Can Tax Reforms Reduce Inequality?

Ahmad Seyf

1 Introduction

Discussions about inequality, especially economic inequality[1] seems to be everywhere. With few exceptions, inequality has been rising in the past four decades almost everywhere. At the same time, it is true that significant progress has been made on various aspects of social inequality, race, gender for instance in the last 100 years. But it is equally true that much of that progress in economic inequality stalled in the last 40 years or so. In more recent times, while we may have increased our knowledge about inequality, considerable less research has been

[1]We define economic inequality as the difference between levels of income, assets, wealth and capital and living standards, including inequalities in employment.

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produced to inform policy makers about intervention to reduce it. Areas that require special attention are the following:

- The research community knows far too little about inequality of opportunity relative to what is known about inequality of outcomes.
- The research of the last few decades has been much more successful at documenting the patterns, trends, and (to some extent) causes of social inequality than it has been at examining its consequences or identifying effective strategies for reducing it.
- Last but not least, the problem of inequality has been framed in both research and in public debate as a problem of poverty. In other words, research often asks 'why are the poor poor?' or 'what are the consequences of poverty?' rather than 'why education and health outcomes, and the distribution of political power are so unequal?' and further, 'what are the consequences of inequality for society?' (Carter and Reardon 2014, p. 2)

It should be pointed out from the outset, that there is nothing natural about this growing inequality. More focused attention should be given to unpacking the combination of economic, political, social and cultural influences that shape individuals and communities' life chances and welfare. In this contribution, however, we focus on tax reforms to reduce inequality.

The structure of the chapter is as follows: Sect. 2 offers a relevant literature review, giving an outline of the evolution of inequality in the last four decades. Section 3 discusses the impact of tax reform on inequality. Section 4 assesses the re-distributional impacts of taxes and transfers in a sample of 24 emerging countries. The impact of different components is de-constructed too, and examined separately. Section 5 assesses the distributional impact of taxes and transfers in a sample of 17 developed economies. Section 6 brings these findings together and offers some policy recommendations and the chapter ends with a summary and conclusions.

2 Literature Review

The coexistence of deep and persistent inequalities in conjunction with increasing prosperity is a paradox of our time. This paradox has called into question the way our global economy is being managed. It is true that mainly owing to a reduction in poverty in China and India, global levels of economic inequality have declined but inequality within countries, including in China (Piketty et al. 2017) and India (Chancel and Piketty 2017) has increased in the past four decades and has even accelerated since the Global Financial Crisis (GFC) of 2008 and the subsequent Great Recession (GR). In addition, the persistent inequalities have many dimensions. Over and above inequalities in wealth and income, inequalities in health and education, and access to welfare services, and especially gender and racial inequalities are present too. It used to be argued that some inequalities may be pro-growth, but more recent academic research (OECD 2015a), has shown that not only do deep social inequalities endanger social cohesion, but also undermine sustainable growth. Examining the rising trend of inequality in the OECD countries, Keeley (2015) pointed out a number of factors. Two factors that could be mentioned are technological change and changes in pay norms and in taxation. Growth of part-time employment is another factor as it demonstrates the shifting of social patterns. Other factor according to Keeley (op. cit.) is income shift from labour to capital. Keeley (2015) went on to add that in the 1980s, the richest 10% of the population in the OECD countries earned 7 times more than the poorest 10%. In 2015, they then earned nearly ten times more.

The situation regarding wealth is much worse. The richest 10% controlled 50% of all total household wealth and the top 1% held 18% compared to only 3% for the poorest 40% (Keeley 2015, p. 3). There is a broad agreement on the problems caused by rising inequality; nonetheless, the economic cost of rising inequality is often overlooked. Keeley (op. cit., p. 3) points out that the rise in inequality observed between 1985 and 2005 in 19 OECD countries 'knocked 4.7 percentage points off cumulative growth between 1990 and 2010.' OECD (2014, p. 2) offers a higher estimate, confirming that there is a

negative and statistically significant impact on growth and the average rise in Gini coefficient over the previous two decades dragged growth by 0.35% per year for 25 years 'a cumulated loss in GDP at the end of the period of 8.5 percent.'

However, what seems to be happening is worrying. In 2013, about a third of total employment in OECD countries was in 'non-standard' jobs. These are jobs meeting certain conditions; these are temporary, and permanently part time and mostly self-employed.

To make matters worse, 40% of employed youth have 'non-standard jobs and 50% of temporary workers are under 30 years old (ibid., p. 4).

Until recently, the most well established view on linkages between growth and income distribution was the Kuznets hypothesis (Barro 2008). This approach postulated that growth would first lead to an increase, and then to a decrease in income inequality. Further development of this approach led to a situation in the middle of the twentieth century, which gave rise to the idea that 'a rising tide lifts all boats': that is to say, economic growth would bring increasing wealth and higher living standards to all sections of society. In the 1950s and 1960s, there was some evidence behind that claim and it looked as if that was the case. Ignoring the role played by trade unions and the welfare state, there are still some who consider the distribution of productivity gains during the 1950s and 1960s to be a free market phenomenon that can be repeated.

We reject this assertion, and argue instead that the welfare gains of the 1950s and 1960s relied on market outcomes strongly moderated by institutional factors. In view of the role that institutions play in economic progress, we argue that institutions and norms affect the distribution of created values as well as their aggregate size. Our argument leads to an explanation of earnings levels and inequality in which skill-biased technical change, globalisation and related factors function within an institutional framework, including anti-trade union measures, which have been set up in the past four decades. In our narrative, the recent impacts of technology and trade have been amplified by the collapse of the institutions of the post-war years, a collapse that arose because economic forces led to a shift in the political environment over the 1970s and 1980s. If our interpretation is correct, no rebalancing of

the labour force can restore a more equal distribution of productivity gains without government intervention to reverse many of the destructive changes that had taken place in the past four decades.

In more recent decades, in the ensuing economic and political debate, this 'rising tide hypothesis' evolved into a much more specific idea, that policies favouring the richer classes, would be benefiting everyone. To put it differently, resources allocated to the rich would be utilised in a way that the benefits would inevitably 'trickle down' to the rest. Even now ten years after the GFC, discussions and debates favouring further tax cuts to the rich relies heavily on this assumption.

Alves da Silva (2017, p. 1) using data for Brazil and relying implicitly on the notion of 'trickle down' claims that 'higher growth leads to lower income inequality, consequently pursuing growth enhancing policies should be translated not only in higher growth but also in better income distribution.' Similarly, Barro (2008, p. 8) updating an earlier study concludes that 'international data show that the Kuznets curve is a clear empirical phenomenon. Income inequality first rises but subsequently decline with per capital GDP.'

After four decades of the dominance of the 'trickle down' economics, we now know if anything is trickling; it is actually trickling up and serious measures are needed to stop this trend. Hacker and Pierson (2010, pp. 21–25) examine the changes in households' real earnings between 1979 and 2006 in the US. The average household income rose by more than 50% during this period, from $47,900 in 1979 to $71,900 in 2006. But the average income of the poorest 20% rose from $14,900 to $16,500, a 10% rise over the 27 years. The second poorest 20%, enjoyed a rise of 18%, but the income of the richest 1% rose from $337,100 in 1979 to more than $1.2 million in 2006, an increase of nearly 260%. They then went on to estimate what would have happened had the income of all households increased by the same percentage as the average household income, and concluded that 'the entire bottom 90 percent saw their income rise more slowly than average household income between 1979 and 2006' (ibid., p. 25). The gap between the average income of the 20% poorest households and the income of the top 1% that stood at $322,200 in 1979 went up to $1,183,500 in 2006, nearly a fourfold increase. Other researchers

studying the income distribution in the US came to the same conclusion. Papadimitriou et al. (2014, p. 5), writing on the US, confirm this trend and point out that between 1980 and 2012 the real income of the top 1% increased by more than $2 trillion and close to $5 trillion in 2012 dollars. By contrast, the average income for the bottom 90% while increasing in the first three decades after World War II 'has stagnated since then. In fact, the real average income of the bottom 90 percent of the distribution was lower in 2012 compared to 40 years earlier' (ibid., p. 5). Tcherneva (2014, p. 1) also confirms this trend by indicating that from 2009 through 2013 while the US economy was recovering from one of the biggest economic downturn in recent memory, 116% of the income growth went to the top 10%, 95% to the top 1% and 21% to the remaining 9%, while the average income of the bottom 90% fell during this growth period. Jacobson and Occhino (2012, p. 2) stated that income inequality was declining up to the late 1970s, not only in the USA but also in a number of other industrialised economies too, but the trend has since reversed. Between 1967 and 1980, the average real income of the bottom 20% of household grew by 1.34% annually, faster than the 1.09% of the top 20% and the 0.67% of the top 5%. After 1980, it was different. The real income of the bottom 20% grew by only 0.05%, while it grew by 1.24% for the top 20% and by 1.67% for the top 5%. Taking a longer view of the changes in income distribution in the US, Fig. 1 shows that in contrast to Kuznets' hypothesis and claim by Barro (2008, p. 8), the share of the top 10% of the richest decile increased by 20% between 1970 and 2015.

In the UK, there has been a similar trend. In 1978, someone in the richest decile of the population had an income three times that of his/her contemporary at the poorest decile of the distribution. But in 2010, this ratio went up to five to one. In 1978, 7.1 million people had incomes below 60% of the median income, and by 2009–2010, that figure stood at 13.5 million, a rise of more than 90% (Mirrlees et al. 2010, pp. 8–9). This development should not be surprising, as it is also known that those who were among the 5% of the poorest population, have seen their income rise by 30% between 1979 and 2010, whereas the income of those at the top 5% richest in the distribution, increased by 100% during the same period (ibid., p. 9). Writing on China, Li Shi

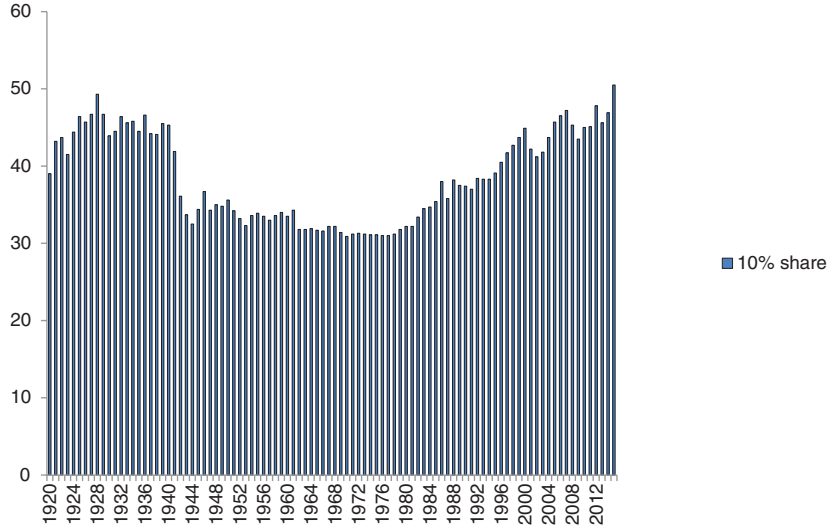

Fig. 1 US, top 10% national income share, 1920–2015 (*Source* Data extracted from Gordon [2017])

(2016, p. 84) pointed out that during the past three decades, China's economic growth has been among the fastest in the world. At the same time, China experienced one of the fastest increases in income and wealth inequality too. Between 1985 and 2014, the economy grew at about 10% on average per year, and the Gini coefficient for disposable income has also increased from 0.38 to 0.47 during the same period.

Fredrikson (2012, p. 2) examining the situation in the EU concluded that inequality has risen quite substantially since the mid-1980s and the main driver of this development was the sharp rise in the share of the top 10% of the population. For the period between the mid-1980s and 2008, the average annual income rise for the poorest 10% was 0.87%, whereas the top 10% enjoyed an annual average rise of 2.23%, more than 2.5 times (ibid., p. 10). Alvaredo et al (2017, p. 20) studied the development of inequality in the Middle East and found that the share of the total income going to the top 10% income earners is about 61%, as compared to 36% in Western Europe and 47% in the USA. Taking the income share of the top 1%, a similar picture emerges in the Middle

East. The top percentile income share is about 27% in the Middle East vs. 12% in Western Europe, 20% in the USA, 28% in Brazil, 18% in South Africa, 14% in China and 21% in India (ibid., p. 22).

With this development in place, we should be mindful of the fact that the global economy is undergoing major transformations with serious implications for public policy making. Not only is there continued technological change, but productivity growth has also slowed down. In addition to the growing divide, these transformations create new demand for public policies to facilitate these developments. While tax and welfare policies, especially progressive direct taxes, play a mitigating role in reducing inequality, other components of public policies should be implemented to foster sustainable and inclusive growth. However, as we discuss in the next section, there is no unique pattern of impact and it is this diversity that makes the role of taxation and welfare spending rather complex. What is true in all cases, however, is that progressive taxes and transfers would reduce inequality. Several studies have shown that enhancing the scale of the intervention would improve the redistributive impact of taxes and transfers (Prasad 2008; Jellema et al. 2017; Cabrera et al. 2014; IMF 2014b; Baanante 2013). But the IMF (2017b, p. 23) while accepting that more resources may be needed, argues that in view of a high degree of uncertainty surrounding the global economic outlook as well as high levels of public debt, taxes and transfers have 'the difficult task of achieving more and better in a more constrained environment' (ibid., p. ix).

However, finding additional resources is easier said than done. In the developing and emerging economies, it cannot be done, and in the rich economies, austerity would ensure that it would not happen either. In developing economies, given their low income level; the tax base is relatively weak. Furthermore, the problems created by tax evasion and tax avoidance are relatively more serious for them than in the case of high income economies. Furthermore, there is a serious inadequacy of institutional efficiency in tax collection, in addition to the existence of a large informal sector, which does not pay income taxes. In the high income economies, and in the EU, for instance, the so-called 'financial consolidation' requires a cut rather than an increase in these programs. As an indication of the general tendency, between 2010 and

2016, social spending as a percentage of GDP declined in 14 out of 23 OECD countries. In the US, social spending as percentage of GDP remained the same; Ireland suffered the greatest decline while Finland enjoyed the highest rise in social spending.[2]

This said, however, better targeting could be achieved by changing the composition of taxes, i.e. introducing progressive direct taxes and either reducing or redirecting the indirect taxes on items that are usually consumed by the richer deciles. If the trends in taxation in the last two decades are anything to go by, capture of politics by the rich and super-rich has changed the tax composition in favour of the rich and has also reduced the progressivity of direct taxation. It is almost universally true that the generosity of social programme favouring the poorer households has reduced; while at the same time, the state is more generous towards the rich. First of all, this generosity manifested itself in substantially reduced tax rates for the rich. In addition, governments' drifts in closing loopholes enabled the rich and big corporations to engineer lower profit figures, hence, pay even less tax. In a way, we face a double whammy, not only the effective rates of tax are lower, but also the base at which this lower rate is applied is allowed to shrink. This engineering requires artful schemes from the 'experts'. It is here that tax havens play a crucial role. Related to the issue of the weakening of the revenue base of the state, another factor that needs to be examined is what IMF (2014a, p. 101) calls the 'implicit subsidies for banks.' According to the IMF (2014a, p. 102), one of the most troubling legacies of the GFC, 2007–2008 is the widely held view that some banks are 'too big to fail' and further, this is based on the belief that the failure of systemically important banks would have such a negative impact on the financial system and the economy as a whole that whatever it takes to prevent such a failure should be undertaken. Estimates of the implicit subsidies are made and the numbers are simply astonishing. The implicit subsidies to banks which are seen to be globally too big to fail

[2]OECD (2017), "Social Expenditure: Aggregated data", OECD Social Expenditure Statistics (database). Available at: http://dx.doi.org/10.1787/data-00166-en (Accessed on 24 November 2017).

in 2011–2012 'represent around $15–$70 billion in the United States, $25–$110 billion in Japan, $20–$110 billion in the United Kingdom, and up to $90–$300 billion in the euro area' (IMF 2014a, p. 104). It is to be noted here that this concept is directly linked with the level of market concentration in banking, and further, and as the IMF (2014a, p. 104) claims, in most capitalist economies, governments and central banks 'often encouraged consolidation in the banking industry in an attempt to fight the financial crisis' (ibid., p. 104). Putting these two together, what governments and central banks have done, has effectively increased the amount of implicit subsidies that these banks receive. In the next section, we examine the impact of taxes and welfare payments on inequality.

3 Role of Taxes in Inequality

It is true that to a large extent; the rise in inequalities is policy-driven, that is, most of the major drivers identified in the literature point to a certain extent to a policy failure. In this context, we mention in passing the erosion of labour institutions (Acemoglu et al. 2001; Brennan 2016; Jaumotte and Buitron 2015), the decline in fiscal progressivity (IMF 2017a), skill-biased technical change (Kang 2015), trade and financial liberalisation (Danhaupt 2013; Denk and Cournede 2015), and the increasing political power of the wealthy (Hacker and Pierson 2010). In this section, we examine the role that taxes and transfers play in bringing down inequality and would also examine how the impact of these measures could be improved.

As a starting point, the last four decades could be outlined in the following manner.

- Historically speaking, the advanced capitalist economies grew at slower rates than in the 'golden age' though faster than pre-World War II.
- Within countries inequality increased everywhere in the industrialised countries.

- Under the pretext of encouraging saving and investment, hence economic growth, the top tax rates on income and wealth have declined.

Clearly, in terms of higher and more sustained economic growth, there has been no pay-off and there is no evidence in support of this claim.

It is most likely that in contrast to the promises, the skewed income distribution did not increase the size of the GDP much. This brings us to pose the question:

Would there be any negative trade-off if policies were implemented designed to reverse this trend? We would look into this in more detail, but would argue that if the income growth for the bottom 90% were boosted, there would be a better chance to revive and sustain economic growth. If the pattern of growth is shifted so that the benefits of growth accrue disproportionately to low income and poor households, this will be the most sustainable route to reduce inequality and promote growth. First, if the income of the poor is adjusted upwards, there will be less demand for redistributive efforts from the government. Furthermore, since the poor households have higher marginal propensity to consume, domestic aggregate demand would be boosted and further, it is more likely that this extra income will be spent on goods and services, produced domestically which, in turn would improve job creation in the economy. Specific policies that could be used here are adjusting minimum wages and increasing investments in training schemes and make these services accessible to a larger segment of the population. Enhancing the skill level would in turn improve productivity and improves growth prospect.

Looking at the evolution of marginal rate of tax for top earners, the IMF (2017a, p. ix) concludes that 'optimal tax theory suggests significantly higher marginal tax rates on top income earners than current rates, which have been on a declining trend.' Other researchers advocated similar view points (Hungerford 2012). Hungerford (op. cit., p. 16) provides statistical evidence showing that the persistent decline in the marginal rate of tax for top earners had no positive impact on saving, investment or growth, but increased inequality. Looking at the USA, he argues that throughout the late 1940s and 1950s, the top marginal tax rate was typically above 90%, whereas by 2012, this rate

was down to 35%. The top capital gains tax was 25% in the 1950s and 1960s; went up to 35% in the 1970s. Likewise, by 2012, this rate was also reduced to 15%. On the other hand, the real GDP growth rate averaged 4.2% and real per capita GDP increased annually by 2.4% in the 1950s. In the 2000s, however, the average real GDP growth rate was only 1.7% and real per capita GDP increased annually by less than 1%. The share of 0.1% rose from 4.2% in 1945 to 12.3%, nearly 3 fold increases in 2007. On the other hand, the average tax rate paid by the top 0.1% fell from 50% in 1945 to about 25% in 2009 (ibid., p. 16).

In the UK, the pattern of changes in the income distribution was different, and the rise in inequality was concentrated in the period 1979 to 1992, and then levelled off. Other measures of inequality, however, such as the share of the top 1% has increased. In 2010–2011, the top 1% of income tax payers were expected to pay nearly 28% of all the income tax revenue received by the government more than double the 11% they contributed by the richest 1% in the late 1970s. Nonetheless, Mirrlees et al. (2010, p. 10) argues that 'this extraordinary level of, and increase in, the contribution of the richest is not down to a more progressive income tax structure—quite the reverse, as higher rates of income tax are much reduced. Rather, it is down to the very high level of income enjoyed by the richest relative to those received by everyone else.' Examining the evolution of inequality in India, an economy with an impressive growth rate in the last few years, Chancel and Piketty (2017, p. 1) observe 'the share of national income accruing to the top 1% income earners is now at its highest level since the creation of the Indian Income tax in 1922.' The top 1% of earners had less than 21% of total income in the late 1930s, and this share went down to 6% in the early 1980s, rising again to 22% now. As we have already alluded to another high growth economy, namely China, experienced sharp rise in inequality too, despite enjoying a very high growth rate for a few decades (Zhou and Song 2016).

It can be concluded from the evidence offered, that non-inclusive growth strategy needs to be re-examined and replaced. We would argue the case for a strategy that while leading to a reduction in inequality would also increase growth. There are two ways that this could be done.

We can first identify policies that would promote growth and then examine their distributional effect. Alternatively, we can identify policies that best address inequality and then evaluate their impact on growth. To get this mix right, i.e. promoting growth and equity at the same time is essential for the success of any programme. Ignoring growth and focusing on redistribution based on transfers and taxes, may be effective but will not be financially sustainable. Accepting the view that growing inequality reduces growth (OECD 2014; Ostry et al. 2014; Berg and Ostry 2011), the fact of the matter not only is the situation of the very poorest decile of the population that contributes to reducing growth, but also that of a much broader group of working and lower middle class households. On the other hand, relying solely on growth and overlooking equity, could only make the situation worse as it has done in the last four decades. An effective and efficient strategy should meet three conditions:

- It should be countercyclical, i.e. relies on automatic stabilizer and is symmetric too, expand in bad times and tighten in good times.
- It must be growth friendly, using tax and expenditure to support the stock of physical capital, and the labour force. It should address the productivity growth slowdown as the most reliable strategy to improve financial sustainability of these measures.
- The package of policies should promote inclusion. One way of doing this is by promoting 'equality of opportunity', i.e. through investment in human capital and offering greater protection against risk of losing their jobs. It is broadly true that policies to reduce inequality of opportunity would improve income distribution while at the same time boost productivity. It is to be noted here that inequality of outcome and that of opportunities are highly inter-dependent. Overlooking the inequality of opportunities, systemic patterns of discrimination and exclusion would prevent the poorer households to access economic and other resources, effectively enhancing the existing growing divide. While trying to reduce inequality of opportunities is important, it is not enough on its own. It follows from this that an effective policy to tackle inequality should address both. There is no 'one-size fits all' policy package for different countries, as

the overall conditions giving rise to this growing inequality is country specific.

An inclusive growth should focus on the creation of productive employment to ensure that the benefits of growth are shared by the largest possible segment of the population. In the absence of other assets, labour income is the main source of income for the bulk of the population and employment is a very important channel through which income generated from economic growth could be distributed. Let us also add here that the quality of these jobs should be an issue too. We share the view expressed by the UN (2013, p. 230) that 'if countries are to reduce inequality sustainably, the economy needs to create a sufficient number of jobs to secure employment for the majority of the population (quantity); the employment generated needs to provide sufficient income, security and stability to workers (quality); and it needs to be accessible to all groups within a population (equal access).'

Some of the policies briefly discussed above would take time to produce their positive results, such as greater investment in education. However, the problems associated with the existing levels of inequality are alarmingly acute and require serious efforts for short term fixing too. We would argue that it is here that the use of taxes and transfers, especially progressive taxes, is more urgently required to tackle this growing malaise.

Taxes could play two main functions: mobilise revenue to ensure macro stability and to promote redistribution and reduce inequality. To achieve these objectives, it should be efficient, i.e. less costly to be implemented, and further, the negative effects of the tax system on welfare must be minimised. Last but not least, transparency is essential, i.e. no taxes by 'stealth'. Broadly speaking, taxes tend to disrupt the signalling function of a market economy. An employer pays more for an hour of labour than what the employee receives. Likewise, VAT means a retailer receives less for a product she sells than her customer pays for it. In the case of developing countries, there are additional problems that should be addressed. Most of these economies suffer from weak administration and also have a large informal sector. Historically, there is a fragile social contract between citizens and the state. Furthermore,

political institutions enjoy low credibility and there is a very strong tie with the economic elite. Following these points, it should be stressed that in these countries, redistribution is most effective via public expenditure rather than the revenue side, i.e. taxation. However, a well-designed policy mix could be effective too. Sabaini et al. (2016, pp. 206–207) point out that there was 'a shift in political preferences towards left parties' and shows that from the early 2000s to 2016, income inequality decreased in Latin America by five Gini points. Inter alia, taxation played an important role, thanks to the growing emphasis placed by governments on tax progressivity. In the 1980s and 1990s, economic efficiency was more important than equity to policy makers. For that purpose, trade taxes were reduced and replaced by VAT and other consumption taxes; both tend to be regressive of course. The maximum marginal rate of taxes was reduced too and in extreme cases, such as Uruguay in 1974 and Paraguay in 1992, personal income tax was abolished. This misguided mix of policies led to a sharp rise in inequality. However, the direction of tax policy has changed during the 1990s. A summary of what was subsequently undertaken is given below:

- Taxation reverted to its original role of providing resources for development and reducing inequality.
- The state eliminated or reduced a long list of exemptions, deductions and tax holiday.
- A dual tax system of personal income tax was introduced including a progressive tax schedule for labour- based income and a flat tax rate for capital income.
- Interestingly, this taxation shift started in Uruguay in 2007, Peru and some others followed from 2009.

Two further measures were introduced:

- Simplified taxation regimes for the small business sector.
- Some governments in the region introduced tax on financial transactions.

As a result of these reforms, the average tax revenue to GDP ratio gradually increased, reaching 21% of the GDP in 2016 from a very low rate of 13% in the 1990s (Sabaini et al., pp. 206–207).

Different countries use a mix of measures to achieve their stated objectives. Looking at the OECD, for instance countries can be grouped according to their inequality patterns and mix of policies implemented to tackle inequality. Overall, we can identify several social welfare models in the OECD.

The Nordic countries and the Netherlands are characterised by below-average disposable income inequality thanks to little dispersion in wages, relatively lower level of unemployment but except in Sweden, a higher than OECD average part time jobs. They use universal cash transfers and progressive income taxation. These countries use extensive fiscal interventions in labour markets and allow relatively strong labour unions. One of the main aims of these policies is to promote employment, which has a positive impact on inequality. The second model includes Ireland, Japan, New Zealand, the UK and the USA as well as Australia. These countries have a higher than average wage dispersion, weaker unions and a relatively high incidence of low paid employment. The use of cash transfers is less than other OECD countries, and in Australia and New Zealand these transfers are targeted to low income groups whereas in the US and Japan, most of the cash transfers are on old-age pensions. One of the main drivers of rising inequality in these countries is relatively very high part-time employment. It should be pointed out that in the OECD countries, the average involuntary part-time employment as a proportion of part time employment increased from less than 11% in 2000 to 17.4% in 2015. In some countries, it was much higher, for instance, in France, it was 40% and in Italy and Spain, it was higher than 63% in 2015 (OECD 2016, p. 228). In addition, OECD (2015b, p. 20) reports that most of the increase in part-time has been involuntary and 'reflects s shortage of opportunities for full-time employment.' Except in Ireland, their overall employment rate is above the average for the OECD and that in turn have a mitigating impact on inequality. The size of cash transfers is not very big, but these are more targeted and taxes are more progressive than the average among OECD members. Inequality in these countries is higher

than the OECD average. In Japan, there is an additional problem of above average part time employment (20.6% vs. 17.4% OECD average, OECD 2016, p. 228).

In the third model, consisting of Austria, Germany, France, Hungary, Luxembourg, social policy is heavily insurance-based and this would lower the progressivity of these measures; hence, their impact on inequality. Cash transfers targeted primarily at old- age pensions, and, except in Germany, the role of personal income tax is not very significant.

The final social welfare model includes Chile, Greece, Italy, Portugal, and Spain, Turkey with relatively higher inequality than others in the OECD. Two drivers could be identified: these countries suffer from wide wage dispersion and low employment rate. Like others, cash transfers are used, but their sizes are relatively small, and mostly insurance-based, and hence, have little re-distributional impact. In Chile and Turkey, the welfare system is less developed and furthermore, the levels of transfers and taxes in these countries rely more heavily on consumption taxes for their revenue, which is below the OECD average. The size of tax system is smaller but more progressive and yet, both inequality and poverty in these countries are higher than the OECD average (OECD 2012; Hoeller et al. 2012).

4 The Distributional Impact of Taxes and Transfer in the Emerging Economies

In this section, we turn to examine the distributional impact of taxes and transfers in a sample of 24 emerging economies. The impact of different components is de-constructed too, and examined separately. In the case of income, it is useful to consider various concepts of income before we proceed. Researchers at Commitment to Equity (hereafter, CEQ) have come up with a summary of these different concepts (Fig. 2).[3]

[3]The data used are from national household surveys; the unit is 'representative households'.

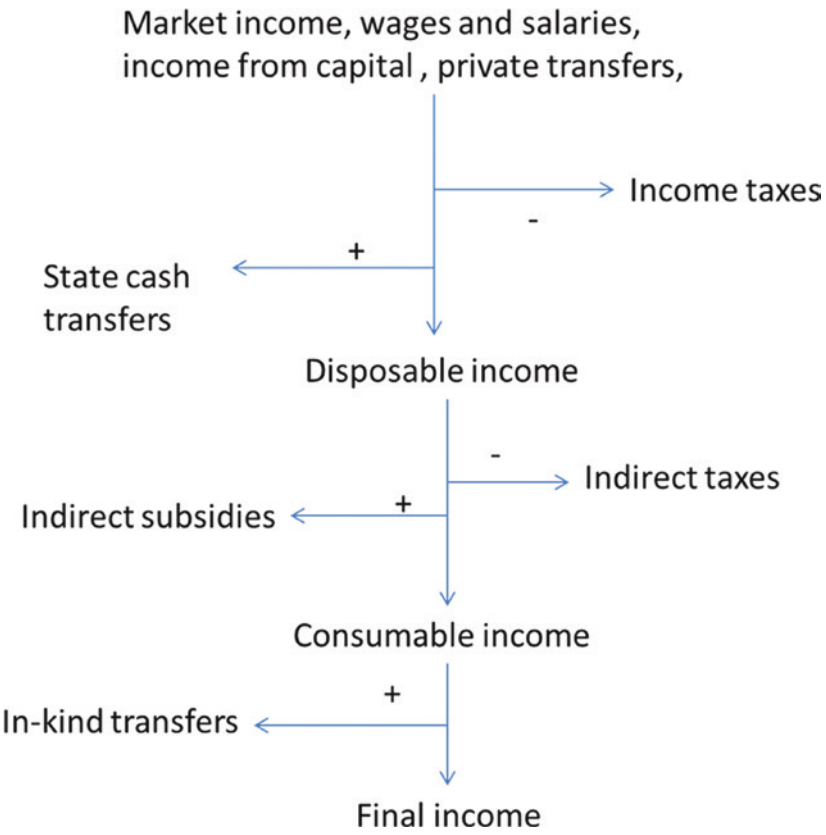

Fig. 2 Basic income concepts (*Source* Adapted from Lustig [2015, p. 9])

These researchers have also developed technical capabilities enabling the examination of the distributional impact of each of fiscal components (Lustig 2017). Without doubt, it is a major progress in our endeavour to examine some economic issues that produce serious social outcomes; henceforth, this attempt enables policy makers to reduce the negative impacts. There is no doubt that progressive taxes reduce inequality, not homogenously, but surely these measures are effective everywhere they have been implemented. In this context, using different concepts of income enables one to compare incomes before taxes and transfers with income after taxes and transfers. One can also assess

the impact of transfers in kind, such as education and health care services offered by the state. In a major study by Inchauste and Lustig (2017), on the distributional impact of taxes and transfers on income distribution, evidence is offered as to the impact of fiscal measures on income distribution in eight low and middle income economies. At the same time, CEQ produced several studies, using the same concepts of income and the same analytical approach to study the distributional impacts of these measures in another 16 countries. Overall, I have compiled data on the impact of fiscal measures in 24 countries for further examination.

There are several reasons as to why I have chosen these countries for further examination. First, the list is comprehensive; countries from Asia, Africa, Europe, Latin America and the Middle East are present. Second, as the same concepts of income are used, using the same technique to measure inequality, and hence, our results are comparable without creating any problem of incompatibility.

In the 24 studies, the Gini coefficient, a common measure of income inequality, has been calculated for each of these income concepts. Hence comparing the Gini coefficient for market income, with Gini coefficient for disposable income captures the impact of direct taxation on income distribution. Similarly, other Gini coefficients inform us about the impact of other fiscal measures that the state may have undertaken. As a starting point, comparing Gini coefficients for market income with Gini coefficient for final income confirms the view that progressive taxes and transfers have positive impact on inequality and reduces it (Fig. 3).

Examining details of each individual study would go beyond the scope of this chapter, but a number of general conclusions emerge.

- Given the results obtained in these studies, it is clear that the inequality in market income is the highest amongst income types.
- Progressive taxes and transfers definitely reduce inequality as can be seen above, but the scale of the decline is different in different countries.

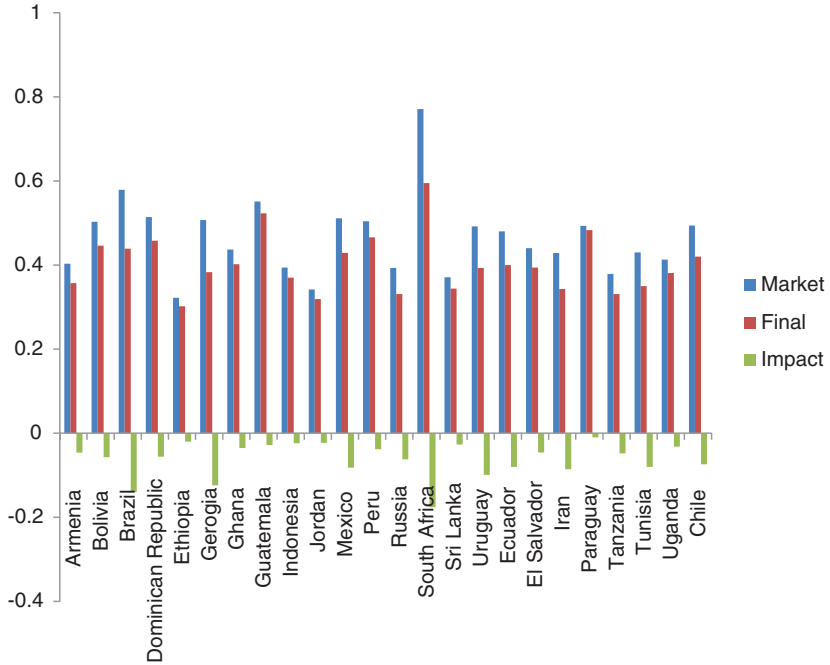

Fig. 3 The distributional impact of fiscal policy (*Source* Based on statistics given in: Alam et al. (2017; Jordan), Higgins et al. (2013; Paraguay), Jellema et al. (2017; Indonesia), Cancho and Bondareako (2017; Georgia), Inchauste et al. (2017; South Africa), Paz-Arauco et al. (2012; Bolivia), Cabrera et al. (2014; Guatemala), Arunatilake et al. (2017; Sri Lanka), Baanante (2013; Peru), Enami et al. (2016; Iran), Ruble et al. (2013; Brazil), Younger and Khachetryan (2017; Armenia), Pinto et al. (2015; Ecuador), Beneke et al. (2017; El Salvador), Haas et al. (2017; Uganda), Myamba et al. (2016; Tanzania), Martinez-Aguilar et al. (2017, Chile), for the remaining countries, Inchauste and Lustig 2017)

In the above example, the fall in Gini coefficient in Brazil, South Africa, Georgia is the highest in this sample. The impact in Jordan, Indonesia and Paraguay is minimal. In Georgia, despite the fact that indirect taxes make a bigger contribution to government revenues from taxation, Chancho and Bondarenko (2017) show that the social spending is reasonably targeted to the bottom of the distribution, and 'while indirect taxes reduced the income of the poor, social spending raised their income considerably' (p. 129). Furthermore, 'the income of the bottom

60 percent increased moving from market income to final income, with the largest increase experienced by the poorest 20 percent' (ibid., p. 129). By contrast, in the case of Jordan, one possible reason for the weak impact of taxes and transfers may be the extensive use of indirect taxation without sufficient mitigating social spending. Alam et al. (2017, p. 6) point out that for Jordan revenues from indirect taxation account for more than two thirds of government revenues from taxes. It seems that Paraguay suffers from the same problem since its government relies heavily on value added tax to the extent that while income taxes raised about 11% of government revenue, nearly 34% of it is raised via VAT (Higgins et al. 2013, p. 6). The conduct of taxes and transfers in Paraguay is so inadequate that Higgins et al. (ibid.) examining the situation in this country compare it with seven other Latin American economies and conclude that, based on market income, Paraguay has one of the lowest inequalities before government intervention. However, the final income Gini coefficient for Paraguay is the second highest among Latin American economies in this sample, which is interpreted as the failure of these measures. The use of direct taxes and transfers reduce it by less than one percent, but extensive use of indirect taxes reverses this progress. Another possible contributing factor to the relative failure in Paraguay is that the revenue base of the government is rather weak. Indonesia likewise raised more revenue from indirect taxes than direct taxes and Jellema et al. (2017, p. 33) point out that while these measures reduce both poverty and inequality, 'however, the magnitudes are modest' as we have witnessed in the data presented earlier. In South Africa, possibly the most unequal society in Africa, the government is using its fiscal instruments to significantly reduce market income inequality and poverty through a progressive tax system and highly progressive social spending programme. It looks as if the state gets its 'targeting' right, the rich bear the brunt of taxes, and the government redirects these resources to the poorest in society to raise their income (Inchauste et al. 2017, p. 23). It is further revealed by Inchauste et al. (op. cit.) that only the top three deciles of the income distribution pay more in taxes than they receive in transfers; hence, a serious decline in the Gini coefficient emerges as we have already reported.

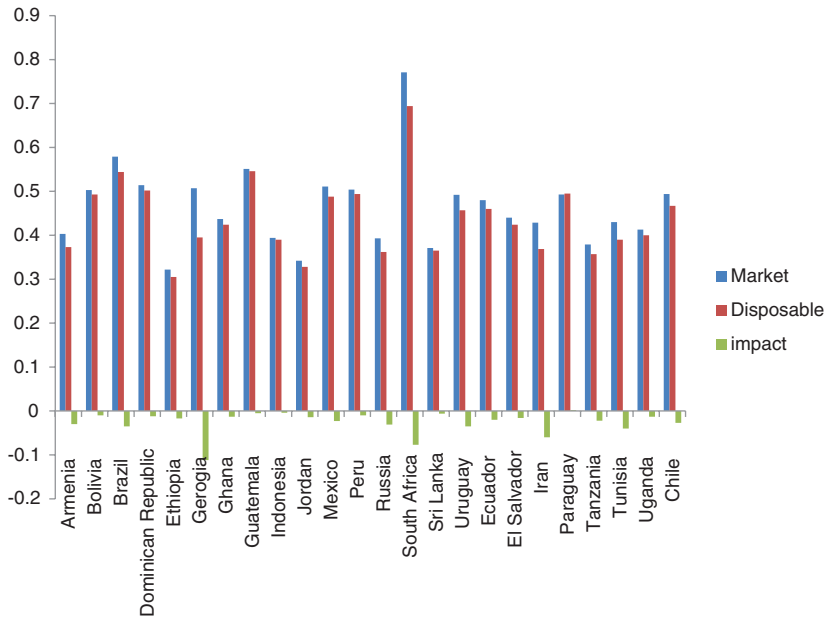

Fig. 4 The distributional impact of income tax and direct cash transfers (*Source* as for Fig. 3)

4.1 The Distributional Impact of Direct Taxation and Transfers

Comparing the Gini coefficients for market income and disposable income enables us to assess the impact of direct taxes and direct cash transfers on inequality in these countries. As can be seen in Fig. 4, these measures have reduced the Gini coefficient in all, except one, countries in our sample.

In Paraguay, the Gini coefficient has actually increased slightly indicating more inequality following the intervention by the government in these areas. In Bolivia, Indonesia, Peru and Sri Lanka, the impact was minimal. Georgia experienced the highest decline in its Gini coefficient, 22 percentage points followed by Iran where the decline was 14%. Looking at the underlining factors causing these impacts, a number of interesting points emerge. In Paraguay, it seems as if the government

failed in its targeting and as Higgins et al. (2013, p. 16) point out 'a significant number of the near poor pay enough direct taxes to make them poor … direct transfers reduce poverty slightly, but their impact is overshadowed by the poverty increasing impact of direct and indirect taxes.' In the case of Bolivia, Paz Arauco et al. (2012, p. 3) make two points. One, the targeting is misplaced and there appears to be significant leakages to the non-poor, and second, the size of the transfers was relatively small. Direct transfers account for 2% of GDP.

Cobrera et al. (2014, p. 8) assessing the situation in Guatemala show that taxes and transfers achieve almost nothing in terms of reducing inequality and poverty overall because tax revenues are not only low but also severely regressive. Extensive use of consumption taxes offset the benefits of cash transfers and more than 60% of government revenues are raised by indirect taxation and the share of direct taxation is less than 27%. Direct taxes are somewhat progressive but 'they are painstakingly low' (ibid., p. 3). They add (ibid., p. 3) that 'in contrast, consumption taxes are outright regressive and increase inequality after direct and consumption taxes and direct transfers is the same as market income inequality.' In their view, the share of direct taxes should increase, but at the same time, 'Guatemala is a textbook case of the power of elites to block pro-poor tax reforms' (ibid., p. 24). Jellema et al. (2017, p. 21) writing on Indonesia, point out that 'approximately two-fifth of poor individuals are impoverished by fiscal policy;' and further, this outcome 'indicates that a progressive, poverty-reducing fiscal system like Indonesia's does not necessarily produce net positive transfers for all poor households.' Jellema et al. (op. cit., p. 34) stress the fact that direct transfers are equalising and more effectively target the poor than in-kind transfers or subsidies but the problem seems to be that direct transfers are very small in magnitude, less than half a percentage point of GDP, hence its impact is minor as the size of the transfers is so small that it does not cover all those who my need them.

In the case of Sri Lanka and the failure of its fiscal measures to reduce inequality, both the size and their progressivity seem to be the culprit. In Sri Lanka, most of government revenues are raised via indirect taxes (Arunatilake et al. 2017, p. 269). Furthermore, there appears to be additional problems. The government sustained fiscal deficits of 7–8%

of GDP annually during 2002–2012, leading to significant accumulation of public debt. Arunatilake et al. (2017, p. 268) refer to 'limited fiscal space' given the low revenue, hence, leading to 'limited impacts'. To see how limited this fiscal space is, let us recall that with revenue equal to 10.7% of GDP in 2014 'Sri Lanka now has one of the lowest tax-revenue–to-GDP ratios in the world' (ibid., p. 268). Most of the revenues are collected via indirect taxes; in fact, two and a half times more than what is collected via direct taxation. Total tax collection in 2009 amounted to 12.8% of GDP of which 7.2% were indirect taxes and the 2.9%, direct taxes (ibid., pp. 269–270).

On Peru, Baanante (2013) points out that the extent of inequality reduction by fiscal measures in Peru is rather small. The main reason for this is relatively small scale of this spending. Social spending in Peru is below the Latin American average, as is its tax revenue; however, revenue raised via indirect taxes is above the average for Latin America. Regarding the use of taxes and transfers in Georgia, policy makers appear to come up with a number of interesting ideas to enhance their redistributive impact. For instance, income from the primary supply of agricultural products produced domestically, and up to $83,350, is exempt from income tax. There are also tax exemptions for a single mother or for a person with a disability. In addition, Georgia spends 6.1% of GDP on direct transfers and social assistance programmes, which is one of the highest among the middle income economies. Georgia's non-contributory public pension scheme provides a flat universal pension to all elderly people (Cancho and Bondarenko 2017, pp. 119–121). In the case of Iran, it raises more revenues from direct taxes than from indirect taxes and its total social spending is about 14% of GDP. Enami et al. (2016, p. 9) show that Iran has several transfer programmes, and broadly speaking, fiscal measures reduced Gini coefficient by nearly 20% (ibid., p. 18) and the main role here is played by direct transfers. The main cash transfer was universal when it was first introduced. The top 20% of population was subsequently excluded and Enami et al. (2016) argue that if the exclusion was extended to the top 40%, and were combined with a moderate increase in the cash transfers to the bottom deciles, 'the additional reduction in poverty and inequality would be considerable' (p. 31). For Brazil, Ruble et al. (2013, p. 7)

point out that primary spending is close to OECD average, but taxes on consumption are the main source of government revenues, representing 12.9% while direct taxes are only 8.2% of the GDP.

4.2 The Distributional Impact of Indirect Taxation and Indirect Subsidies

Moving from disposable income to consumable income, the impact of indirect taxes and indirect subsidies can be examined.

As can be seen in Fig. 5, the distributional impact of these two measures is rather limited and in half of the countries in our sample; there was an increase in their Gini coefficients for disposable income. The highest rise was in Georgia, where the Gini coefficient increases by 0.016 point or more than 4%. The highest fall was in Tanzania where there was more than 3% decline. Broadly speaking, the Gini coefficient for disposable income was higher than the Gini coefficients for consumable income in Armenia, Bolivia, Brazil, Georgia, Guatemala, Indonesia, Russia, South Africa, Uruguay, Iran, Paraguay. In Georgia, Cancho and Bondarenko (2017) confirm that while direct taxes are progressive, the burden of indirect taxation is more evenly distributed with the poor losing a higher percentage of income. Indirect taxes represent 55% of government revenues from taxes whereas the share of progressive and well-targeted income tax is only 29% (ibid., p. 8). Furthermore, 'Georgia's excise taxes are more regressive than the VAT. Excises are the only taxes the government can levy under the Economic Liberty Act without a referendum….overall the net fiscal system is more un-equalising with the current system of indirect taxes than with direct taxes' (ibid., p. 31). Writing on Brazil, Higgins and Pereira (2013) believe that a large proportion of direct transfer beneficiaries are non-poor, and further, indirect taxes paid by the poor often surpass the benefits they receive; hence, there is relatively low impact on inequality in relation to total spending. It should be noted, though, that inequality has fallen in Brazil in every year since 2001, but still there is a very high level of inequality. Factors reducing inequality in Brazil are as follows:

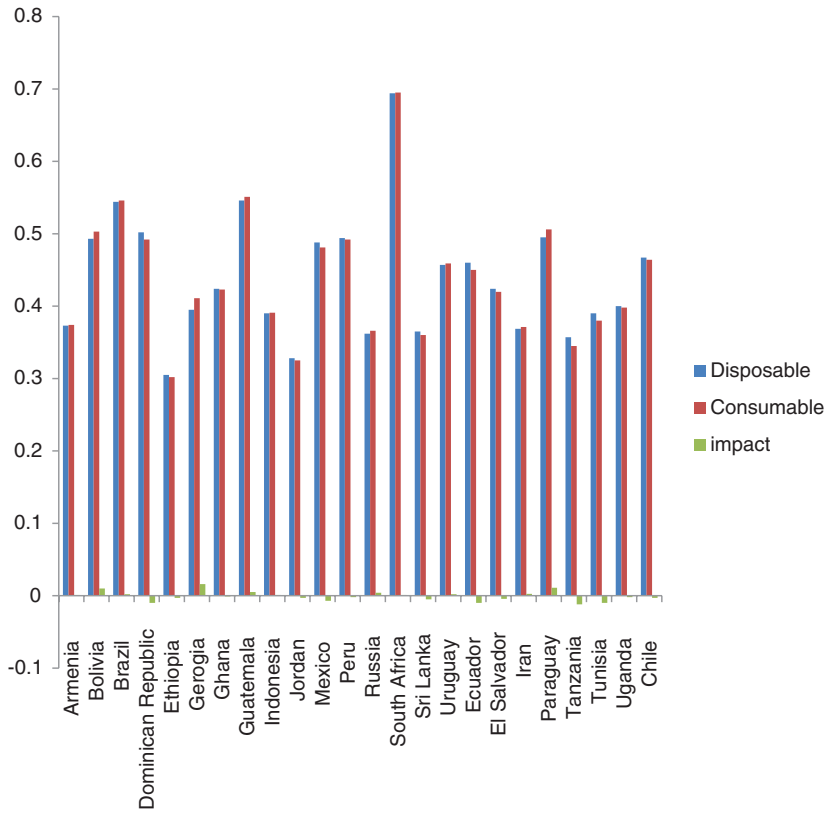

Fig. 5 The distributional impact of indirect taxes and indirect subsidies (*Source* as for Fig. 3)

- increased public cash transfers;
- more equal distribution of educational attainment resulting from easier and expanded access to education in the 1990s;
- social spending becomes larger and more progressive (Cornia 2015; Tsounta and Osueke 2014). That said, direct transfers are poorly targeted, 74% of total direct transfer benefits the non-poor (Higgins and Pereira, op. cit., p. 11). Higgins and Pereira (2013, p. 13) summarise the situation rather nicely, in terms of direct transfers, Brazil has relatively high spending, poor targeting, and low effectiveness and add that, 'in many cases, the benefits of transfer programmes are

> offset by indirect taxes.' Lustig (2015, p. 29) also points out that in Brazil 'it is the consequence of consumption taxes- including taxes on basic foodstuffs- that wipe out the benefits from direct transfers such as Bolas Familia for a considerable number of the market income poor.'

In the case of Bolivia, the situation is more complex. Paz Arauco et al. (2012, p. 2) testify that despite the fact that social spending was expanded between 2007 and 2009, from 11.9 to 15.1% of GDP, its distributional impact was limited. While 'personal income in Bolivia is not taxable, there are four indirect taxes applied to consumption, accounting for 41 percent of total tax revenue in 2009' (ibid., p. 5). It looks as if indirect taxes have a major role in reducing the distributional impact of fiscal measures in Bolivia. When the impact of indirect taxes and subsidies is assessed, Paz Arauco et al. (2012, p. 11) conclude that 'only people from the two poorest deciles receive more than what they contribute.' As indicated earlier, the size of the package does not seem to be the main culprit. It is worrying to learn that 'the largest cash transfers in terms of GDP, shows a distribution biased towards the three richest deciles' (ibid., p. 15).

Given poor targeting, there are 'significant leakages to the non-poor population and the small size of the transfers, 62 percent of benefits distributed through direct transfers are received by the non-poor' (ibid., p. 15). By contrast, Myamba et al. (2016, p. 8), examining the situation in Tanzania believe that cash transfer programmes have an excellent targeting mechanism. However, there is widespread agreement that tax evasion through informality is an important problem in this country. Interestingly enough, results show that indirect taxes, VAT, import duties and excises reduce inequality in Tanzania, albeit by a smaller amount (ibid., p. 15); but at the same time, it is also true that 'government causes significant increases in poverty with the indirect taxes that it levies (p. 16).' Myamba et al. (2016, p. 29) conclude that about half of this redistribution comes from very progressive direct taxation. The rest comes from unusually progressive indirect taxation and progressive in-kind transfers in health and education.

4.3 The Distributional Impact of in-Kind Transfers

Comparing the Gini coefficients for consumable income with the Gini coefficients for final income would capture the impact of in-kind transfers. Examining the impact of in-kind transfers, we learn that in 23 out of 24 countries in our sample, these transfers reduced inequality. It was only in Ethiopia that there was no change. The highest fall in the Gini coefficient happened in Brazil; the Gini coefficient declined there by 0.11 points, followed by 0.1 declines in South Africa and between 0.05 to 0.07 points in Ecuador, Mexico and Uruguay. In countries such as Sri Lanka, Armenia and Jordan, the fall in inequality was not as pronounced. Before discussing some of the underlying factors causing such a drastic fall, let us point out that it should not be surprising to see that in-kind transfers have such a strong downward influence on inequality. By and large, while the scale may still be inadequate, governments spend more on education and health than they do on direct transfers or indirect subsidies in these countries (Fig. 6).

Given the serious redistribution impact of in-kind transfers, the result in Jordan is slightly puzzling. The government spends more than 3% of GDP on education and primary and secondary schooling are free and compulsory. Alam et al. (2017, p. 10) claim that Jordan has one of the most modern health care infrastructure in the Middle Ease and like education it absorbs more than 3% of GDP. One possible explanation for weak impact may be that public health insurance covers only about 40% of the population. Writing on Armenia, Younger and Khachatryan (2017, p. 4) argue that fiscal interventions are all very well targeted but the scale is seriously inadequate. In the case of Brazil, it should not be surprising to see that in-kind transfers have such a drastic impact on inequality. All the measures taken together, except in-kind transfers, reduced the Gini coefficient by 0.035 points but following the in-kind transfers, the Gini coefficient fell by another 0.075 points, more than twice the impact of all other measures combined.

There is always room for improvement, but Brazil spends about 11% of GDP on education and health, and as Higgins and Pereira (2013, p. 5) point out education is free at all levels and health is also free publicly,

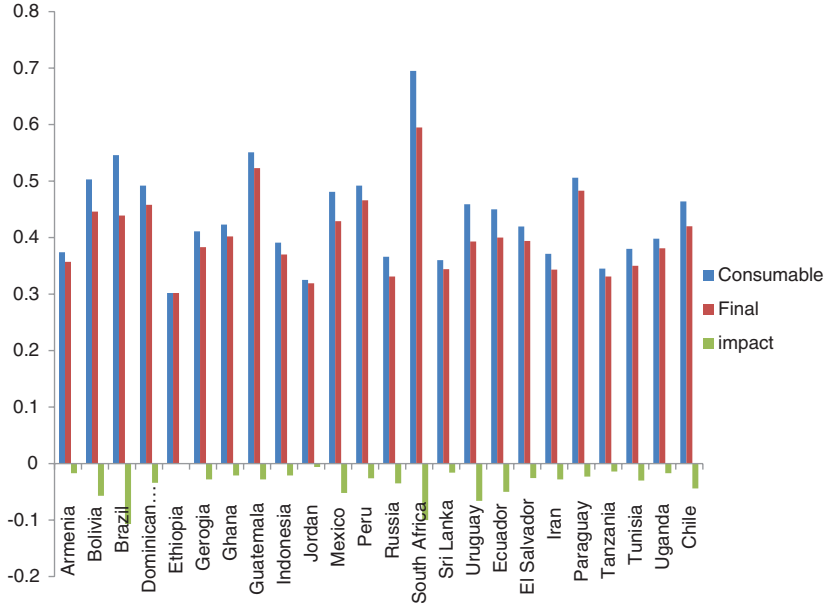

Fig. 6 The distributional impact of in-kind transfers (*Source* as for Fig. 3)

providing day care facilities for poor households. Likewise, health care is also free for all types of care and a system created by the 1988 Constitution 'guarantees access to health care to every citizen at public health facilities.' Regarding South Africa, Inchauste et al. (2017, p. 4) show that spending on primary and secondary education is very well targeted to the poor and the same is true about spending on health. In-kind transfers absorb 12.6% of country's GDP, 7 percentages of which is spent on education (ibid., pp. 7–9). Schooling is compulsory for all children aged 7–15 years. While there is a fee to be paid, 'schools in poorer neighbourhoods are designated "no fee" schools, which receive a slightly higher state subsidy to compensate for the absence of school fees.' It is further reported that in 2011, 78% of students attended no-fee schools (ibid., p. 10). The health care system is divided into public care (serving more than 89% of the population) and private care which is rather expensive and mainly used by the rich and well-off

inhabitants. Primary health care is available free to everyone, but hospital services are offered at a heavily subsidised rate.

There are widespread exemptions for a whole variety of people, those with low income, pregnant women and those who are on social benefits. It is true that South Africa starts at a very high level of inequality, but the use of taxes, both direct and indirect as well as cash transfers, lowers Gini coefficient by 0.076; whereas, the impact of in-kind transfers reduces Gini coefficient by 0.098 point, nearly a 30% larger impact. Spending on education in South Africa, with the exception of higher education, is pro-poor reflected in a very high enrolment rates, over 97% for 7–15 year-olds and 83% for 16–18 year olds (ibid., p. 19). Spending on adult education is also pro-poor, about 50% of all the spending on adult training centres benefits households with income of less than $4 a day (ibid., p. 19). Health spending is not as pro-poor as spending on education, but public spending on health is relatively well targeted. It may not be because the poorer households have a higher utilisation rates, but because the rich and the high income households choose not to use the public health care system. For the financial year 2010/2011, South Africa spent more than 4% of GDP on public health, which serves about 83%, nearly 42 million of the South African population. The remaining 17% or 8.3 million people mostly use private health insurance (ibid., p. 20). One issue of concern is the total private sector health related spending, which is slightly more than what is spent by the state on public health, i.e. 4.3% versus 4.1% of GDP. So in effect, the average per person expenditure on health in the private health care is more than five times what is being spent for public health services.

To sum up our discussion so far, there is no doubt that taxes and transfers, especially when progressive, would reduce income inequality. However, despite all these measures, in thirteen countries in our sample the Gini coefficient for final income is more than 0.3 but less than 0.4, and for eleven countries the Gini coefficient is more than 0.4.

There is no doubt that there would always be room for improvement in the use of taxes and transfers, but, this relatively poor result is affected by three factors:

- relatively high inequality in market income;
- relatively inadequate size of social spending in most of these economies; and
- in view of the regressive nature of indirect taxation, the sources of finance for these programmes should change. IMF (2014b, p. 18) offers two interesting observations. One, in the advanced economies, not only do they raise more revenue than the emerging economies, more than 30% of GDP on average compared with 15–20%, but also more importantly, most of the revenues are raised via direct taxation. By contrast, as we indicated earlier, the bulk of the revenues in our sample are raised through regressive indirect taxation.

On the relative size of social spending and its impact on inequality, a note of caution is in order. Looking at the impact of fiscal measures on the Gini coefficients for final income, a mixed picture emerges. In our sample, no such a direct link could be observed. The lowest expenditure was in Indonesia, less than 5% of GDP and the highest, more than 25% of GDP concurred with the situation in Brazil.

In our sample, two countries spend anything similar to the average social spending in Europe. Thirteen countries spend less than 10% of GDP, and in the case of another 7 countries, the social spending is more than 10 but less than 15%. While we agree that the size of social budget is an important factor enhancing the re-distributional impact of fiscal measures, judging by our data, no robust relationship between the two could be established.

In our sample, in terms of GDP, Brazil spends more than others on social issues, but the fall in Brazil's Gini coefficient is only second highest. On the other hand, Paraguay spends more than 12 other countries in this sample on social issues, but the impact of these measures on inequality is almost negligible. In short, while the scale of intervention is important, equally significant is how well these measures are targeted, transfers to the poor, and taxes to the rich.

5 The Distributional Impact of Taxes and Transfers in the Developed Economies

In this section, we turn to examining the distributional impact of taxes and transfers in a sample of 17 developed countries. In advanced economies, taxes and transfers reduce inequality quite substantially, whereas in emerging economies the scope is rather limited. First, progressive direct taxes and transfers can reduce disposable income inequality as compared with the inequality that the market transactions generate. Second, when examining consumption taxes, it can affect consumable income inequality. Finally, through in-kind transfers; such as education and health, which can reduce the inequality of 'final income'; that is, consumable income adjusted for in-kind transfers. The impact of in-kind transfers such as those for education and health is likely to be long-term, and will affect market income inequality over time by changing the distribution of human capital. These types of transfers are most likely to be effective across generations by promoting social mobility. To a large extent, the effectiveness of these measures depends on both the magnitude of taxes and transfers and their progressivity. In follows from this that to enhance their effectiveness, taxes and transfers should be progressive. Looking at different types of income, and how to tax them, it looks as if in the last four decades, we have had our priority wrong. For instance, capital income, which is more concentrated than labour income, is taxed more lightly than labour income. If this anomaly is corrected and more revenue is thus generated, it would be easier to maintain the progressivity of income tax system.

In our examination of the role of taxes and transfers in advanced economies, in addition to IMF (2017b), we have four further pieces of research (Jesuit and Mahler 2017; Caminada et al. 2017; Guillaud et al. 2017; Figari and Paulus 2015) that have provided evidence for our discussion in this section. Jesuit and Mahler (2017) took a sample of 20 developed economies and the sample size for Caminada et al. (2017) was 47. Both of these studies consider pension as transfers, whereas Guillaud et al. (2017) who utilised a sample of 22 OECD member countries looked at pensions as part of market income in their analysis.

Figari and Paulus (2015) looked at three countries, but utilised an extended income concept that in addition to looking at indirect taxation also includes in-kind transfers. There will be some over-lapping of evidence but their findings are different too. On top of these five, we have access to the 'Leiden LIS Budget Incidence Fiscal Redistribution Dataset on Income Inequality'[4] where detailed evidence is provided and will be utilised.

Three different concepts of income are used here, with the exception of those derived from Figari and Paulus (2015): Primary income, which covers labour and capital income; plus any private transfers. Examining this concept further would inform on income inequality before social transfers and taxation. Gross income is primary income plus any social security transfers and here we measure the re-distributional effect of social transfers. Lastly, we examine the inequality in disposable income, that is, we subtract income taxes and any social security contributions. Looking at the evolution of disposable income informs us about income inequality after social transfers and taxes. It would be ideal if we could examine the impact of indirect taxes and in-kind transfers too, but, lack of data made this task impossible. In these studies, as indicated earlier, only Figari and Paulus (2015) use an extended concept of income but only report on three countries, of which only one is included in our country sample, the UK.

Let us first see how has inequality changed in these countries when transfers and taxes are taken into consideration (Fig. 7).[5]

A number of general points could be made:

- There is a substantial decrease in inequality as measured by the Gini coefficient, as between that for primary income and disposable income in all countries, with the exception of South Korea.

[4]This dataset is available at: https://www.universiteitleiden.nl/binaries/content/assets/rechtsgeleerdheid/fiscaal-en-economische-vakken/economie/llbifr-dataset-on-income-inequality---november-2017.pdf.

[5]For eleven of the countries in this list, the year is 2013. Six of the 17 countries differ as follows: for France and Canada, it is 2010, Sweden, 2005, Italy, 2014, Japan, 2008, and South Korea, 2012.

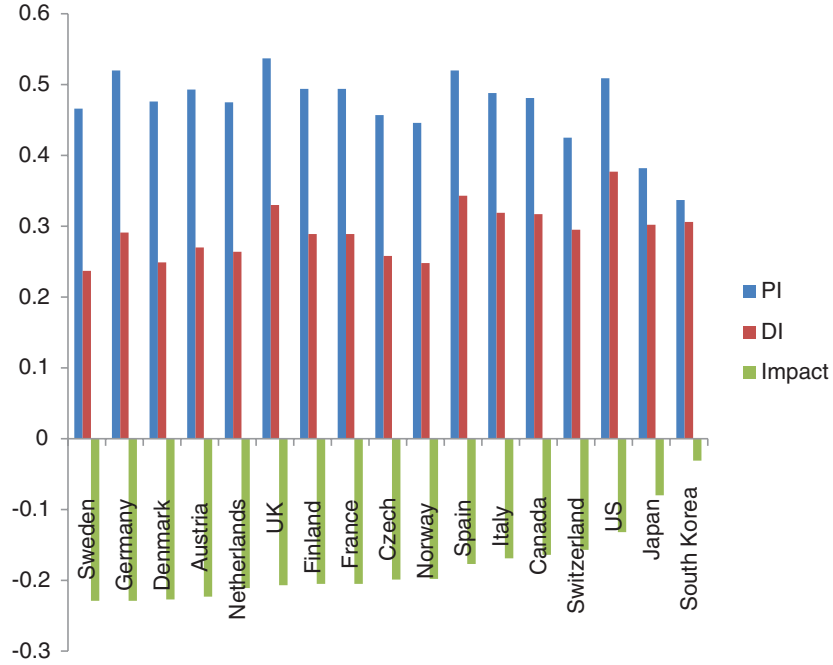

Fig. 7 Gini coefficients for Primary income (PI) and Disposable income (DI) (*Source* LIS dataset on income inequality, available at: https://www.universiteitleiden.nl/binaries/content/assets/rechtsgeleerdheid/fiscaal-en-economische-vakken/economie/llbifr-dataset-on-income-inequality—november-2017.pdf)

In South Korea, and to some extent in Japan, there is a fall in inequality of income when the Gini coefficients for primary and disposable incomes are compared, but compared with others, the scale of the decrease is not significant.

- In all countries, transfers, especially pensions, are by far the main driver of decline in inequality, with the exception of Japan and Sweden.
- In terms of percentage decline in Gini coefficient, the highest fall was in Sweden (49%) and the lowest happened in South Korea where it fell by just 9%. Excluding South Korea, the average decline in inequality was a little over 39% in these countries.

Caminada et al. (2017, p. 4) have stressed the fact that with the exception of the USA, in the mid-2000s, the average distributional effect of public cash transfers was twice as large as what was achieved by taxation. This said, however, they also show that while inequality in market income has been sharply moderated, it was not compensated in full, though, meaning that inequality in disposable income increased too, but not by the same scale. In their findings, the average Gini coefficient for market income was 0.483 but post-government's intervention this average went down to 0.347, a Gini reduction of 0.136 points or 28% (ibid., p. 5). They have also shown that out of this decline, 23% fall is linked with transfers and 5% is caused by taxes (ibid., p. 22). We have selected 17 countries from their sample, and for the selected countries, all advanced economies, the results were slightly different. The average Gini coefficient for market income was 0.47 and went down to 0.291 when we included the impact of taxes and transfers, a fall of 0.179 points or more than 38%. It is not surprising that the distributional impact of these measures is stronger in this smaller sample. Jesuit and Mahler (2017, p. 13) study is similar, covering more or less the same countries, 14 out of 17 of our selected countries are included in their sample here.

Once again, the driver for most of the decline in inequality is the pensions which on average reduce the Gini coefficient by 0.091 points which is more than twice the impact of other transfer programs combined. In Belgium and the Netherlands, the impact was more pronounced than others, and reduced the Gini coefficient by 0.115 points. At the other end, the impact of pensions in reducing inequality was lowest in the US, Canada and Japan (ibid., p. 13). Jesuit and Mahler (op. cit., p. 21) note that during the period 1970–2010, the Gini coefficient for market income increased significantly in these countries; in fact it increased by 0.110 points, but when they examined the changes in the Gini coefficient for disposable income, which captures the impact of taxes and transfers, the average went up by only 0.018 points, still an increase but a very modest one. Among this group of countries, the highest increase was in the UK where the Gini coefficient increased by 0.190 points and the next in line in terms of increase was Germany followed by the USA (ibid., p. 23). Their results seem to confirm that redistribution resulting from taxes did not change much and remained flat in the previous four decades.

In addition to pensions, the impact of child benefits, unemployment compensation and housing benefits on Gini coefficient is also examined. While every one of these programs made a positive contribution to the decline in inequality, but their impacts were minor, and unemployment benefits, for instance, reduced the Gini coefficient by 0.011 points on average for these countries. This brings us to raise the issue that it might be the right time to reform our tax systems to enhance the distributional impact.

Figari and Paulus (2015, p. 361) using an extended concept of income found lower levels of inequality, with their estimate for the Gini coefficient for the UK being reported at 0.26, whereas other studies give us a figure of 0.33, which is more than 25% higher. Furthermore, by looking at main drivers for lowering inequality, in the UK, they found that the main driver was means tested benefits and not the public pensions as claimed by others (ibid., p. 363).

In discussing the use of tax and transfer policies to reduce inequality, we often come up face to face with the claim that this could harm growth by reducing market efficiency. Accepting the so-called 'trade off' between equity and efficiency overlooks policies that could enhance both. As we have shown earlier in this chapter, government spending on education and health would surely reduce inequality and these kind of productive expenditure would be pro-growth too.

In most of the economies of our sample, the tax code is less progressive than it may appear as those sources of income which tend to be received by the rich such as capital gains and dividends are taxed at a preferred rate. The incomes of lower- and middle-income taxpayers predominantly come from wages, which when all the other deductions included, generally incur a higher rate of taxation than capital gains and dividends. Not only is this treatment not fair, but also in practice, it invites manipulation of how income is reported to the tax authorities and how business owners choose to pay themselves and their workers.

So tax reform should, as much as possible, narrow the differences between the ways different income types are treated and if it fails to give preferential treatment to income from work, at least, it should treat labour income in the same way that it treats income from capital. Whatever the claim, the fact of the matter is that in the past four decades wealth and income trickled up and were transferred from the poor

and middle classes to the wealthy. Given the current state of the global economy, there is simply no good reason to continue maintaining this mechanism, and drastic measures to change it are essential. Incomes and wealth have risen at the top, but wages have grown too slowly for the working and middle class. To mention in passing, this pattern would lead to a sluggish growth of aggregate demand and that in turn, would generate all kinds of problems for the management of the macro economy everywhere. We must ensure that whatever reforms we undertake, the poor, the working class and the middle class would not have their share of taxes increase. At the same time and perhaps more important, we should make sure that the wealthy would not have their share of taxes decreases either. It is important that tax reform raises more revenues so that the size of social spending could increase.

Revenue-raising reforms must strengthen the tax system in both the short run and the long term. In most of the countries that we have chosen in our sample, the tax system chronically underfunds public investments the people at large collectively support and want; and does so in a way that pushes low-income families further into poverty while allowing big corporations and the wealthy to avoid paying their fair share of taxes. An effective and efficient tax reform should raise revenue in the short run so that pressing needs could be financed, while simultaneously creating a sustainable long term revenue base to meet those future needs that are likely to be more urgent. It is absolutely essential that tax reform would not create greater problems for inequality and poverty than what they are already. It is not easy but could be done if sufficient political will is at the right place. Each of these goals can be achieved by trying to close unwarranted loopholes for capital gains and offshore corporate profits, while preserving and expanding valuable low-income tax credits and pro-investment tax allowances.

6 Policies to Tackle Growing Inequality

Let us begin with a simple statement that the present economic and social inequalities are unsustainable. In recent decades, income inequality has increased in nearly all countries and Alvaredo et al. (2018, p. 8)

warns 'It is our belief, however, that if rising inequality is not properly monitored and addressed, it can lead to various sorts of political, economic, and social catastrophes'.

Short of offering structural changes in the working of capitalism, the use of progressive taxes and transfers is an effective mechanism that can help reduce income inequality through various channels. The extent of fiscal redistribution depends on both the magnitude of taxes and transfers and their progressivity. If we implement progressive direct taxes and transfers, these measures reduce disposable income inequality, that is, inequality of income after taxes and transfers. Indirect taxation; consumption taxes which, is increasingly popular with policy makers as a source of raising revenue but with negative impact on equity, would lower inequality in consumable income. There are two ways that the impact of consumption taxes could improve. First, policy makers exclude items that are usually consumed by lower deciles in the income distribution and taxes are targeted towards items consumed by the rich and wealthy. Second, the revenue raised via consumption taxes would be allocated to welfare programs benefiting the lower deciles in the distribution. Finally, via in-kind transfer spending, the distribution of final income would be affected. It should be noted that greater spending on education and health also influence market income inequality over time by improving the distribution of human capital and consequently promotes social mobility too.

As indicated in this contribution, worsening inequality is not 'as act of God or nature' and depends on policy decisions and changes that have been made in the last four decades; concerning trade unions, banks, wages and our tax system. If sufficiently strong political will is in the right place, this trend could be reversed. In relation to taxes, as a major source of revenue, IMF (2017a, p. ix) seems to be in favour of some kind of wealth tax and increase in the marginal tax rate for top income earners. While we share the view that the top rate of tax should increase and the declining trend of recent years should be reversed, we argue that given the level of financial secrecy and secret jurisdiction, we share Zucman's observation 'it is not possible to tax wealth if we cannot measure it' (2015, p. 99). We would further argue that the IMF as a powerful global organisation should use its influence for a global financial register so that such a tax could be applied.

Moving from the tax side to the spending side, an important debate here is the choice between universal and means tested transfers to achieve distributional objectives. In view of financial constraints, some researchers argue in favour of better targeting, i.e. more means-tested measures, while others, points out the weaker redistribution impact of means-tested transfers. It goes without saying that greater use of means-testing could potentially stretch the administrative ability of the welfare system and may lead to mis-allocation of resources. Looking at the transfers' side of taxes and transfers, one measure; the Universal Basic Income (UBI) is discussed in many circles. A number of factors could be mentioned in its favour.

- It could address poverty and inequality more efficiently than means-tested transfers.
- It could be used to mitigate the decline in income and uncertainty generated by technological change, and automation in particular.
- It is also suggested that the UBI may be used as leverage for pursuing essential but unpopular structural reforms, such as subsidies removals.
- On the negative side, however, the opponents argue that there would be unacceptable level of leakage of benefits to higher income groups.

Our main concern about the UBI, is the uncertainty about its source of finance. There are two ways that this could be financed. First, trying to raise revenue by raising taxes, or by reducing other social expenditure and allocating what become available to UBI. In both cases, the final outcome is not very clear. The fiscal cost of UBI will depend at what level it would be set. The IMF (2017a, pp. 52–53) offers a brief empirical assessment of UBI in 8 countries, the level of UBI is set at 25% of the country net median market income and some interesting results are produced. On average, it would cost about 6.5% of GDP in the advance economies and 3.8% of GDP in the selected emerging economies. In the case of all countries in this small sample, there is a fall in Gini coefficients as well as in the poverty rate. Our counterfactual argument here would be if the health or education expenditure in the UK increases by 6.5% of the GDP—the cost of UBI—how would the

Gini coefficient be affected by this? In relation to France and the US, the situation is the same, except that in the USA the Gini coefficient falls by 0.02 points (ibid., p. 53).

We would argue that given the fact that having a job is no longer a protection against poverty, and further, there is continued growth of non-standard work, taxes and transfers should promote good-quality jobs. While in-work benefits continue, every measure should be taken, including in-work training to improve the productivity, hence, pay and conditions of workers.

7 Summary and Conclusions

This chapter highlighted the distributional impact of taxes and transfers by taking two samples, 24 emerging economies and 17 developed countries for this purpose. It is clear that the use of these measures would reduce income inequality, far greater in the developed countries than in the emerging economies. One of the factors contributing to a bigger impact is the relative size of these programs. In the case of emerging countries, education and health expenditure had the bigger impact on reducing inequality while in the developed economies, pensions played that role. A number of structural factors contributing to this growing divide have been mentioned but this chapter has focused on discussing taxes and transfers and their impact on inequality. Given the risk associated with growing inequality, the use of progressive taxes and transfers is strongly recommended but to enhance the effectiveness of these measures the prevailing international tax system must be overhauled too.

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