**Analyzing Income Inequality: Taxes and Transfers Impact**

# Abstract

*Improved quality natural fibre composites cannot be achieved without considering certain factors such as the degree of uniformity of the fibre, wettability of the fibre, fibre length, fibre volume fraction, type of matrix, interfacial bond strength, fibre orientation, compatibility of the fibre with the resin, processing parameters and manufacturing techniques among others. Their influences on the properties of the composites with typical examples from previous works were highlighted. The exact or approximate volume fractions of specific fibres in specific resins for optimal performance in composites are lacking. Epoxy, low density polyethylene, polystyrene and polyester resins were mostly used as matrix for natural fibre composites. Epoxy resins possess higher tensile and flexural strengths than polyester resins. Significant differences in the tensile strength and Young’s modulus of natural fibre polymer composites were observed with changes in the orientation and length of the fibres particularly when the differences in length are significant. Other relevant issues affecting natural fibre composites were buttressed with the aim of improving the properties of natural fibre polymer composites for advanced applications*.

**Keywords:** Composites, matrix, natural fibres, processing parameters, tensile properties

# 1.0 INTRODUCTION

# In most wealthy countries during the past few decades, there has been a worrying trend toward rising income disparity, which is especially noticeable in OECD countries (Burkhauser *et al*., 2016). The increase in inequality that has been caused mostly by a larger variation in primary income since the mid-1980s (OECD, 2008, 2011, 2015) has drawn a lot of attention from sociologists, economists, and political scientists (Jessen,2016). One crucial factor impacting disposable income distribution is the tax-transfer system, with redistributive impacts arising from both transfers and taxes.

# In light of this, this study carefully examines how taxation and income transfers to households affect redistributive consequences. Though earlier research suggested a "welfare state retrenchment," more recent studies cast doubt on this idea, particularly those that make use of the Luxembourg Income Study (LIS) dataset. Surprisingly, most welfare states showed more attempts at redistribution in the 1980s and 1990s, which was in line with their original intent.

# The goal in this study is to add to the current conversation by concentrating on the in-depth examination of the

# redistributive effects that income taxes and transfers have on households. The Study examines the implications on income distribution explicitly using harmonized LIS data across time and countries. It is expected that social transfers will mostly help lower-class populations, while income taxes will predominantly target the wealthy, thereby affecting the redistribution of income.

# This work examines the combined effects of income taxes and transfers on income distribution by comparing pre- and post-government income using the conventional budget incidence approach. Based on preliminary findings, there appears to be a noteworthy reduction in income disparity, primarily due to social benefits. This study contributes to the greater knowledge of the complex processes of income distribution by offering both a snapshot of current inequality levels and a longitudinal analysis from 1967 to 2014.

# The goal of this study is to clarify the nuances surrounding income inequality and provide insight into how redistribution has changed over time and between nations

# 2.0 LITERATURE REVIEW

# In the last two to three decades, most OECD nations have seen a noticeable change in the distribution of household income, with an increasing tendency towards inequality. (Burkhauser *et al*., 2016). This problem affects homes headed by individuals of working age as well as the general populace. In addition to being noticeable in the highest income levels of the distribution, the growing income gaps also show up as a worrisome increase in the prevalence of extremely low incomes, which has led to a rise in relative poverty measures in a significant number of nations. (OECD, 2008a). Although there is a chance that the recent

# economic crisis would lessen the top incomes, inequality's overall trajectory remains complex. Those who were already at a disadvantage prior to the crisis includes expected to see a decline in income going forward, exacerbating already existing inequalities (OECD, 2011c; Immervoll and Peichl, 2011). Compounding these challenges, austerity measures implemented by some countries to curtail spending levels pose a significant threat to the redistributive capacity of government budgets. This historical context sets the stage for an exploration into the role and impact of government redistribution policies on the evolving landscape of income inequality, particularly focusing on "non-elderly" households (Immervoll and Richardson, 2011)

# The study by Caminada, Goudswaard, and Wang (2012) looks at social transfers, taxation, and income inequality in 20 OECD nations between the middle of the 1980s and the middle of the 2000s. Using micro-data from the Luxembourg Income Study, the study applies a sequential accounting budget incidence decomposition technique to assess home market inequality and the redistributive impact of social programs. The results show that primary household inequality has increased, with two thirds of the increase being countered by tax-benefit systems. Redistribution is greatly aided by some social programs, such as survivorship plans and public

# old age pensions. The research gives vital insights into emerging patterns and the effectiveness of tax-benefit regimes during this era.

# During the "welfare state retrenchment" era, pivotal studies like Caminada, Goudswaard, and Wang (2012) and van Oorschot (2006) explored the changing landscape of 20 OECD nations from the mid-1980s to the mid-2000s. They highlighted a notable rise in primary household inequality, despite the mitigating effect of tax-benefit systems, aligning with discussions on the diminishing redistributive role of welfare states. Simultaneously, van Oorschot's study on European welfare states revealed differential rationing of benefits and shifting perceptions of deservingness among citizens. The consistent pattern emerged, ranking elderly individuals as most deserving, followed by sick and disabled people, with immigrants perceived as least deserving.

# The Luxembourg Income Study (LIS) revolutionized inequality analysis.

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