



NATIONAL INCOME DISTRIBUTION: A COUNTRYWISE ANALYSIS

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ABSTRACT

Purpose- This study aims to analyze the changes in income distribution for selected developing countries over a time period in between 2015 and 2022, 8 years of observations. It hypothesizes that Covid19 pandemic period of 2020 and 2021 significantly impacted income distribution in all developing countries investigated.

Methodology- Income distribution data for this study are extracted from the World Inequality Database addressing household income adjusted for after-tax income. Each household's income is equally divided among the adult population aged 20 or older. The data are categorized into 10% income groups resulting in ten distinct income levels for the analysis. The study examines income distribution of five developing comprising Turkiye, Czechia, Greece, Hungary, and Romania.

Findings- The top 10% of the population in the developing countries take 33% of national income on average. The average per capita income was \$34,849 in 2015 and increased to \$42,610 in 2022 after a dip of with a similar Covid19 dip. However, social policies generally failed resulting in income shifting from lower and middle-income groups to the top 30%.

Conclusion- All countries implemented various social programs to support those most affected by Covid19. The social policies and measures implemented by governments to mitigate the effects of Covid19 appear to have been more successful in some of the developing countries comparing to the other developing countries. Although the developing countries could manage to increase their overall national income, they failed to restore their pre-pandemic income distribution. Significant income transfer occurred from the bottom 20% and middle 50% to the top 30% in these countries.

Keywords: Income distribution, personal income distribution, income inequality, developed countries.

JEL Codes: D30, O15, E64

1. INTRODUCTION

Income inequality has long been a critical issue in both developed and developing countries, influencing social stability and economic growth. The Covid19 pandemic emerged in late 2019 and escalated and extended globally in 2020 and 2021 has exacerbated income distribution problem by disrupting economies and deepening existing inequalities. Governments worldwide have implemented various social policies and programs to mitigate the bad economic impacts of the pandemic. These social programs generally aimed to protect vulnerable segments of the population and maintain a fair income distribution. This study seeks to analyze the changes in income distribution in selected developing countries from 2015 to 2022 with a specific focus on the effects of the Covid19 pandemic.

The study hypothesizes that the Covid19 pandemic significantly disrupted income distribution, with varying degrees of success in recovery across countries. By extracting income data from the World Inequality Database, the study compares income distribution changes in five developing countries, namely; Turkiye, Czechia, Greece, Hungary, and Romania. The analysis spans an eight-year period capturing pre-pandemic, pandemic, and post-pandemic periods. Through this comparative approach, the study aims to shed light on the effectiveness of social policies in mitigating income inequality and the resilience of developing economies in restoring equitable income distribution.

2. LITERATURE REVIEW

Bayar et al., (2023) examine the economic growth of the Turkish economy under Covid19 pandemic conditions and the impact of pandemic on income distribution. Using data from SILC, the study conclude that the short run working allowance was the most important policy that reduced the impact of pandemic on income distribution.

Petrakos et al., (2023) investigate the impact of Covid19 pandemic on Greek economy. Using EU - SILC data they conclude that country's response to the shock was harmful for disadvantaged groups.

John Wildman (2021), use cross-sectional regression method to analyze the relationship between income inequality and effect of Covid19 pandemic for OECD countries. The author finds that countries with higher income inequality level are worse affected by Covid19 pandemic.

Han et al., (2020), in their study for the US, examine how income distribution and poverty are affected. Using Monthly Current Population Survey (CPS) data, the study runs various simulations and finds that the government's policies against the Covid pandemic have improved income distribution and reduced poverty.

Alon et al., (2023) investigate the impact of Covid19 on world income distribution. Using a calibrated model, they especially focus on insurance programs in emerging market economies representing the middle of the world income distribution and state that the effects of pandemic are more severe.

Acevedo et al (2024) examine inequality in Latin America during Covid19 using the 2020 survey data. They analyze trends from 1992 to 2020 and use regression models for 16 countries to explore socioeconomic factors. They find that inequality rose by 2% from 2019 to 2020 with varied impacts by gender, location, and sector. The remittances had a modest effect while government transfers reduced disparities in some countries. The declines in employment by Covid19 increased inequality which negatively affected the recovery of economies.

In their research Qian & Fan (2020) examine the economic impact of Covid19 in mainland China using data from March-April 2020. They find that income losses are mitigated by factors like education, family economic status, and state-sector employment. Those in harder-hit regions or families face greater income declines. The study concludes that Covid19 exacerbates existing inequalities and creates new disparities, recommending public policies to support vulnerable and marginalized populations for recovery.

3. DATA AND METHODOLOGY

In this study, the data are obtained from the World Inequality Database to examine the income distribution of various countries over the period of 2015-2022. The household income data used in the study are post-tax providing a clearer picture of the actual income available to households spendings. The study examines income distribution in five developing countries, namely; Turkiye, Czechia, Greece, Hungary, and Romania).

To ensure an accurate representation, the total household income is divided among the adult population defined as individuals aged 20 and above. This allows to categorize household income into deciles or ten equal income groups. Subsequently, the shares of total income for deciles are calculated providing a detailed view of income distribution across different segments of the population.

Table 1 illustrates the income groups and their respective shares of total income for Czechia offering a specific example of how income is distributed among the population in one of the countries studied. This approach enables us to analyze changes and trends in income distribution over the specified period highlighting valuable insights on the economic impact and effectiveness of social policies implemented by the countries examined in this study.

Table 1: Income Distribution - Czechia

Income Groups	Czechia															
	2015		2016		2017		2018		2019		2020		2021		2022	
(Bottom 10%) 1	14,513	4%	14,906	4%	15,477	3%	16,150	4%	16,810	4%	16,794	4%	15,572	3%	16,042	3%
2	21,338	5%	22,550	5%	23,645	5%	24,482	5%	24,789	5%	24,172	6%	22,410	5%	23,091	5%
3	26,963	7%	29,020	7%	30,725	7%	31,973	7%	32,065	7%	30,872	7%	28,711	6%	29,587	6%
4	29,811	7%	32,181	8%	34,594	8%	36,114	8%	36,678	8%	34,395	8%	31,994	7%	32,959	7%
5	33,423	8%	35,589	9%	38,432	9%	40,418	9%	41,261	9%	37,627	9%	35,767	8%	36,845	8%
6	37,570	9%	39,613	10%	42,808	10%	44,964	10%	46,058	10%	41,740	10%	41,367	9%	42,601	9%
7	41,228	10%	42,228	10%	46,346	10%	48,726	11%	50,126	11%	45,440	10%	47,146	10%	48,539	10%
8	45,507	11%	46,390	11%	50,485	11%	52,687	11%	54,382	12%	49,448	11%	54,039	12%	55,639	12%
9	50,745	13%	51,543	13%	56,051	13%	58,273	13%	59,800	13%	54,909	13%	65,423	14%	67,331	14%
(Top 10%) 10	98,037	25%	97,222	24%	104,483	24%	105,227	23%	107,641	23%	100,284	23%	112,132	25%	115,047	25%
Sum	399,135	100%	411,241	100%	443,045	100%	459,015	100%	469,611	100%	435,681	100%	454,561	100%	467,679	100%
Average	39,913		41,124		44,305		45,901		46,961		43,568		45,456		46,768	

	Czechia															
	2015		2016		2017		2018		2019		2020		2021		2022	
Bottom %20	17,925	14.00	18,728	14.34	19,561	13.93	20,316	14.05	20,800	14.06	20,483	14.84	18,991	12.87	19,566	12.89
Middle %60	35,750	27.92	37,503	28.71	40,565	28.89	42,480	29.39	43,429	29.35	39,920	28.93	39,837	28.99	41,028	27.03
Top %20	74,391	58.09	74,383	56.95	80,267	57.17	81,750	56.56	83,720	56.59	77,597	56.23	88,778	60.15	91,189	60.08
Sum	128,067		130,614		140,393		144,547		147,948		138,000		147,606		151,783	
Top20/Bottom20	4.15		3.97		4.10		4.02		4.03		3.79		4.67		4.66	
Top20/Middle60	2.08		1.98		1.98		1.92		1.93		1.94		2.23		2.22	
Middle60/Bottom20	1.99		2.00		2.07		2.09		2.09		1.95		2.10		2.10	

4. FINDINGS

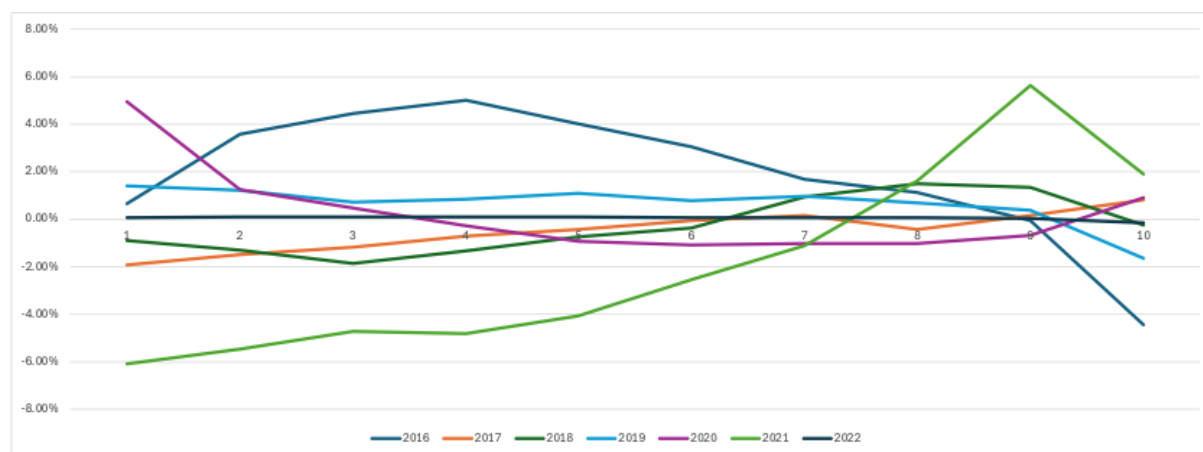
The analysis is extended to the group of developing countries. The developing countries included in the group are Czechia, Hungary, Greece, Turkiye, and Romania. Then, the income deciles for each country are calculated and the shares of total income for each decile are determined.

Table 2 presents the average income of the developing country group and the share of income each decile received. Graph 1 illustrates the changes in income for each decile over the study period. As clearly shown in Graph 1, during the years 2020 and 2021, the income share of the highest income group increased compared to other income groups. This detailed analysis highlights the disparity in income distribution and the economic impact of the Covid19 pandemic on different income groups in the developing countries.

Table 2: Average Income of Developing Countries

Income Groups	Czechia - Hungary - Greece - Turkey - Romania															
	2015		2016		2017		2018		2019		2020		2021		2022	
(Bottom 10%) 1	8,026	2.30	8,371	2.32	8,661	2.28	8,864	2.27	9,265	2.31	9,151	2.41	9,214	2.25	9,574	2.25
2	13,864	3.98	14,796	4.10	15,385	4.04	15,670	4.02	16,338	4.07	15,584	4.10	15,827	3.86	16,466	3.86
3	18,705	5.37	20,142	5.58	21,017	5.52	21,283	5.46	22,091	5.50	20,896	5.49	21,379	5.21	22,249	5.22
4	21,339	6.12	23,163	6.42	24,298	6.38	24,726	6.34	25,727	6.40	24,142	6.35	24,682	6.02	25,679	6.03
5	24,386	7.00	26,203	7.26	27,548	7.24	28,198	7.23	29,437	7.33	27,434	7.21	28,287	6.90	29,423	6.91
6	28,179	8.09	29,923	8.29	31,575	8.29	32,424	8.31	33,771	8.40	31,433	8.27	32,949	8.04	34,260	8.04
7	32,181	9.23	33,704	9.34	35,667	9.37	37,059	9.50	38,697	9.63	36,064	9.48	38,415	9.37	39,935	9.37
8	37,311	10.71	38,933	10.79	40,943	10.76	42,715	10.95	44,489	11.07	41,500	10.91	45,475	11.09	47,275	11.09
9	46,051	13.21	47,637	13.20	50,293	13.21	52,241	13.40	54,119	13.47	50,806	13.36	58,003	14.15	60,282	14.15
(Top 10%) 10	118,447	33.99	117,907	32.68	125,299	32.91	126,784	32.51	127,868	31.82	123,282	32.42	135,775	33.12	140,953	33.08
Sum	348,488	100	360,780	100	380,686	100	389,964	100	401,803	100	380,291	100	410,006	100	428,097	100
Average	34,849		36,078		38,069		38,996		40,180		38,029		41,001		42,610	

Graph 1: Change in Average Income of Each Decile – Developing Countries



5. CONCLUSION

This study aimed to analyze the changes in income distribution over the period of 2015 and 2022 in the selected five developing countries. The whole population over the age of 20 is first clustered into ten income groups. It examined two groups of countries, selecting five developed and five developing countries to analyze changes in income distribution both individually and collectively. When the effects of Covid19 were strongly felt during the years 2020 and 2021, significantly reduced national incomes and, more critically, damaged income distribution across all countries.

All countries in general implemented various degrees of social programs to support those income groups badly affected by Covid19. The analysis reveals that the developing countries, on the average, struggled with their social programs. While the developing countries managed to increase their national income overall, they failed to restore their income distribution to pre-pandemic levels. This led to a significant income transfer from the bottom 20% and middle 50% to the top 30%.

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