of countries. In regimes 1 (exchange rate appreciation) and 2 (price volatility), the presence of natural resources contributes to an increase in inequality. Conversely, in regimes 3 (poor institutional quality) and 4 (unsustainable policies), natural resources are associated with a decrease in inequality levels. However, within regime 5 (religious and ethnic polarization and fractionalization), natural resources do not exhibit a significant impact on inequality.

Jamil *et al.* (2024) in their study 'Financial inclusion and income inequality in developing countries: The role of aging populations' explored the influence of financial inclusion on income inequality with a focus on the moderating effect of an aging population across 73 developing nations during the period from 2004 to 2019. The findings derived from the generalized method of moments (GMM) estimator indicated that, individually, an aging population and financial inclusion do not significantly affect income inequality. However, the interaction impact of these factors on income inequality is pronounced in these nations. Meanwhile, the panel quantile regression showed that both factors play a crucial role in reducing income disparity, particularly at the lower end of the income spectrum. The aging population plays an important role in moderating the association between these two factors, especially in widening the income gap in countries with lower levels of inequality. Nevertheless, the values of the coefficients exhibited a downward-sloping trend as they approached the higher quantiles.

Ponce *et al.* (2023) in the paper 'Spatial determinants of income inequality at the global level: The role of natural resources' examined the spatial effects of natural resource rents, democracy, and international trade on income inequality. Using the data from 78 countries from 1995 to 2017 and employing integrating spatial lag, spatial autoregressive combined, spatial error, and spatial Durbin models, the study revealed that regions with strong democratic systems mitigate income inequality. Furthermore, developed regions with solid democracies enhance social welfare through the use of rents from natural resources. Additionally, the analysis supported the existence of spatial dependency in income disparity across the majority of areas, with indirect effects showing up as spillovers to neighbouring countries.

Friderichs *et al.* (2023) in the paper entitled 'Decomposing the impact of human capital on household income inequality in South Africa: Is education a useful measure?' analyzed the

association between income inequality and human capital in South Africa. Information from the first (2008) and fifth (2017) waves of the National Income Dynamics Study (NIDS) and Fields' regression-based decomposition techniques have been utilized to analyze this association. The finding indicated that enhancing the level of education by elevating the standard of schooling for everyone could significantly contribute to reducing income inequality.

Ghosh *et al.* (2023) in their study 'Does economic structure matter for income inequality?' examined the intricate relationship between economic complexity (structural transformation) and income inequalities. The study scrutinized the validity of the Kuznets curve theory across 65 nations over the time span from 1990 to 2015 and employed the GMM. The findings of the study revealed that economic complexity exerts a considerable negative influence on income disparity. This suggests that advancements in structural transformation are likely to lead to a more equitable distribution of income. Additionally, the study showed that the impact of economic complexity on income inequality varies widely among different groups of countries. In a sample of the poorest countries, it is observed that economic complexity exerts a significant influence on the disparity in income distribution. This relationship holds true across various models and income levels.

Chekouri (2023) in an article titled 'Natural resource abundance and income inequality: A case study of Algeria' investigated the association between rent from natural resources and income inequality using time series data from Algeria during the period from 1980 to 2020. The study applied the autoregressive distributed lag (ARDL) simulation technique along with the Kernel regularized least squares. The study indicated the existence of a long-run relationship between the two. The results of the study revealed that natural resource rent, economic growth (GDP per capita), and government expenditure lower income inequality in both the short and long run. Moreover, the study also showed that better institutional quality helps reduce income inequality.

Akpa (2023) in a paper 'Effect of natural resources rents on income inequality in sub-Saharan Africa: Exploring the direct and indirect transmission mechanisms' examined transmission mechanism, both direct and indirect, by which natural resources rents influence income inequality across Sub-Saharan Africa (SSA). The study used data during 1990-2018 and applied system GMM method. The findings showed that natural resources rents exacerbated income inequality, but its combined effect with education help reduce income inequality.

Zandi *et al.* (2022) in the paper 'Do corruption, inflation and unemployment influence the income inequality of developing Asian countries?' examined the impact of inflation, unemployment, and corruption on income inequality. Using panel data from 12 developing Asian countries from 2006 to 2020 and employing the random effect (RE) and GMM methods, the study found that inflation, unemployment, and corruption have a positive impact on income inequality.

Wolde *et al.* (2022) in their study 'Causal relationship between income inequality and economic growth in Ethiopia' analyzed the direction of causality between economic growth and income inequality in Ethiopia over the period from 1980 to 2017. The study applied the ARDL bound test approach to analyze the short- and long-run relationship between the variables, and the vector error correction model (VECM) was used to explore the direction of causality among income inequality and economic growth. The study found that economic growth has a positive short-run and negative long-run impact on income inequality. VECM Granger causality tests showed the direction of causality running from GDP per capita to income inequality both in the long and short run.

Walujadi *et al.* (2022) in an article 'Determinants of income inequality among provinces: Panel data evidence from Indonesia' investigated the factors determining income inequality using data from 33 Indonesian provinces during 2010-2017 and the fixed effect (FE) cross-weight econometric method. The results showed that economic growth significantly increases income inequality, while HDI and population have a significantly negative effect on income inequality.

Perugini & Tekin (2022) in the paper 'Financial development, income inequality and governance institutions' examined the impact of financial development on income inequality and the mediating role of governance institutions in this relationship. The study collected data from 48 middle-income and high-income countries over the period 1996-2014 and applied the FE and system GMM methods. The findings of the study revealed that income inequality tends to increase with an increase in financial development, and this impact is reduced with better regulatory quality (RQ), stricter control of corruption (CC), the rule of law (RL), and political stability or no violence (PV). But government effectiveness (GE) and political voice and accountability (VA) do not play a mediating role.

Hartwell *et al.* (2022) in the study entitled 'Natural resources and income inequality in developed countries: Synthetic control method evidence' examined the effect of natural

resources on income inequality. Using data from three Northern European countries (Denmark, the Netherlands, and Norway) and the synthetic control method, the study revealed that income inequality is permanently lowered by natural resource discoveries.

Batuo *et al.* (2022) in the article 'The dynamics of income inequality in Africa: An empirical investigation on the role of macroeconomic and institutional forces' empirically investigated the impact of macroeconomic and institutional factors of income inequality in 52 African countries during the period from 1980 to 2017. The study estimated six models, such as pooled ordinary least squares (POLS), FE, RE, pooled two-stage least squares (TSLS), FE-TSLS, and RE-TSLS. The study found that the Kuznets' curve relationship is applicable only for economies at the bottom of the distribution of income. Income inequality is found to be increasing in high-income economies in Africa, while in low-income or least-developed countries it is declining. The study also showed that macroeconomic and institutional factors only play a limited role in determining income inequality and vary across convergence clubs.

Avom *et al.* (2022) in the paper 'Revisiting the effects of natural resources on income inequality in Sub-Saharan Africa' investigated the effect of rents from natural resources on income inequality. The study utilized the panel quantile regression (QR) technique for 42 SSA countries during the period 1998–2018. The study found that natural resource rents negatively affect income inequality. Among the various forms of natural resources, forestry and oil rents reduce income inequality, while coal rents increase inequality.

Asogwa *et al.* (2022) in the research paper 'Do macroeconomic indicators determine income inequality in selected African countries?' analyzed the impact of macroeconomic determinants on income inequality in Africa during the period 2001-2016. Using the FE and GMM methods, the study showed a negative link between income inequality and economic growth. The study did not find the existence of the Kuznets hypothesis and concluded that the inflation rate, labor force, and wage rate impact income inequality negatively, while education and unemployment impact positively.

Ali *et al.* (2022) in the paper 'The effect of urbanization and industrialization on income inequality: An analysis based on the method of moments quantile regression' examined the impact of industrialization and urbanization on income inequality in low-income, middle-income, and high-income countries during the period from 1990 to 2014. Using the method of moments quantile regression (MMQR), the study found that in HICs, industrialization tends to lower inequality in most low and medium quantiles and becomes insignificant in

higher quantiles, but urbanization tends to increase inequality starting in the third quantile. In UMICs, urbanization has no significant impact on lower and medium quantiles, but it significantly raises inequality in higher quantiles. In UMICs, industrialization tends to increase inequality, in contrast to improving it in HICs. The findings also demonstrate that, whereas industrialization has no effect on all quantiles of LMICs, urbanization reduces inequality. Furthermore, the study discovered evidence for an inverted Kuznets-curve association in both UMICs and LMICs.

Ullah *et al.* (2021) in a research article 'Sustainable utilization of financial and institutional resources in reducing income inequality and poverty' analyzed the impact of globalization, financial development, e-government, and economic growth on income inequality and poverty in 64 sample countries from Belt and Road Initiative countries during the period from 2003 to 2018. The study applied the two-step system GMM and the Driscoll-Kraay (DK) regression method. The results of the study showed that globalization, e-government development, economic growth, government expenditure, and inflation negatively affect income inequality and are vital to mitigating income inequality and poverty. On the other hand, gross capital formation, financial development, and population size positively affect income inequality, which leads to an increase in income inequality and poverty. The moderating factor of institutional quality also has a positive impact on income inequality.

Taresh *et al.* (2021) in their study 'Analysis of the relationship between income inequality and social variables: Evidence from Indonesia' analyzed the association between income inequality and different social variables in 33 provinces in Indonesia during 2005-2018 period. The study employed the structural vector auto regression (SVAR) model and revealed that income inequality positively affects unemployment, population growth, and poor health, whereas it negatively affects education, urbanization growth, and human development. Unemployment, population growth, urbanization growth, and poor health can increase income inequality, while HDI and education help reduce income inequality. Furthermore, raising the minimum wage can reduce income inequality, improve poor health, and improve education and per capita income. This study also demonstrated that population and income inequality have a long-term association with per capita income.

Shao (2021) in an article entitled 'Robust determinants of income distribution across and within countries' investigated the robust factors of income distribution. The study employed POLS and the least squares dummy variable (LSDV) and found no evidence of Kuznets

curve theory within and across countries. Investment is found to be a robust determinant of income inequality; labor income share positively affects income inequality. The marginal effects of development in terms of GDP, investment, and capital stock on income inequality are likely to be positive both within and between countries.

Saha *et al.* (2021) in the paper 'Corruption control, shadow economy and income inequality: Evidence from Asia' looked into the impact of corruption and shadow economy on income inequality. The study employed a panel dataset for 21 Asian countries over the period from 1995 to 2015. Using the FE estimator, the study suggested that in order to address inequality, control of corruption must be complemented with the ability to convert secondary and tertiary education enrolment into industrial and service sector jobs. Countries with low corruption and high inequality can lower inequality by contributing to higher consumption expenditures. Furthermore, countries with greater trade openness have lower inequality when combined with low corruption, except for South Asian countries.

Muryani *et al.* (2021) in the paper 'Dynamics of income inequality, investment, and unemployment in Indonesia' examined the effect of per capita income, unemployment, and investment on income inequality in Indonesia from the period 2011 to 2019. The study applied the partial least squares (PLS) regression, FE, RE, and GMM methods. The results of the study revealed the existence of the Kuznets hypothesis between income inequality and economic growth. Infrastructure expenditure and foreign direct investment (FDI) are positively related to income inequality. Similarly, the enhancement of domestic private investment helps to lower income inequality. Moreover, the impact of unemployment on income inequality is found to be negative.

Memon & Qureshi (2021) in the paper 'Income inequality and macroeconomic instability' analyzed the relationship between macroeconomic instability and income inequality. The study used a panel data set from 61 developed and developing countries for 1990-2019. The regression results of the study showed that there is a positive association between past inflation volatility and subsequent inequality. The study also showed that this relationship does not exist in developed countries but is stronger in developing economies.

Amate-Fortes *et al.* (2021) in the paper 'Measuring inequality in income distribution between men and women: What causes gender inequality in Europe?' analyzed the determinants of income inequality in 33 European countries from 2003 to 2017. Using the panel-corrected

standard errors (PCSE) and GMM method the study concluded that gender inequality increases income inequality.

Alvarado *et al.* (2021) in the paper 'Heterogeneous impact of natural resources on income inequality: The role of the shadow economy and human capital index' using panel data for 75 countries during the period from 1990 to 2016, analyzed the impact of natural resources on income inequality along with the role of the shadow economy and human capital index. The results from fully modified ordinary least squares (FMOLS) showed the heterogeneous impact of natural resource rents on income inequality among the countries. The finding also demonstrated that nations with greater dependence on natural resources for income have higher levels of income inequality. The result also indicated the positive impact of the human capital index on income inequality.

Xu *et al.* (2021) in the paper entitled 'Trade openness, FDI, and income inequality: Evidence from Sub-Saharan Africa' analyzed the nexus between trade openness, FDI, and income inequality in SSA. The study used panel data from 38 SSA countries during the period from 2000 to 2015 and applied the GMM technique. The results from the study demonstrated that FDI and income per capita have a negative impact on income inequality. However, trade openness, education, corruption, political stability, and the rule of law have a positive impact on income inequality.

Sarkodie & Adams (2020) in the paper 'Electricity access, human development index, governance and income inequality in Sub-Saharan Africa' examined the nexus between access to electricity, income level, income inequality, HDI, and political system in SSA during the period 1990-2017. The study applied the DK standard errors regression method and revealed that the political system has a negative effect on income inequality and that income inequality has a negative impact on human development.

Prawoto & Cahyani (2020) in the paper 'Analysis of unequal distribution of population income in Indonesia' examined the unequal distribution of income in Java Island, Indonesia, including the HDI, foreign investment, open unemployment rate, and the degree of fiscal decentralization. Using the FE model, the study unveiled that open unemployment rate, HDI, and fiscal decentralization have a positive effect on income inequality. Meanwhile, foreign investment has a negative effect on income inequality.

Munir & Bukhari (2020) in the paper entitled 'Impact of globalization on income inequality in Asian emerging economies' investigated the impact of globalization on income inequality in 11 Asian emerging economies. The study applied the POLS and instrumental-variable least squares (IVLS) techniques and revealed that trade and technological globalization significantly decrease income inequality. The effect of financial globalization on income inequality showed that financial integration contributes to rising income inequality.

Law & Soon (2020) in the paper 'The impact of inflation on income inequality: The role of institutional quality' investigated the income inequality-inflation nexus and the mediating role of institutional quality on this nexus. The study applied the two-step system GMM method and revealed that inflation has a positive impact and institutional quality has a negative impact on income inequality. Furthermore, the marginal effect showed that the effect of institutional quality on the impact of inflation on income inequality is negative.

Butler *et al.* (2020) in an article 'Population change and income inequality in rural America' investigated the effect of population change on income inequality in rural America during the period 1980-2016. Applying the FE regression model, the study found that income inequality increases when the population declines, while inequality declines only marginally when the population grows. The study also found that the relationship between population change and income inequality change differs depending on the country's geographical region, baseline population size, and baseline inequality level.

Berisha *et al.* (2020) in the paper 'The impact of macroeconomic factors on income inequality: Evidence from the BRICS' investigated how macroeconomic factors (evolution of economic growth, inflation, and real interest rate) determined income inequality in Brazil, Russia, India, China, and South Africa (BRICS) economics. Using the data from BRICS during 2001-2015 and employing Common Correlated Effects (CCE), the study unveiled that real income growth and inflation aggravate income inequality. The study further showed a stronger positive association between the three macroeconomic factors and income inequality in BRICS economies during the period after 2008.

Vo *et al.* (2019) in the study 'What factors affect income inequality and economic growth in middle-income countries?' investigated the causal and dynamic association between income inequality and economic growth. The study was conducted with a total sample of 158 countries and 86 middle-income economies during 1960-2014. The study applied the Granger causality test and the system GMM method and found that causality runs from growth to

inequality and vice versa in both sample countries. Further, the study also found a negative impact of income inequality on economic growth in middle-income economies.

Sulemana *et al.* (2019) in the study 'Urbanization and income inequality in Sub-Saharan Africa' examined the association between urbanization and income inequality using panel data for 48 Sub-Saharan African countries during the period 1996-2016. The study employed the FE, RE, feasible generalized least squares (FGLS), and GMM methods to find the association between the two. The study revealed a significantly positive relationship between urbanization and income inequality.

Signor *et al.* (2019) in a paper 'Persistence and determinants of income inequality: The Brazilian case' examined the factors influencing the distribution of income and the extent to which income inequality remains persistent across the states of Brazil. The study used microdata during the period 1996-2015 and the system GMM suggested that income inequality is highly persistent among the states of Brazil and government policies (income transfer) programs reduce income inequality. The study also demonstrated that the rise in the proportion of formal jobs in the labor market and the fall in labor income ratios between various ethnic groups both helped to lower income inequality.

Siami-Namini & Hudson (2019) in a paper 'Inflation and income inequality in developed and developing countries' investigated the impact of inflation on income inequality and also tested the validity of the Kuznets hypothesis by taking data from 24 developed and 66 developing countries during the period 1990-2014. The study adopted the Toda and Yamamoto and VECM methods. The study confirmed the association of a nonlinear nexus between inflation and income inequality, implying that as inflation goes up, income inequality declines. After that, income inequality reaches a minimum and starts increasing again. The study also confirmed the validity of Kuznets' U-shaped hypothesis in developed countries and Kuznets' inverted 'U-shaped' hypothesis between real GDP per capita and income inequality in less developed countries (LDCs).

Hartwell *et al.* (2019) in the paper 'Democratic institutions, natural resources, and income inequality' examined the nexus between natural resources, democracy, and income inequality. The ordinary least squares (OLS) regression results revealed that in non-democratic countries, natural resources exacerbate income inequality, while natural resources have the potential to reduce inequality in a country with a high degree of democracy.

Ha *et al.* (2019) in the paper entitled 'The impact of urbanization on income inequality: A study in Vietnam' investigated how income inequality affects urbanization in Vietnam. Using data from 63 provinces of Vietnam during 2006-2016 and applying DK and the pooled mean group (PMG), the study showed that urbanization reduces income inequality in the long term, while its effect on income inequality is negligible in the short term. The study found the validity of the Kuznets hypothesis. In addition, the proportion of agriculture and high school enrollment reduces income inequality.

Furceri & Ostry (2019) in the paper 'Robust determinants of income inequality' analyzed the robust factors determining income inequality. Employing weighted average least squares (WALS), the study demonstrated that development, demographics, unemployment, and globalization are the main drivers of income inequality. Trade integration is associated with lower inequality, while financial globalization is associated with higher inequality. In advanced economies, financial deregulation and technological change are also found to be key drivers of inequality.

Adams & Klobodu (2019) in their paper 'Urbanization, economic structure, political regime, and income inequality' examined the relation of urbanization with income inequality for 21 SSA countries during the period 1984-2014. Using PMG and Common Correlated Effects Mean Group (CCEMG) estimation techniques, the study showed that democratic reforms negatively affect income inequality. The study did not find support for the Kuznets hypothesis. The share of agriculture (% of GDP) and FDI do not have an independent effect on income inequality; GDP per capita, urbanization, and trade openness positively affect income inequality. The study also demonstrated the moderate effect of institutional quality on the effect of urbanization on income inequality.

Tridico (2018) in their paper entitled 'The determinants of income inequality in OECD countries' investigated the determinants of income inequality in OECD countries. The study using data from OECD (25 high-income) countries during 1990-2013 and the generalized least squares (GLS) method found that the increase in financialization, the expansion of labor flexibility, the declining status of trade unions, and a decline in the welfare state are all contributing factors to the increase in inequality during the past two decades.

Lee & Lee (2018) in the working paper 'Human capital and income inequality' used data from 95 countries during 1980-2015 and applied panel FE and panel fixed effect instrumental variable (FE-IV) regression models to investigate the impact of human capital on the

distribution of income. The results indicated that education equality significantly reduces income inequality. A low rate of inflation makes income distribution more equal. Furthermore, government expenditure on education also helps to improve income distribution. But GDP per capita, trade openness, and technological progress have a positive impact on income inequality.

Baloch *et al.* (2018) in the paper 'The effect of the gender equality on income inequality: A dynamic panel approach' investigated how gender equality affects income inequality. Using data from 103 countries during 2006-2013 and applying the system GMM approach, the study revealed that gender equality is negatively associated with income inequality. In addition, per capita GDP impacts income inequality in a nonlinear manner; educational attainment tends to have a negative and higher inflation has a positive impact on income inequality.

Shahbaz *et al.* (2017) in the paper 'Finance and income inequality in Kazakhstan: Evidence since transition with policy suggestions' investigated the impact of financial development, economic growth, education, FDI, and democracy on income inequality. Using data from Kazakhstan during 1990-2014 and applying the ARDL approach, the study found a long-run association among the variables and showed that financial development and democracy make income inequality worse, while economic growth, FDI, and education reduce income inequality.

Shahabadi *et al.* (2017) in the study 'The effect of knowledge economy factors on income inequality in the selected Islamic countries' examined the impact of knowledge economy on income inequality in Islamic countries. Using panel data from 1995 to 2012 and the FE model, the study revealed that the components of knowledge have a positive effect on income inequality; the effect of the innovation and creativity index is positive but insignificant; the effect of education and information and communication technology (ICT) on income inequality is negative; but the result is not significant for ICT.

Park (2017) in the working paper 'Education, globalization, and income inequality in Asia' investigated the effect of education and education inequality on income inequality in the Asian and Pacific areas using the data collected for the periods 1990, 2000, and 2010. The regression results of the study revealed that education helps to reduce income inequality, while educational inequality aggravates income inequality. The study also revealed that

higher levels of globalization are connected with higher degrees of income inequality, while freedom (either political or economic) has marginal effects on income inequality.

Munir & Sultan (2017) in the paper 'Macroeconomic determinants of income inequality in India and Pakistan' examined the factors determining income inequality in India and Pakistan. The study used panel data during the period from 1973 to 2015 and applied the FE estimator model. The study found that per capita GDP, fertility rate, urbanization, and globalization have a positive and significant impact on income inequality. While government consumption expenditure, value addition by the agricultural sector, and per capita arable land have a significantly negative impact on income inequality. However, FDI, gross fixed capital formation, secondary education (gross enrolment ratio), and inflation have an insignificant impact on income inequality.

ElGindi (2017) in the paper 'Natural resource dependency, neoliberal globalization, and income inequality: Are they related? A longitudinal study of developing countries (1980–2010)' investigates the effect of natural resources, neoliberal globalization, and institutional factors on income inequality in a group of 96 developing countries during 1980-2010. Using the PCSE method, the results showed that natural rent dependency, GDP, population, and democracy have a positive impact on income inequality, whereas trade openness and institutional quality are negatively related to income inequality.

Deyshappriya (2017) in a working paper entitled 'Impact of macroeconomic factors on income inequality and income distribution in Asian countries' examined the macroeconomic factors of income inequality for 33 Asian countries during the period from 1990 to 2013. The study utilized the GMM technique to find the impact on income inequality. The study unveiled an inverted U-shaped association between GDP and inequality. In addition, the study also discovered that labor force participation, official development assistance (ODA), and education help to reduce income inequality, while political risk, inflation, unemployment, and terms of trade are found to increase income inequality. Furthermore, no significant relationship is found between income inequality and macroeconomic factors such as capital formation (growth rate), debt (growth rate), corruption, and population (growth rate).

Lee & Son (2016) in a paper 'Economic growth and income inequality: Evidence from dynamic panel investigation' investigated the impact of income inequality on economic growth, covering the data of developing and developed countries. The study applied the

system-GMM method and found that income inequality has a negative impact on economic growth.

Grotti & Scherer (2016) in the study 'Does gender equality increase economic inequality? Evidence from five countries' investigated the impact of gender equality on income inequality for the four European countries (Denmark, Italy, Germany, and the U.K.) and the U.S. from the mid-1980s to the mid-2000s. The decomposition analysis showed that the evolution of inequality cannot be explained by shifts in the similarity of couples' earnings. Instead, the majority of the time, the rise in dual-income households, considered alone, would have resulted in lower levels of inequality than were observed.

Florida & Mellander (2016) in the paper 'The geography of inequality: Difference and determinants of wage and income inequality across US metros' investigated the geographic variation in income and wage inequality across U.S. metros. Using OLS regression, the study revealed that wage inequality is closely linked with human capital, technology, skills, and metro size, but these determinants are only weakly linked with income inequality; income inequality is closely linked with race, unionization, and poverty. But no link is found between average incomes and income inequality.

Bukhari & Munir (2016) in the study 'Impact of globalization on income inequality in selected Asian countries' investigated the globalization-income inequality nexus in eleven selected Asian economies. The study includes the period from 1980 to 2014 for technological and trade globalization and for financial globalization period is 1990 to 2014. The study employed POLS and IVLS techniques for estimation. The results showed that trade and technological globalization significantly help reduce income inequality, while financial globalization raises it. Education has an inverse impact, while FDI has a positive impact on income inequality.

Anyanwu (2016) in the paper 'Empirical analysis of the main drivers of income inequality in Southern Africa' investigated the factors determining income inequality in Southern Africa. Applying system GMM, the study revealed evidence of the Kuznets hypothesis. In addition, political globalization exhibits an inverted Kuznets-type (non-monotonic). Secondary education and natural resources are found to reduce income inequality, while population and domestic investment are found to increase income inequality.

Anyanwu *et al.* (2016) in the paper 'Empirical analysis of the key drivers of income inequality in West Africa' investigated the drivers that affect income inequality in West Africa. The study collected data from 17 West African nations from 1970 to 2011 and applied the system GMM approach. The study supports the Kuznets curve hypothesis between income inequality and GDP per capita. Political globalization exhibits a Kuznets-type (non-monotonic) effect. In addition, the study also found a positive impact of population density, natural resource rents, domestic investment, government expenditure, inward FDI, trade openness, international remittances, civil war, and unemployment on income inequality, while negative impact of skill premium, democracy, and age dependency on income inequality.

Theyson & Heller (2015) in the study 'Development and income inequality: A new specification of the Kuznets hypothesis' analyzed the nexus between income inequality and HDI in 147 countries during the period 1992-2007. Using the OLS and FE models, the study revealed an S-curve relationship between income inequality and HDI. This result implies that in the early phases of a country's development, human development forces income inequality to decline, then briefly spike and then decline in income inequality again.

Marsh (2015) in the paper entitled 'Determinants of income inequality in the early twenty-first century: A cross-national study' looked into the factors determining income inequality in 142 developed, developing, and transitional societies. The OLS regression results indicated that the Kuznets effect is the main cause of inequality. Population growth has a positive impact on income inequality. A rise in labor productivity in agriculture reduces income inequality relative to the non-agriculture sector. The effect of educational attainment is less on income inequality. Government income transfers occasionally lower inequality. Liberal democracy has had no effect on income inequality.

Kim (2015) in the paper 'A study on the effect of financial inclusion on the relationship between income inequality and economic growth' assessed the impact of financial inclusion on income inequality in the OECD and European Union (EU) or in the eurozone during the period from 2004 to 2011. The study devised the TSLS method and discovered that income inequality has a strong negative impact on GDP growth in LICs. However, the effect is stronger in reducing GDP growth in high-fragility countries. Progressivity is not found to be a major factor in lowering income inequality in high-fragility or low-income countries.

Financial inclusion helps to improve the relationship between economic growth and income inequality.

Dabla-Norris *et al.* (2015) in the study 'Causes and consequences of income inequality: A global perspective' investigated the different factors determining income inequality. The study investigated a sample of 100 advanced countries and Emerging Markets and Developing Countries (EMDCs) during 1980-2012. Using the FE regression, the study found that less-regulated labor markets, technological progress, and financial deepening largely contribute to the increase in market income inequality. Globalization (i.e., financial openness) has played a lesser but reinforcing effect, while improvements in health outcomes offset over half of the nearly three percentage point average rise in the Gini coefficient. The relative importance of globalization, skill premiums, financial deepening, and technological progress in affecting inequality, however, is different across EMDCs and advanced economies.

Shahpari & Davoudi (2014) in their study 'Studying effects of human capital on income inequality in Iran' studied the effect of human capital as a determinant factor of income inequality in Iran. Using the time series data from 1969 to 2007 and the ARDL approach, the study showed that improvements in human capital and physical capital help reduce income inequality and make income distribution better. But unemployment, inflation, and GDP increase income inequality and make income distribution worse.

Johansson & Wang (2014) in an article 'Financial sector policies and income inequality' analyzed the relationship between financial sector policies and income distribution. Using GMM and the modelling average approach, the study confirmed that financial repression increases income inequality. Moreover, GDP per capita and urbanization alleviate income inequality.

Monnin (2014) in the paper 'Inflation and income inequality in developed economies' examined the link between inflation and income inequality in 10 OECD countries during the period 1971-2010. The pooled regression showed a U-shaped relationship between income inequality and long-run inflation. Further, the study also found the positive impact of unemployment and the negative impact of unionization on income inequality. However, did not find any significant relationship between trade openness, skill-based technology, and income distribution.

Kanbur & Zhuang (2013) in their paper 'Urbanization and inequality in Asia' investigated the impact of urbanization on income inequality, focusing on four countries: the People's Republic of China (PRC), Indonesia, India, and the Philippines, during the period from the early 1990s to the late 2000s. The study showed that in the Philippines, more than 300 percent of the growth in inequality was attributed to urbanization, as was more than 50 percent in Indonesia, 15 percent in India, and somewhat reduced inequality in the PRC. On the other hand, the shift in the urban-rural income difference contributed almost 50 percent of the rise in inequality in India, one of the third in the PRC, but assisted in lowering inequality in Indonesia and the Philippines.

Thalassinos *et al.* (2012) in the article 'Income inequality and inflation in the EU' examined the association between income inequality and inflation. The study collects data from 13 EU countries during the period 2000-2009. The study employed the FE model and found a positive impact of inflation on income inequality. In addition, other macroeconomic factors such as employment rate and trade openness increase income inequality, while GDP helps to reduce it.

Castells-Quintana & Royuela (2012) in their paper 'Unemployment and long-run economic growth: The role of income inequality and urbanization' examined the combined effect of unemployment and inequality on economic growth in 48 sample countries. Using OLS estimation, the study showed that although initial high rates of unemployment appear not to be significant for explaining long-run growth, they do exert a significantly negative influence when combined with rises in inequality. At both low and high levels of urbanization, increasing inequality damages growth. In sum, unemployment seriously harms growth, which is the main cause of poverty.

Zhou *et al.* (2011) in their paper 'Impact of globalization on income distribution inequality in 60 countries' investigated globalization's impact on income inequality in 60 developed, developing, and transitional countries. The regression results of the study revealed the robust negative impact of globalization on income inequality.

Sheng (2011) 'Unemployment and Income Inequality: A Puzzling Finding from the US in 1941-2010' investigated the link between unemployment and income inequality in the U.S. during 1941-2010. The study used wage share as a proxy measurement of income inequality and employed OLS. The study found a trade-off association between the changes in the

unemployment rate and the wage share. It means that there is a positive correlation between unemployment and income inequality.

Jäntti & Jenkins (2010) in the paper 'The impact of macroeconomic conditions on income inequality' investigated the role of unemployment and inflation on income distribution in the U.K. during the period from 1961 to 1999. Applying seemingly unrelated regression (SUR) estimates, the study found little evidence of a nexus between unemployment, inflation, and income inequality.

Fum & Hodler (2010) in the paper 'Natural resources and income inequality: The role of ethnic divisions' analyzed the natural resources-income inequality nexus in ethnically polarized and homogeneous societies. The regression results of the study showed that natural resources increase income inequality in countries with polarized ethnic populations, like Bolivia or Mexico, but decrease it in nations with homogeneous ethnic populations, like Norway.

Gaston & Rajaguru (2009) in an article 'The long-run determinants of Australian income inequality' investigated the determinants of income inequality in Australia during 1970–2001. Applying the VECM, the study found that globalization and technological progress increased income inequality. On the other hand, improvement in terms of trade enhances equity. Of the institutional factors, deunionization has had a harmful effect on income inequality, whereas increased minimum wages have lowered it.

Dreher & Gaston (2008) in the study 'Has globalization increased inequality?' analyzed the impact of globalization on income inequality in a set of different countries during 1970-2000. Using the GMM method, the study demonstrated that globalization exacerbates inequality, which is particularly true in the case of OECD countries.

Checchi & García-Peñalosa (2008) in the paper 'Labour market institutions and income inequality' investigated how labor market institutions affect household income inequality using data from 16 OECD countries during 1969-2004. The evidence from the OLS estimate showed that stronger institutions help to lower income inequality, but in some circumstances, also linked to greater unemployment rates.

Bahmani-Oskooee *et al.* (2008) in the study titled 'Short-run and long-run determinants of income inequality: Evidence from 16 countries' investigated the short-run and long-run factors that determine income inequality for 16 countries. The study applied cointegration

analysis and found that Kenya follows the pattern of the classic Kuznets hypothesis, while in Panama, national income exerts a long-run positive and significant impact on income inequality that follows an 'uninverted U' shape pattern. For trade openness, income inequality increases due to its positive impact in six countries and declines in three countries. In the long run, trade openness reduces income inequality for three countries, but for the two other countries, the effect is opposite.

Adams & Mengistu (2008) in the paper 'Privatization, governance and economic development in developing countries' analyzed the effect of privatization on income inequality and economic growth across 82 developing nations from 1991 to 2002. Employing the LSDV method, the finding showed that privatization does not have an impact on both income inequality and economic growth. Conversely, good governance contributed positively to economic growth and mitigated income inequality. In contrast, FDI showed a minimal influence on economic growth, but it tended to increase income inequality.

Adams (2008) in an article 'Globalization and income inequality: Implications for intellectual property rights' investigated the impact of globalization on income inequality in a panel of 62 developing countries during the period of 1985-2001. The study applied the SUR method and revealed that strengthening intellectual property rights and trade openness are positively related to income inequality, FDI is negatively correlated with income inequality, and institutional infrastructure is negatively linked with income inequality.

Milanovic (2005) in their paper titled 'Can we discern the effect of globalization on income distribution? Evidence from household surveys' examined the impact of globalization (trade openness and FDI) on income distribution. Using the GMM estimation technique, the study demonstrated that in countries with very low income levels, openness benefits the wealthy, but as income levels increase, the incomes of the poor and the middle class improve proportionately more as compared to the incomes of the rich. But FDI does not have a significant effect on income inequality. The result also indicated that in a democratic system, the distribution of income tends to favor the middle segments of society, increasing their share of income, while the income shares of both the highest and lowest deciles remain unchanged.

Knowles (2005) in the paper 'Inequality and economic growth: The empirical relationship reconsidered in the light of comparable data' investigated the income inequality-growth

nexus using data for 40 countries during 1960-1990 and the OLS method. The study found a negative association between income inequality and economic growth.

Sala-i-Martin (2002) in a working paper 'The disturbing "Rise" of global income inequality' estimated the evolution of world income distribution, poverty, and income inequality during the last three decades. The study used aggregate GDP and within-country income share data during the period 1970-1998 to estimate the income level of each person. The density function showed that the poverty rate ($1/day) declined from 20 percent to 5 percent in the last 25 years. The poverty rate ($1/day) has declined from 44 percent to 18 percent. The study estimated global income inequality utilizing seven different well-known indexes: the Gini coefficient, two of Atkinson's indexes, the variance of log-income, the Theil index, the mean logarithmic deviation, and the coefficient of variation, and showed that global income inequality declined between 1980 and 1998. The study also found that global income inequality is explained by across-country inequality, not within-country inequalities. During the sample period, within-country inequalities have marginally increased, but not nearly enough to overcome the significant decline in across-country inequalities. The across-country declines in inequality are caused mainly, but not entirely, by the growth rate of the 1.2 billion Chinese citizens' incomes.

Odedokun & Round (2004) in the paper 'Determinants of income inequality and its effects on economic growth: Evidence from African countries' investigated the factors of income inequality and income distribution, its effect on the growth of the economy, and the mechanisms through which growth is affected by inequality. The study used data from 35 African countries during the period from the 1960s to the 1990s. The regression results showed that economic development, regional factors, the size of the government, the labor force engaged in agriculture, a shortage of skilled manpower, and land resources were found to have an inequalizing effect. The mechanisms affecting growth are through a decline in investment in secondary and tertiary education, a decline in political stability, and a rise the fertility rate.

Martínez *et al.* (2001) in their paper entitled 'The impact of unemployment on inequality and poverty in OECD countries' investigated the contribution of unemployment to income inequality and poverty in OECD countries. The study revealed the considerable differences in unemployment distribution within households in OECD countries. A sub-group

decomposition analysis shows the limited impact of unemployment on the distribution of income in most of the countries.

Bulíř (2001) in a paper 'Income inequality: Does inflation matter?' using cross-country data from 75 countries, analyzed the impact of inflation on income inequality. Using the OLS and IV techniques, the study revealed that level of development, fiscal redistribution, state employment, and price stability are all found to improve income inequality. Price stability has a positive impact on income distribution and it is non-linear. Income inequality is greatly reduced as inflation drops from a hyperinflationary level, but the Gini coefficient appears to gain very little more as inflation is brought further down to a very low level.

Milanovic (2000) in the paper 'Determinants of cross-country income inequality: An "Augmented" Kuznets hypothesis' investigated the impact of social choice variables on income inequality on a sample of 80 countries during the 1980s. The results of the study indicated that social choice variables (state-sector employment and social transfers) uniformly have a significantly negative impact on inequality.

Mocan (1999) in the paper 'Structural unemployment, cyclical unemployment, and income inequality' investigated the impact of unemployment and inflation on income inequality in the U.S. during the time period 1948-1994. The study decomposes unemployment into structural and cyclical components. The study revealed that structural unemployment raises the highest quintile's income share and decreases the income shares of the bottom 60 percent of the population. The inflation result showed a progressive impact on income inequality. Inflation decomposition into anticipated and unanticipated showed that anticipated inflation does not affect income inequality, while income is redistributed from the top quintile to the bottom (lower) three quintiles due to unanticipated inflation.

Doessel & Valadkhani (1998) in the paper 'Economic development and institutional factors affecting income distribution: The case of Iran, 1967-1993' investigated the impact of institutional or structural factors and sectoral shifts on income inequality in Iran during the period from 1967 to 1993. The empirical test of the study rejected the Kuznets inverted U-shaped relationship. The results also indicated that per capita government expenditures reduce income inequality. However, high-income groups received more benefits from subsidies and transfers.

Perotti (1996) in a paper titled 'Growth, income distribution, and democracy: What the data say' examined the association between income distribution, democracy, and growth. The study applied OLS and two stage least squares (2SLS) regression and concluded that societies with more equality have low rate of fertility and invest more in education, in which higher growth rates reflect both. Also, highly unequal societies are more likely to be socially and politically unstable, which can be seen in lower investment and therefore a low rate of growth.

Alesina & Perotti (1996) in the study 'Income distribution, political instability, and investment' investigated two questions: (i) does political instability rise as a result of income inequality? and (ii) does political instability lower investment? The study effectively examined a sample of 72 countries during the period from 1960 to 1985. The findings of the study indicated that 'yes' is the correct response to both questions. First, in particular, the findings implied that political stability is increased by the presence of a prosperous middle class. Second, political instability has a negative impact on investment and consequently, on GDP. These two effects (from instability to investment and from inequality to instability) are also both statistically and economically significant.

Maxwell (1990) in the paper 'Changing female labor force participation: Influences on income inequality and distribution' investigated the impact of female labor force participation on income inequality in the U.S. during the period from 1947 to 1985. The study applied OLS regression and unveiled that prior to 1970, gender equality improved income distribution due to the high participation of women married to low-earning men. But after 1970, there was an increased participation among women who got married to high-earning men and had above-average incomes. Consequently, the increase in female labor force participation could potentially increase inequality among families with both husband and wife earners.

Ram (1984) in the paper 'Population increase, economic growth, educational inequality, and income distribution: Some recent evidence' assessed the impacts of population increase, educational level and inequality, and short-run growth rate on income distribution in a sample of 28 countries for different years. The results showed that an increase in population is associated with widening income disparities. An increase in short-run economic growth reduces income inequality. Higher mean educational attainment seems to be a modest

equalizer; however, there is no evidence of the harmful impact of educational inequality on income distribution.

Rice & Lozada (1983) in the paper 'The effects of unemployment and inflation on the income distribution: A regional view' analyzed the impact of unemployment and inflation on income distribution in the regions of the U.S. over the period from 1968 to 1976. The regression results showed that increases in unemployment rates are generally associated with a widening of income inequality, while inflation often appears to reduce the degree of such inequality.

2.3 Income Inequality, Democracy, and Governance

Sintos *et al.* (2024) in a paper titled 'The political process in nations: Civil society participation and income inequality' examined how participation in civil society directly impacts income inequality. Utilizing the panel dataset from a sample of global countries from 1975 to 2019 and employing FE, FE-IV, and 2SLS econometric methods revealed that increased in the civil society participation contributes to a reduction in income inequality over the short, intermediate, and extended periods.

Gossel (2024) in the study 'FDI and inequality in Sub-Saharan Africa: does democracy matter?' investigated the moderating effect of democracy on the association between income inequality and FDI. Using panel data from 38 SSA countries during 1990-2018 and employing FE and system GMM methods, the study revealed that FDI does not have an immediate impact on income inequality. In contrast, democracy helps reduce income inequality in both the short and long run. Further, sensitivity results revealed the positive effect of democracy on equality, irrespective of FDI levels, natural resource endowment, or the extent of democratic consolidation. However, FDI begins to reduce inequality once democracy reaches a moderate level.

Amri & Bouvet (2024) in the article titled 'Do voters in developing and transitional democracies care about income inequality? The role of media freedom' examined how income inequality is related to the incumbent party's vote share and how the degree of media freedom influences the magnitude of economic voting in 38 transitional and developing democracies during the period from 1987 to 2016. The results indicated a negative relationship between rising income inequality and the incumbent party's vote share, but only in countries with free or partially free media. Additionally, economic growth continues to be

a consistently significant economic element influencing the voting percentages of incumbents.

Adeleye (2024) in a research ‘Income inequality, human capital and institutional quality in Sub-Saharan Africa’ investigated the role of institutional quality on the nexus between human capital and income inequality in 46 SSA countries from 2010 to 2019. Employing the DK and bootstrap unconditional quantile regression (UQR) methods, the study revealed that institutional quality and human capital increase inequality, but the interaction of both helps reduce it. The UQR indicated a negative interaction effect at the lower quantiles, specifically at the 0.10, 0.25, and 0.50 levels and the results are mixed across sub-regions. Furthermore, the margin plots indicated that as institutional quality becomes more robust, the association between human capital and income inequality becomes negative. The declining trend observed within the 95% confidence interval suggested that institutional quality amplifies the positive influence of human capital in diminishing income inequality.

Uzar (2023) in the paper ‘Income inequality, institutions, and freedom of the press: Potential mechanisms and evidence’ analyzed the impact of institutional quality and press freedom on income inequality across the BRICS-Turkey (BRICS-T) countries over the period 1993-2016. Applying the Augmented Mean Group (AMG), the findings of the study revealed that institutional quality and the freedom of the press contribute to the reduction of income inequality. In addition, while trade openness contributes to the reduction of inequality, globalization and economic growth on this matter do not show a significant impact.

Trinugroho *et al.* (2023) in the paper ‘Democracy, economic growth, and income inequality: Evidence from province level data’ studied using panel data, which incorporates 335 observations across province-years, covering 34 provinces. The study found that, on the whole, democracy negatively impacts regional economic growth due to the significant financial resources required to support it. However, democracy contributes to reducing inequality among provinces as it potentially provides increased educational opportunities for marginalized groups, which in turn leads to higher income for those individuals.

Huynh *et al.* (2023) in the study ‘A multidimensional free market and income inequality in developing Asia: How does the quality of governance matter?’ investigated the impact of the free market, governance quality, and their interaction simultaneously on income inequality across 23 Asian developing countries during the period 2000-2019. Results showed that overall economic freedom and its three components, including trade freedom, labor freedom,

and investment freedom help reduce income inequality; but other components, such as monetary freedom, business freedom, and financial freedom raise income inequality. Meanwhile, the quality of governance helps in the reduction of income inequality and amplifies the beneficial impacts of overall economic freedom and its respective components on income inequality.

Dossou *et al.* (2023c) in an article 'Moderating effect of ICT on the relationship between governance quality and income inequality in sub-Saharan Africa' investigated how ICT influences the dynamic between governance quality and income inequality across 42 SSA countries from 1996 to 2020. Applying the GMM method, the study revealed that while ICT plays a role in enhancing income distribution, the quality of governance, on the other hand, tends to aggravate income inequality. The findings also indicated that enhancing e-governance initiatives has the potential to bolster social welfare and diminish income inequality.

Dossou *et al.* (2023b) in their study 'Toward efforts to lessen income inequality in Asia: Exploring synergies between tourism and governance quality' investigated how the interaction of governance quality on the tourism-income inequality nexus in 30 Asian nations during 1996-2020. The study applied dynamic ordinary least square (DOLS) and PCSE regression techniques and showed that tourism has a positive impact, while governance quality has a negative impact on income inequality. In addition, the result also showed that the interaction of governance quality with tourism can have a beneficial impact on income distribution.

Dossou *et al.* (2023a) in a paper entitled 'Exploring the linkage between tourism, governance quality, and poverty reduction in Latin America' analyzed the moderating effect of governance on the link between tourism and poverty reduction utilizing panel data from 15 Latin American countries during the period 2003-2015 and applied the PCSE and two-step GMM estimation techniques. The findings of the study showed that governance quality helps in poverty reduction, while tourism exacerbates poverty.

Dossou (2023) in the paper 'Income inequality in Africa: Exploring the interaction between urbanization and governance quality' examined the moderating effect of governance quality on the relationship between urbanization and income inequality in 46 African countries during the period from 1996 to 2020. Using the two stage system GMM method, the study showed that urbanization has a positive impact on income inequality. Enhancing the quality

of governance helps to improve income distribution within urban areas. Notably, the result revealed that improvements in governance quality within African regions have the potential to foster positive urbanization, which in turn could bolster urban economic growth and help reduce inequalities in income.

Tselios (2022) in an article ‘Does political decentralization affect income inequality? The role of governance quality’ investigated the impact of political decentralization on income inequality. The study employed the IV or 2SLS approach and showed that enhancing decentralization helps reduce inequality. However, this effect is more pronounced in countries where governance quality is relatively low, suggesting that in such contexts, private investments may play a crucial role in reducing income inequality.

Ongo Nkoa & Song (2022) in the study ‘Does institutional quality increase inequalities in Africa?’ investigated the significance of institutional quality in mitigating inequalities across Africa. The study amalgamated two modern types of inequalities: environmental and housing. The study applied the maximum likelihood method (MLM) to analyze the objective using data from 48 African countries from 1996 to 2016. The study revealed that governance plays a role in reducing income inequalities while simultaneously imposing a significant adverse impact on inequalities related to housing and the environment. Furthermore, the duration of a regime's rule and the length of tenure of the ruling political party's chief executive intensify these inequalities in various aspects.

Dossou *et al.* (2022) in a working paper titled ‘Does E-governance reduce income inequality in sub-Saharan Africa? Evidence from a dynamic panel’ investigated the ICT-income inequality and the governance quality-income inequality nexus for a panel of 42 SSA economies during the period 1996-2020. The GMM econometric method revealed that while ICT helps in the distribution of income, governance quality exacerbates income inequality.

Roy-Mukherjee & Udeogu (2020) in their paper ‘Neo-liberal globalization and income inequality: Panel data evidence from OECD and Western Balkan countries’ analyzed the effect of institutional quality (good governance), export complexity, and labor unionization on income inequality, covering the data from 39 OECD and Western Balkan countries during 1991-2017. The study applied the FGLS estimation method and indicated that institutional quality, export complexity, and labor unionization tend to lower income inequality, while neo-liberal globalization is found to increase income inequality.

Hassan *et al.* (2021) in the paper 'Investment portfolio, democratic accountability, poverty and income inequality nexus in Pakistan: A way to social sustainability' investigated how institutional quality affects poverty and income inequality. The study employing the ARDL to cointegration method and using data during the period from 1984 to 2019 revealed that democratic accountability and investment portfolios help in reducing poverty in both the short and long run. Democratic accountability reduces income inequality in Pakistan. The study also indicated that the literacy rate reduces income inequality; inflation increases income inequality and poverty; remittances exacerbate income inequality; and urbanization exacerbates poverty.

Coccia (2021) in the paper 'How a good governance of institutions can reduce poverty and inequality in society?' investigated the impact of institutional change on poverty and income inequality. The study collected data from 191 countries for different periods (2000, 2004, and 2007). The regression results suggested that improvement in institutional quality helps reduce poverty and income inequality in a society.

Blancheton & Chhorn (2021) in their article 'Government intervention, institutional quality, and income inequality: Evidence from Asia and the Pacific, 1988-2014' examined the nexus among public expenditure, institutional quality, and income inequality in Asia and the Pacific from 1988 to 2014. The study applied the FMOLS and DOLS methods. The result of the study revealed that government intervention and institutional quality have a negative long-run and steady-state effect on income inequality (top 1% income share). The finding also revealed a nonlinear association in the long run when results are estimated using SWIID's Gini index (version 8.2).

Bahamonde & Trasberg (2021) in the paper 'Inclusive institutions, unequal outcomes: Democracy, state capacity, and income inequality' investigated whether the influence of democratic rule on income disparity is dependent on state capability. Using data from 126 countries during 1970-2013, the FE model showed that democratic rule, when combined with state capacity, increases income inequality.

Asamoah (2021) in the study titled 'Institutional quality and income inequality in developing countries: A dynamic panel threshold analysis' investigated the threshold effect of institutional quality on income inequality in both developed and developing countries during the period from 1995 to 2017. The study revealed that when World Governance Indicators are used as a measure of institutional quality, it has a quadratic effect for developed countries.

But when the International Country Risk Guide is used as a measure of institutional quality, the Kuznets curve is found to exist in both groups of countries.

Nguyen *et al.* (2021) in a paper 'The Influence of tourism on income inequality,' while analyzing the impact of tourism on income inequality in a sample of 97 countries during 2002-2004 and using the PCSE method showed that institutional quality increases income inequality in low- and lower-middle and upper-middle income countries, while in high-income countries, institutions have a negative effect on income inequality.

Kunawotor *et al.* (2020) in an article 'Drivers of income inequality in Africa: Does institutional quality matter?' investigated the impact of institutional quality on income inequality in Africa during 1990-2017. Using two-step difference GMM and robust standard errors, the study revealed that the influence of institutions on income inequality is not statistically significant. However, indicators of institutional quality, such as the RL and CC are linked to a reduction in income inequality. Conversely, the effects of other indicators such as GE, RQ, VA, and PV on income inequality are not statistically significant.

Hung *et al.* (2020) in the study 'Relationship between government quality, economic growth and income inequality: Evidence from Vietnam' investigated the nexus between government quality, income inequality, and economic growth within Vietnam during the period 2006-2017 using the 3-stage regression model. The results showed that improvements in government quality increase economic growth and reduce income inequality among provinces. On the other hand, economic growth can bring improvements in government quality but exacerbate income inequality among provinces.

Wu & Chang (2019) in the paper 'Income inequality, distributive unfairness, and support for democracy: Evidence from East Asia and Latin America' used the data from 28 democratic countries in Latin America and East Asia during 2013 and 2015 and employed multilevel logistic regression models to investigate the relationship between income inequality and people's support for democracy. The study revealed that lower inequality, whether measured subjectively or objectively, leads to an increase in people's satisfaction with democracy. Furthermore, the study demonstrated that in East Asian countries, people's dissatisfaction with democracy is more strongly associated with subjective measures of inequality, especially how unjust they perceive income inequality to be, than the Gini index, a common objective measure of inequality.

Nguyen *et al.* (2019) in the paper 'Do good governance and public administration improve economic growth and poverty reduction? The case of Vietnam' examined the quality of governance and public administration on economic growth, income inequality, and poverty utilizing provincial-level panel data of Vietnam during the period 2012-2014. Using FE regressions, the study found a positive but nonlinear link between governance and public administration quality and per capita income. Improvements in governance and public administration also seemed to improve income distribution and lower poverty.

Dorsch & Maarek (2019) in the paper 'Democratization and the conditional dynamics of income distribution' analyzed the effects of democratization on income distribution. The study employed country-level panel data from 1960 to 2010, and using the FE and instrumental variable (IV) regression, the study indicated that egalitarian autocracies become more uneven following democratization, but democratization has an equalizing effect on extremely unequal autocracies.

Policardo & Carrera (2018) in a paper 'Corruption causes inequality, or is it the other way around? An empirical investigation for a panel of countries' investigated the causal association between income inequality and corruption in 50 countries during 1995-2015. The study indicated that the causal relationship between income inequality and corruption is country-specific and can be bidirectional. Employing a dynamic GMM approach, findings demonstrated that income inequality exerts a positive influence on corruption, while corruption seems to have an insignificant influence on income inequality.

Ahmad (2017) in the paper 'Economic freedom and income inequality: Does political regime matter?' investigated the nexus between economic freedom and income inequality and also explored the role of political regime in elaborating the nexus. The study used a panel dataset of 115 countries over the period from 1970 to 2014 and the GMM estimation method. The study revealed that income inequality is positively affected by economic freedom. The results, however, also demonstrated that the inequity generated by freedom diminishes in the context of a democratic regime.

Islam (2016) in the paper 'Does democracy reduce income inequality?' investigated the impact of political freedom on income inequality in a sample of 83 countries. The results from the system GMM showed that political freedom helps reduce income inequality. A robust finding showed that freedom helps to reduce income inequality only in democratic countries and not in others. Economic development, institutions, and culture lead to

differences in income between countries. Primary education helps to lower inequality, while secondary education has only a little effect.

Perera & Lee (2013) in the paper 'Have economic growth and institutional quality contributed to poverty and inequality reduction in Asia?' investigated the effect of institutional quality and economic growth on income inequality and poverty. The study investigated it in a sample of nine Asian developing countries during the period from 1985 to 2009 and applied the system GMM estimation method. The results showed that economic growth does not have a significant impact on income inequality, but such growth helps reduce poverty. Improvements in law and order and government stability are found to reduce poverty, while improvements in the level of corruption, bureaucratic quality, and democratic accountability increase poverty levels. Similarly, the results also showed that improvements in corruption, bureaucratic quality, and democratic accountability are worsening the distribution of income.

Andres & Ramlogan-Dobson (2011) in their paper entitled 'Is corruption really bad for inequality? Evidence from Latin America' analyzed the corruption-income inequality nexus in Latin America. Using panel data from 19 Latin American countries during the period from 1982 to 2002 and applying the FE method, the findings of the study revealed the negative impact of corruption on income inequality.

Wagle (2009) in the study 'Inclusive democracy and economic inequality in South Asia: Any discernible link?' examined inclusive democracy and the economic inequality nexus in South Asian countries, covering the period from 1980 to 2003. Using the FE and Three Stage Least Squares (3SLS) methods, the study demonstrated that economic inequality and inclusive democracy have a positive, bidirectional relationship, which suggests that these two concepts may not be entirely compatible in this area.

Shen & Yao (2008) in their study titled 'Does grassroots democracy reduce income inequality in China?' using household and village-level data from 48 villages across eight Chinese provinces during the period 1986-2002. Employing the FE and two-step GMM methods, the study demonstrated that elections tend to raise the income share of lower segments of the population. Furthermore, the results showed that elections result in a rise in per-capita public spending of 271 Yuan but do not raise the net or total transfer income in a village.

Reuveny & Li (2003) in the paper 'Economic openness, democracy, and income inequality: An empirical analysis' analyzed the effects of democracy and economic openness on income inequality in a sample of 69 countries during the period 1960-1996. Using the OLS regression, the study found that democracy and trade openness reduce income inequality, FDI raises income inequality, and financial capital does not have an impact on income inequality.

Sylwester (2002) in an article 'Democracy and changes in income inequality' explored the link between changes in income inequality and the level of both democracy and democratization in a sample of 49 countries during 1970-1990. The study applied the 2SLS method and revealed the running of causality from democratization to changes in inequality. The study also indicated that income inequality is rising in countries that are less democratic or that are moving towards becoming less democratic, albeit the link is weaker in less developed nations.

Li & Zou (2002) in the paper 'Inflation, growth, and income distribution: A cross-country study' investigated the impact of inflation on the distribution of income and economic growth in a sample of 46 countries during 1950-1992. The IV regression showed that inflation makes income distribution worse, raises the income share of the wealthy, reduces the income share of the middle class and the poor, and retards economic growth.

Gyimah-Brempong (2002) in the paper 'Corruption, economic growth, and income inequality in Africa' examined the impact of corrupt practices on economic growth and the distribution of income in 21 African countries during 1993-1999. The results of the study indicated that corruption has a detrimental effect on economic expansion both directly and indirectly through undermining investment in physical capital. The findings also suggested a positive correlation between corruption and income inequality. The interplay of slowing income growth and rising inequality indicated that in African nations, corruption hurts the impoverished more severely than the rich.

Chong & Calderón (2000) in an article 'Institutional quality and income distribution' presented cross-country evidence on the relationship between institutional quality and income distribution. Using the data from 1970 to 1995, the results from the GMM estimate indicated that institutional quality has a positive association with income disparity in poor countries but is inversely related to income distribution in rich countries.

Bollen & Jackman (1985) in the paper 'Political democracy and the size distribution of income' analyzed the impact of democracy on income inequality for a dataset of 60 countries. Using the 2SLS and a new weighted 2SLS procedure, the study didn't find evidence of the impact of political democracy on income distribution or vice versa.

2.4 Income Inequality and Its Determinants in India

Singh (2023) in a paper 'Income inequality and intergenerational mobility in India' examined the link between income inequality and intergenerational income mobility (IGIM) in India. Using the unit-level information from the National Sample Survey (NSS), the study concluded that the country exhibits low-income mobility and pronounced high inequality, which is not confined to any specific social group within India. Moreover, the income inequality-intergenerational mobility nexus exhibits a dual nature, being both positive and negative.

Agrawal & Agrawal (2023) in the paper entitled 'Beyond consumption expenditure: Income inequality and its sources in India' compared the inequality in income and consumption expenditure using the two rounds of the Indian Human Development Survey (IHDS). The study found a marginal increase in income inequality, while the inequality in consumption expenditure remained stable. The study also decomposed income inequality by sources and found that wage and agricultural income are the main drivers of income inequality in rural areas, while wage and business income are the main contributors in urban areas. The study also found that wages and government transfers are the sources of inequality decreasing, and agricultural income is an inequality increasing source of income.

Padhan *et al.* (2022) in the paper 'Nonlinear analysis of government expenditure and tax rate on income inequality in India' examined the role of government expenditure and tax rate on income inequality in India during the period 1980-2013 by endogenizing GDP, remittance inflows, urbanization, economic globalization, and net FDI flows. The results from the nonlinear ARDL approach showed a long-term relationship between government spending and tax rates on income disparity. Further, the results showed that a rise in taxation exacerbates income inequality, while an increase in government expenditure reduces it in the long run. In addition, the findings also revealed that economic growth, urbanization, and economic globalization make inequality worse, while net FDI flows and remittance inflows increase it.

Muduli *et al.* (2022) in the paper 'Nexus between tax structure and income inequality in India' investigated the impact of tax on income inequality in India during 1980-2019. The study used time-series data and employed FMOLS and DOLS econometric techniques and found that the top marginal tax rate mitigates income inequality, whereas customs duty exacerbates income inequality. Corporate income tax, personal income tax, and excise duty found no significant link to income inequality. In addition, the study showed the absence of the Kuznets hypothesis, whereas GDP per capita reduces income inequality in India.

Aggarwal (2022) in the article 'Inequality and inclusive development: Evidence from selected Indian states' analyzed the linkage of growth, poverty, and income inequality with inclusiveness in selected states of India. The study showed that the states are greatly diverse in their inclusiveness rank and score. The study argued that although the poverty ratio declined in all the selected states of India with the growth of the economy, many people are suffering from absolute as well as multidimensional poverty, and inequalities have also risen.

Sethi *et al.* (2021) in a study 'The impact of globalization and financial development on India's income inequality' examined the effects of globalization and financial development on inequality of income in India during the period from 1980 to 2014. The study applied the ARDL approach and found globalization and financial development have exacerbated income inequality. The study also indicated that a lack of education and inflation have a positive impact on income inequality.

Aneja *et al.* (2021) in an article 'Regional economic growth and inequality in India: A sector-wise decomposition analysis' analyzed the behaviour of different sectors, focusing on the impact of income inequality. First, the study estimated the sectoral decomposition of the net state domestic product (NSDP) of different states during the period from 1991-1992 to 2016-2017. Second, the study decomposed regional inequality by sector using per capita income. Finally, the study analyzed how per capita developmental expenditure across various states relates to regional inequalities. Empirical findings demonstrated that throughout the post-reform era, per capita income in India increased significantly. The tertiary sector is the major driver of growth in the post-reform era. At the sectoral level, inequality decreased within the sectors in the primary and tertiary sectors and grew in the secondary sector. However, overall, among the states, the secondary and tertiary sectors are the main causes of raising income inequality, while the primary sector is minimizing this gap.

Sehrawat & Singh (2019) in a paper titled 'Human capital and income inequality in India: Is there a non-linear and asymmetric relationship?' examined the association between income inequality and human capital in India. The study employed the non-linear ARDL approach using the data from 1970 to 2016. The findings of the study suggested that education expansion reduces high income inequality, while high economic growth, the inflation rate, and trade openness create inequality in income distribution.

Ganaie *et al.* (2018) in the paper 'Macro-determinants of income inequality: An Empirical analysis in case of India' investigated the association between income inequality and various determinants during the period 1963-2017. The study applied the ARDL cointegration approach and showed that real GDP per capita and inequality are negatively related; government expenditure and trade openness have a long-run positive impact on the distribution of income; inflation has a positive impact on income inequality; and an increase in the share of agriculture results in better income distribution.

Fukuda (2017) in the study 'The relationship between financial development and income inequality in India: Evidence from vector-error correcting autoregressive with exogenous variable (VARX) and ARDL Assessments' investigated the financial development and income inequality relationship in India during the period 1952-2011. The study used a VARX and ARDL model and found that financial size and efficiency raise inequality, there is no nonlinear effect of financial development on income inequality, economic growth lowers income inequality, and both financial and trade openness and financial crises are unfavorable to the poor.

Chancel & Piketty (2019) in the paper 'Indian income inequality, 1922-2015: From British Raj to Billionaire Raj?' tracked the dynamics of income inequality in India. The study used household surveys, national accounts, and recently released tax data from 1922 to 2015. The benchmark estimates showed that in the late 1930s, the richest 1 percent of earners held less than 21 percent of total income, before falling to 6 percent in the beginning of the 1980s and increasing to 22 percent in the most recent decade.

Azam (2016) in the paper 'Income inequality in India 2004-2012: Role of Alternative Income Sources' examined the role of different sources of income in overall income inequality in the context of India during 2004-2012. Using the data from the IHDS gathered in 2004-05 and 2011-2012 and decomposition estimates, the study found a marginal increase in income inequality in both rural and urban areas during the reference period. Regular salaried income

is found to be a main contributor to total urban income and urban income inequality. In contrast, in rural areas, farm income is the primary component of both total income and income inequality, which is followed by salaried income.

Sehrawat & Giri (2015) in the paper 'Financial development and income inequality in India: An application of ARDL approach' examined the financial development-income inequality nexus in India. Using annual data during the period from 1982 to 2012 and the ARDL bound testing approach, the study found that economic growth, financial development, and inflation increase income inequality in both the long and short run. However, trade openness helps to reduce it.

Jaikumar & Sarin (2015) in a paper 'Conspicuous consumption and income inequality in an emerging economy: Evidence from India' investigated the income inequality-conspicuous consumption nexus using data from the IHDS (2004–2005) and applying a simple regression framework. The results demonstrated that greater income inequality is linked with higher levels of conspicuous consumption as a percentage of overall spending, with lower-income households and those residing in rural areas responding more strongly to this association.

Basole (2014) in a study 'Dynamics of income inequality in India: Insights from World Top Incomes Database' assessed the dynamics of income inequality in the context of India. The study analyzed it using data from the World Top Incomes Database during the period from 1922 to 1999. The study showed that income inequality declined slowly in the planning period, caused by a drop in real earnings at the top of the distribution. In the early 1980s, this downturn started to reverse itself. Then, in the 1990s period, increasing divergence took place between the top 1% (rich) and the rest of the nation.

Tiwari *et al.* (2013) in the paper 'Does financial development increase rural-urban income inequality?' investigated how financial development is affected by rural-urban income inequality. The study using time series data from India during 1965-2008 and the ARDL bounds testing approach revealed that rural-urban income inequality is aggravated by economic growth, financial development, and consumer prices in the long run.

Ang (2010) in the study 'Finance and inequality: The case of India' explored the influence of financial development and financial liberalization on the evolution of income inequality in India during the period 1951-2004. Using the ARDL bounds testing approach, the study

demonstrated that while financial development helps reduce income inequality, financial liberalization exacerbates it.

Ang (2009) in the paper 'Financial liberalization and income inequality' investigated the financial liberalization-income inequality nexus in India from 1951 to 2004 using a multivariate VECM. The study demonstrated the existence of a strong long-term association between the variables. The result indicated that financial sector reforms aggravate income inequality. The results also demonstrated a two-way causal link between financial liberalization and income inequality.

2.5 Research Gap

In the following section, the objective-wise research gap has been explained:

2.5.1 Objective 1 Research Gap: Determinants of income inequality among different income group countries.

The previous research mostly focused on specific regions or countries or different groups of countries and provided mixed results. There is a lack of comprehensive and comparative analysis of how the different determinants of income inequality vary across different income group countries. Therefore, this present study adopts a global perspective and uses panel data from 116 countries over the period from 1996 to 2021, which are further divided into four income group countries (see details in Chapter 3, Section 3.4.2). Second, our study uses Gini coefficient data as a proxy for income inequality from the WID. This study applies econometric methods such as FGLS, PCSE, and the DK standard error estimation method to address the issues of country-specific heterogeneity, autocorrelation, and cross-sectional dependence (CD) problems in panel data. Thus, this study adds to the research literature by providing new insights and evidence on the effects of different determinants on income inequality across different income group countries during the period from 1996 to 2021.

2.5.2 Objective 2 Research Gap: Impact of governance quality, liberal democracy, and their interaction on income inequality in EWG and ERG countries.

Numerous studies have examined the income inequality-governance and income inequality-democracy nexuses in different regions, countries, or groups of countries. Their study does not clearly define the quality of governance, as in a group of countries there may be weak,

medium, and strong governance systems. This present study is different from previous studies in different ways. First, this study contributes to the literature by including only EWG and ERG countries (see the criteria for country classification in Chapter 4, Section 4.4.2) during the period from 1996 to 2021. This is necessary to identify the contribution of the governance system to income inequality based on the extent of the quality of governance. Therefore, an attempt has been made to empirically investigate the impact of governance quality, liberal democracy, and their interaction on income inequality in EWG and ERG countries during the period from 1996 to 2021. Second, this study uses the Gini coefficient as a proxy for income inequality from the WID. Third, the FGLS and PCSE regression methods are used to address the problems of heteroskedasticity and autocorrelation in panel data. Along with FGLS and PCSE, the DK standard error estimation is applied to address the issue of CD. Fourth, this study is the first to study the interaction of governance quality with liberal democracy.

2.5.3 Objective 3 Research Gap: Impact of unemployment and governance quality on income inequality in India.

Despite the works of literature that have extensively explored the impact of unemployment and governance quality on income inequality, rare empirical evidence exists on how these factors affect income inequality in India. The literature highlighted the role of different factors affecting income inequality in India; e.g., Ang (2010) found the financial system as a determining factor of income inequality; Sehrawat & Giri (2015) showed economic growth, financial development, inflation, and trade openness as major factors of income inequality in India; Ganaie *et al.* (2018) found that GDP per capita, government expenditure, trade openness, price level, and share of agriculture in GDP are the determinants of income inequality; etc. Therefore, this study chooses unemployment and governance quality as macro-determining factors of income inequality in India. The study applies the ARDL approach to investigate the impact of unemployment and governance quality on income inequality in India during the period 1996-2021.

2.6 Conclusion

This chapter explores the empirical survey of the literature related to income inequality and different factors in different regions or countries or groups of countries. Various articles from different reputed journals are preferred for the review. Based on the literature review, the researcher has identified the research gap for the present study. Hence, from Chapter 3,

empirical research starting with the first objective, i.e., to investigate the determinants of income inequality among different income group countries, has been investigated.