SUPPORTING ECONOMIC TRANSFORMATION

ECONOMIC TRANSFORMATION AND POVERTY

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EXECUTIVE SUMMARY

Economic transformation (ET), the continuous movement of resources (such as labour and capital) from low- to higher-productivity activities, is crucial for sustained job creation and a more resilient economy, but little attention is paid to the detailed mechanisms by means of which ET relates to the poorest and most vulnerable people in society. This paper describes the main channels through which ET links to poverty, including through production patterns involving the poor directly or indirectly, consumption by the poor and other routes, including government services and context more generally. There are many direct and indirect ways through which ET supports the livelihoods of the poorest in society, but there may also be unintended effects that exclude benefits because of gender, ethnicity or other factors (unless complementary actions are implemented).

The main route by means of which ET affects poverty is through **production**. These links can be direct and immediate, or indirect and may develop over time. For example, Cambodia's 750,000 garment's jobs have provided opportunities for rural women to escape poverty directly. The expansion of light manufacturing has traditionally been associated with ET and poverty reduction (Asian Tigers). Similarly, agriculturally productivity has a strong poverty-reducing effect as it allows higher incomes from agriculture, as well as employment to shift out of agriculture into higher-productivity sectors such as manufacturing or high-quality services. Unfortunately, recently, many low-income countries, including in Africa, have seen not an increase in the manufacturing share in employment but an increase in the share of low-quality services sectors. The evidence suggests different types of services have different employment and poverty-reducing effects. Certain types of production linked to ET may support certain types of employment but displace other more informal jobs (e.g. drivers or retailers not linked to platforms; small shops versus large retailers).

One indirect route through which the poor benefit from the production route comprises **intermediate products and services used by poor producers.** For example, many poor households are farmers or other producers and benefit from cheaper fertiliser, machinery and tools, transport, or energy, marketing, processing and financial services. If a transformed economy can lead to higher productivity and lower costs for the producers of these intermediate goods and services it can facilitate production by poor household and increase their competitiveness and (informal) employment. It some cases, certain types of transformation without effective competition can lead to more concentration, higher mark-ups and higher prices for some goods and services used by poor producers.

A further indirect way the poor benefit on the production side is through **linkages between the formal and informal sectors.** A more transformed formal sector (which may not employ many poor people directly) can still have a large poverty reduction effect if it enables growth in the informal sector (which does often involve poor producers) through direct and indirect linkages. We use the example of Kenya to show that micro, small and medium-sized enterprises (in the formal and informal sector) do link to more formal firms and clusters, although the extent is limited. A potentially negative effect could be through lock-in/over-dependence, which make producers vulnerable to change.

The **consumption** route from ET to poverty has a further direct and immediate effect on poor consumers. A more transformed economy (e.g. through agro-business) is better able to produce the cheaper goods that the poor consume. Poor consumers disproportionally benefit from cheaper prices of food and beverages, clothing, housing and energy, because these products are consumed proportionally more by the poor. This could be as simple as developing an affordable soap used by poor consumers (e.g. in Brazil). Concentration of production into varieties not consumed by the poor (e.g. for exports, upmarket goods) would have a negative effect.

The final general route we consider is **pro-poor government services** and the wider context. A more transformed economy with more manufacturing firms and a wider tax base will raise tax to gross domestic product (GDP) ratios (in addition to increasing GDP). When spent well, these resources can be used for health and education, targeted at the poorest. We also need to consider the wider context, as a transformed economy may involve new dynamics around human rights and feedback loops.

The **wider context** also includes environmental effects of ET on poverty, and these effects deserve more attention. Business-as-usual growth where resource use and emissions have not decoupled from an increase in economic activities may lead to resource degradation (e.g. of land, water and air) or pollution and health hazards through traditional energy use. This may affect the poor and most vulnerable the most? However, a more transformed economy plans resource use better, including through smart cities, and has higher energy efficiency and more investment in renewable energy, through innovation more generally. Agricultural innovation can be good for the poor and the environment.

The paper proposes the use of a range of indicators to better understand which transformation pathways are more poverty-reducing. We argue that ET is more poverty-reducing in the presence of, among others (and other things equal):

(through the production route)

- higher employment rates
- more jobs for poor, low-skilled workers, especially in the manufacturing and services sectors
- stronger growth in real wages, especially through productivity increases in rural areas
- higher agricultural productivity linked to higher wages
- lower prices of intermediate goods and services used by poor producers
- more extensive backward linkages from formal firms and more local sourcing from special economic zones
- greater shares of foreign direct investment in manufacturing and services sectors that are employment-rich with extensive local linkages
- a more dynamic and transformative informal sector (e.g. characterised by higher productivity, higher wages and output, greater resilience and dynamic segments) that can link with and contribute to a transformed formal sector
- a more inclusive private sector employing more poor people and whose products and services are fulfilling the needs of the poor (with bottom of the pyramid business models).

(through the consumption route)

- lower prices of goods and services consumed by poor consumers
- lower price mark-ups and competitive market behaviour.

(through government and other indirect routes)

- a more dynamic tax base consisting of more tax-payers based on a more diversified private sector
- a greater share of public spending devoted to the poorest directly (such as health and education)
- less resource degradation (less land degradation, less water scarcity, less water, land and air pollution)
- fewer carbon emissions
- enhanced resilience (measured through greater macro-economic space, more social cohesion through less inequality and politically inclusive though inclusive institutions that respect the rights of the poorest and most vulnerable)
- a more stable macro-economy (with higher mean incomes and lower variability).

We recognise that measuring the impact of ET on poverty is a complex issue that encompasses well-established literatures, including those linked to the trade and poverty and pro-poor growth debates, and we do not lay a claim to comprehensive or detailed coverage in this note. However, we do emphasise new dimensions of poverty effects introduced through the different transformation paths.

Productivity shifts that coincide with more jobs for the poor and lower prices for the poor, or that involve less resource degradation, tend to be more poverty-reducing. Thus, we should consider other indicators beyond aggregate productivity shifts such as poverty implications. Average pathways and indicators that describe averages mask losses, gains and the nuances of poverty impacts. Certain types of innovation, diversification and productivity change will involve losses and potentially increases in poverty, and these effects need to be identified. We need a much better understanding of wages, employment and productivity in the informal sector in particular.

1 INTRODUCTION

Economic transformation (ET), the continuous movement of resources (such as labour and capital) from low- to higher-productivity activities, is crucial for sustained job creation and a more resilient economy, but there is little attention to the detailed mechanisms by means of which ET relates to poverty reduction. This note provides the main pathways of the benefits of ET for the poor. It discusses a range of conceptual pathways, develops indicators and provides a number of examples from the literature.

Casual observation suggests it is better to be poor in a more transformed economy than rich in a less transformed economy. Even though average incomes in Ghana and Korea in the 1960s were similar, their growth and transformation paths have been so different since then that the average income of the top 40% in Ghana now is lower than even the income of the bottom 20% in Korea. However, the precise mechanisms through which transformation benefits poverty are less clear, especially in the short to medium term. It is also clear that not everyone benefits to the same extent from a transformation path, or could even lose out. This is often the subject of considerable political interest.

In response to this question, we need to develop a simple typology to demonstrate how the poor are affected by different types of ET. A more transformed economy may provide more and better jobs for poor producers, directly or indirectly. It may also provide better choice and lower prices for consumption goods and services used by poor consumers. Indirectly, a transformed economy can be good for government finance and the overall context within which the poor develop their aspirations. Many individual elements are well known, but there has been less attention to how the effects of different *transformation* pathways link to poverty. This paper addresses this gap.

While there are several direct and indirect ways through which ET supports the livelihoods of the poorest in society, there may also be unintended effects that exclude benefits because of gender, ethnicity or other factors (unless complementary actions are implemented). Poverty itself also needs to be disaggregated – if 20%, 40% or even 60% of the population is poor or near poor this is a very large group, which needs to be characterised along with disaggregated production and consumption patterns.

Having considered the transmission mechanisms more broadly, it will also be important for policy-makers to take stock of different transformation pathways and measure the extent to which they are likely to be more poverty-reducing. This paper addresses this by developing several indicators for each transmission mechanism. We acknowledge the complexities of the topic; this analysis is preliminary and develops a framework that will need further in-depth work at a later stage.

The structure of this paper is as follows. Section 2 discusses the transmission of ET to poverty reduction in broad terms, defining ET and poverty in more detail, and introducing three main transmission mechanisms. These are discussed in subsequent sections. Section 3 discusses the production route, Section 4 the consumption route and Section 5 other routes, including through government services, and the wider context. Section 6 brings together the previous analysis and suggests a number of indicators we can use to measure when ET is more likely to be poverty-reducing. Section 7 concludes.

2 CONCEPTUAL PATHWAYS BETWEEN ECONOMIC TRANSFORMATION AND POVERTY

2.1 What is economic transformation?

This paper defines ET as a continuous movement of resources (such as labour and capital) from low- to higher-productivity activities (McMillan et al., 2017). The process involves an upgrading of productive capabilities (e.g. an increase in labour or capital productivity) and diversification. There are two ways in which productivity can increase: moving resources (e.g. capital and labour) from low- to high-productivity sectors, or *structural change*; and improving the use of existing resources in the respective activities, or *within-sector* productivity growth. Within-sector productivity growth involves the upgrading of activities, or the entry and exit of firms.

Structural and within-sector transformation both assume a contraction of some activities or sectors (e.g. agricultural employment) and an expansion of activities in more productive sectors (e.g. manufacturing) as well as possible increases in productivity in existing firms within a sector. This means we are likely to see firms enter and exit sectors as economic activity transforms, with associated gains and losses in employment. We expect to see a shift in employment towards higher-productivity, higher-value, jobs leading to higher incomes.

ET pathways differ by country and region, and over time. Historically, the structural change component of ET involved a move from low-productivity activities such as agriculture into higher-productivity activities such as manufacturing and eventually into higher-value services activities. Korea, Mauritius and a range of Asian tigers are often cited as examples. However, this pattern seems to be changing now. For example, de Vries et al. (2015) find that labour productivity growth in Africa since 2000 has been the result of static gains, by moving resources to higher-productivity services (and out of manufacturing), but with dynamic losses, as such sectors have much lower (or negative) productivity growth compared with manufacturing. Diao et al. (2019) provide recent insights comparing regions. They find that recent growth accelerations (e.g. in the 2000s) owed to rapid within-sector labour productivity growth in Latin America, and structural change in Africa (at the same time as slow or negative within-sector productivity change). The question we are interested in is how such structural shifts would affect poverty.

Other processes are often associated with ET, such as rural–urban transformation, formalisation and others, but this note concentrates on increased productivity.

2.2 What is poverty?

Poverty is conventionally conceptualised in monetary terms, comparing household income or consumption expenditure per capita with a poverty line.[1] However, this monetary measure of poverty has been increasingly viewed as inadequate on its own in assessing people's well-being. Accordingly, often as a complement to this monetary measure, poverty is increasingly conceptualised as multidimensional deprivation, measured by means of an index composed of a number of measurable indicators, such as around living standards, education and health, as in

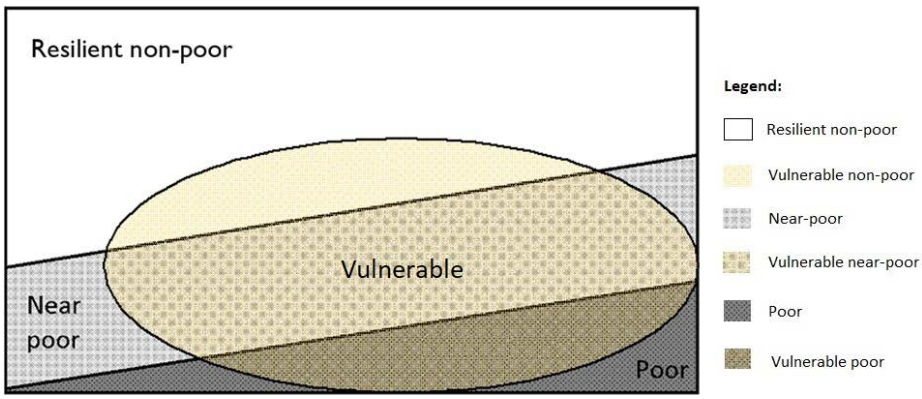
[1] Poverty lines are most frequently calculated based on the cost of basic needs approach, which estimates the cost of acquiring enough food for adequate nutrition and adding other essential items such as clothing and shelter. The poor are accordingly those whose expenditure or income falls below the poverty line.

the Oxford Poverty and Human Development Initiative's Multidimensional Poverty Index (first introduced in UNDP, 2010); or a set of interrelated domains of deprivations, as in the Swedish International Development Cooperation Agency (Sida) conceptual framework, focused on resources, opportunities and choice, power and voice, and human security (Sida, 2017). It is important to examine these different dimensions of deprivation, as it might be expected that ET would contribute to human and social development, for example, which might help build the resilience of individuals and so affect the ability of households to escape poverty and have further implications for intergenerational poverty.

Underlying any given prevalence of poverty or its absence lies a significant degree of mobility in people's fortunes and movements into and out of poverty – that is, poverty dynamics. While some people are stuck in persistent or chronic poverty, often experienced for a long stretch or transmitted intergenerationally, others are becoming impoverished, escaping poverty for the first time or escaping and staying out of poverty (sustained poverty escapes). Ideally, economic growth and ET should lead to sustained escapes (permanent exits) from poverty, but impoverishment, transitory escapes and chronic poverty can all get in the way of this outcome. Getting to zero poverty thus requires a dynamic view that involves tackling chronic poverty, preventing impoverishment and sustaining poverty escapes (Shepherd et al., 2014).

Vulnerability and resilience are key concepts linked to poverty that affect and are affected by economic growth and transformation. Vulnerability has been conceptualised in different settings as vulnerability to poverty, a symptom of poverty, part of the multidimensional nature of poverty and typically underlined by risk (Prowse, 2003). Some households may be vulnerable but non-poor; others may be highly vulnerable and under the poverty line. Resilience, too, has many definitions, but related to poverty and growth may be defined as 'the ability of people, households, communities, countries and systems to mitigate, adapt to and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth' (USAID, 2015). In other words, and with regard to poverty dynamics, resilience can be viewed as a set of capacities enabling households to experience a sustained poverty escape, even in the face of shocks and stresses (Diwakar et al., 2019).

Figure 1: Links between resilience, poverty and near-poverty, and vulnerability



Source: Diwakar et al. (2019)

In this context, reducing exposure to hazards, and the vulnerability of poor and near-poor people, could be critical in inclusive ET. Some sources of impoverishment are economic – for example food and agricultural input price inflation, the costs of ill-health, the absence of insurance markets and public insurance and safety nets, crime against property; some are social or political – conflict, conflictual gender or generational relationships; and others are environmental – natural disasters, environmental degradation. Poverty traps can also exist, comprising combinations of disadvantage (intersecting inequalities); multidimensional geographical underdevelopment; and occupational disadvantage (e.g. many people in fishing communities are often stuck in poverty) that can impoverish and also prolong the spell of time households live in poverty. ET itself may entail risks for poor and near-poor households:

formalisation may reduce accessible opportunities in the informal sector, for example in the retail sector.

2.3 Conceptual links between economic transformation and poverty

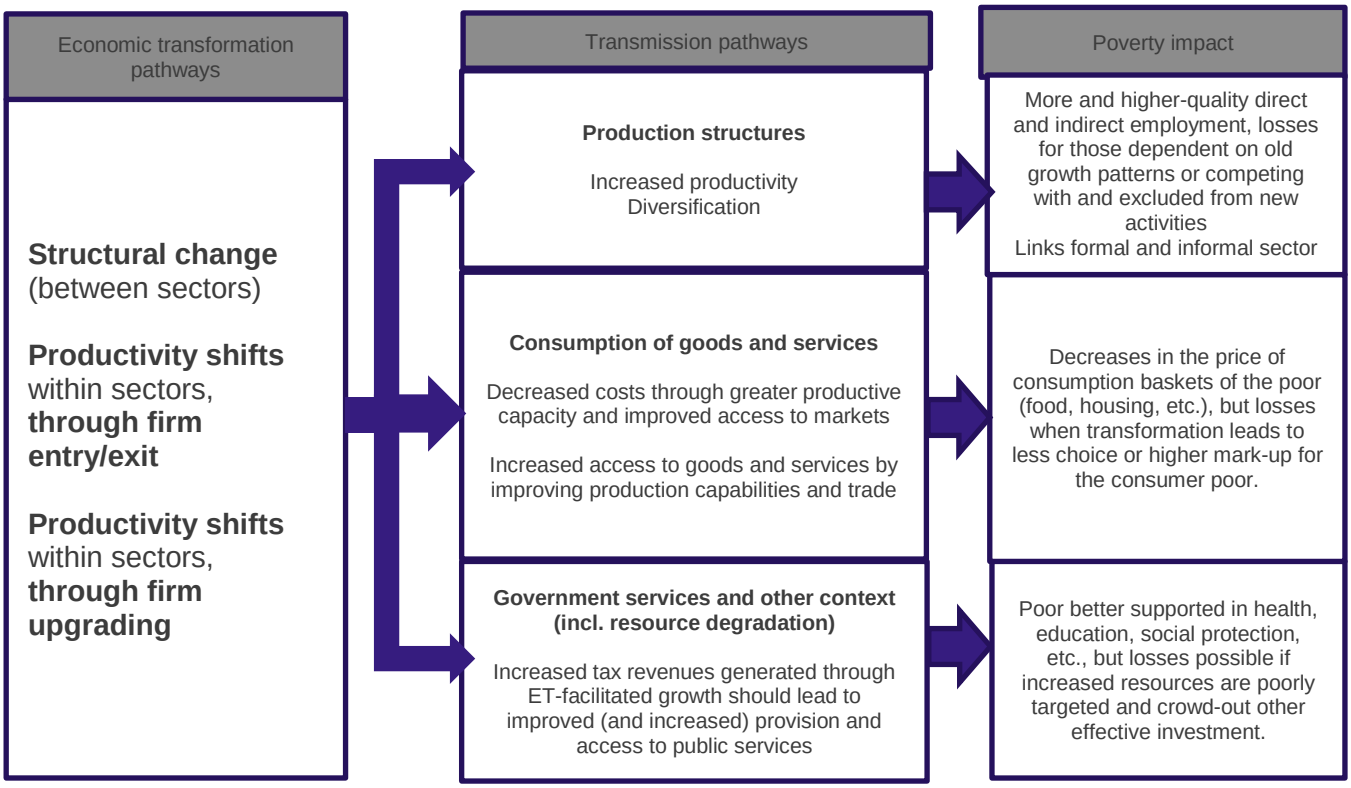
This paper aims to explore conceptual links between ET and poverty. The analysis examines three transmission channels between ET and poverty: through production structures (poor as producers), through the consumption of goods and services (poor as producers) and through government services (poor in a wider context). We also discuss the wider context.

The framework considers (i) the poverty impacts of changes to production systems, which may be 'direct' impacts of ET or indirect. We need to understand how productivity increases can have pro-poor impacts through creating jobs. There may also be targeted negative effects when transformation displaces jobs that were dependent on old activities. It is also important to consider the linkages between the changes in the formal production sector and the informal sector and how one depends on, or replaces, the other. The remaining two transmissions channels are (ii) the possibility of increased 'consumption' of goods and services at a lower cost and (iii) increased provision of 'government services' resulting from the process of ET.

The transmission channels are linked directly and indirectly to potential poverty impacts. For example, a transformed and higher-productivity food or housing sector reduces the price of consumption baskets for the poor through a combination of decreased costs and increased access to goods and services stemming from greater production capabilities or increased access to goods, such as through trade. But when transformation leads to greater concentration of production or marketing arrangements, less choice and higher mark-ups for the consumer poor, there can be negative effects on the poor. Pro-poor government services may increase as a result of greater government revenues through increased production capabilities and a more diversified tax structure, but if these resources are poorly targeted or ineffective, the additional revenues raised may have crowded out investment that could be used for the poor.

The transmission channels are also likely to have feedback loops and be affected by other contextual factors (discussed in Section 5), which may not necessarily be intermediary but help set the scene and the intensity of pathways and outcomes experienced. One could be through environmental consequences of different transformation pathways, which will then affect the poor. A further channel could be through the macro-economic context, as a transformed economy is also an economy that is more resilient to shocks. Moreover, the outcomes in terms of poverty are likely to differ depending on the subgroup of the poor examined. For example, the chronically poor may experience layered exclusions that prevent them from taking part in these processes of change or, if they are included, this may be on adverse terms that do not enable poverty escapes. Government services in the agriculture sector in some countries may target commercially able farmers, exacerbating inequalities with subsistence farmers. The vulnerable near-poor, while not covered in many poverty reduction programmes, could also form a substantial share of the population, and face differential risks that may prompt descents into poverty in the future. Disaggregating poverty by severity, multidimensional deprivations and its trajectories is thus important, providing a nuanced understanding of the links between ET and poverty outcomes.

Figure 2: The broad links between economic transformation and poverty reduction



These links are conceptualised as potentially positive. However, there can also be negative feedback loops, and trade-offs. For example, the Zambian government has been promoting transformation since 2011 through investing heavily in large scale infrastructure, especially roads, to attract FDI and promote economic development more widely. However, it now has a severe debt problem, and has not given adequate attention to the climate-related risks facing smallholder farmers, who are now facing famine conditions in southern and western Zambia. Resources for disaster risk management are limited. Public expenditure on health and education is not keeping pace with demand and need. This brief example indicates how greater policy attention to potential trade-offs is necessary from an early stage.

3 PATHWAY 1: PRODUCTION

The main transmission channel in Figure 2 relates to the poverty impacts of transformative changes in production structures – that is, where resources are moved from low- to high-productivity activities either through structural transformation following the pattern initially identified by Kuznets, which involves movement from low-productivity agriculture into the modern sectors (such as higher-productivity manufacturing) and finally into services, or through within-sector improvements in productivity. This section discusses three main issues: (i) how ET may lead to net job creation through formal employment (but this does not mean there are no job losses); (ii) the indirect job effects through intermediate production; and (iii) how links between formal and informal sectors can support job creation.

3.1 Economic transformation and direct employment opportunities of the poor

ET could increase the incomes of the poor by generating, or shifting to, higher-value employment opportunities. Such transformation requires greater use of existing labour pools as well as the use of higher-quality labour and training to meet new productivity requirements. This conceptual pathway therefore posits that ET has a positive impact on poverty by raising the number of jobs and upgrading their value, both of which increase wages and incomes for the poor. The type of jobs and sectoral composition matters.

The labour-intensive manufacturing transformation route, which takes advantage of a cheap but sufficiently educated labour force, is the most prominent example of this. China, Vietnam and currently Bangladesh and Cambodia have employed millions of poor women and men, often migrants from rural areas, whose wages have spurred their households' escapes from poverty (CPAN, 2019) and enabled longer-term asset accumulation and economic diversification, which often underlie sustained escapes from poverty. Getting a formal job is often perceived as the surest route out of poverty.

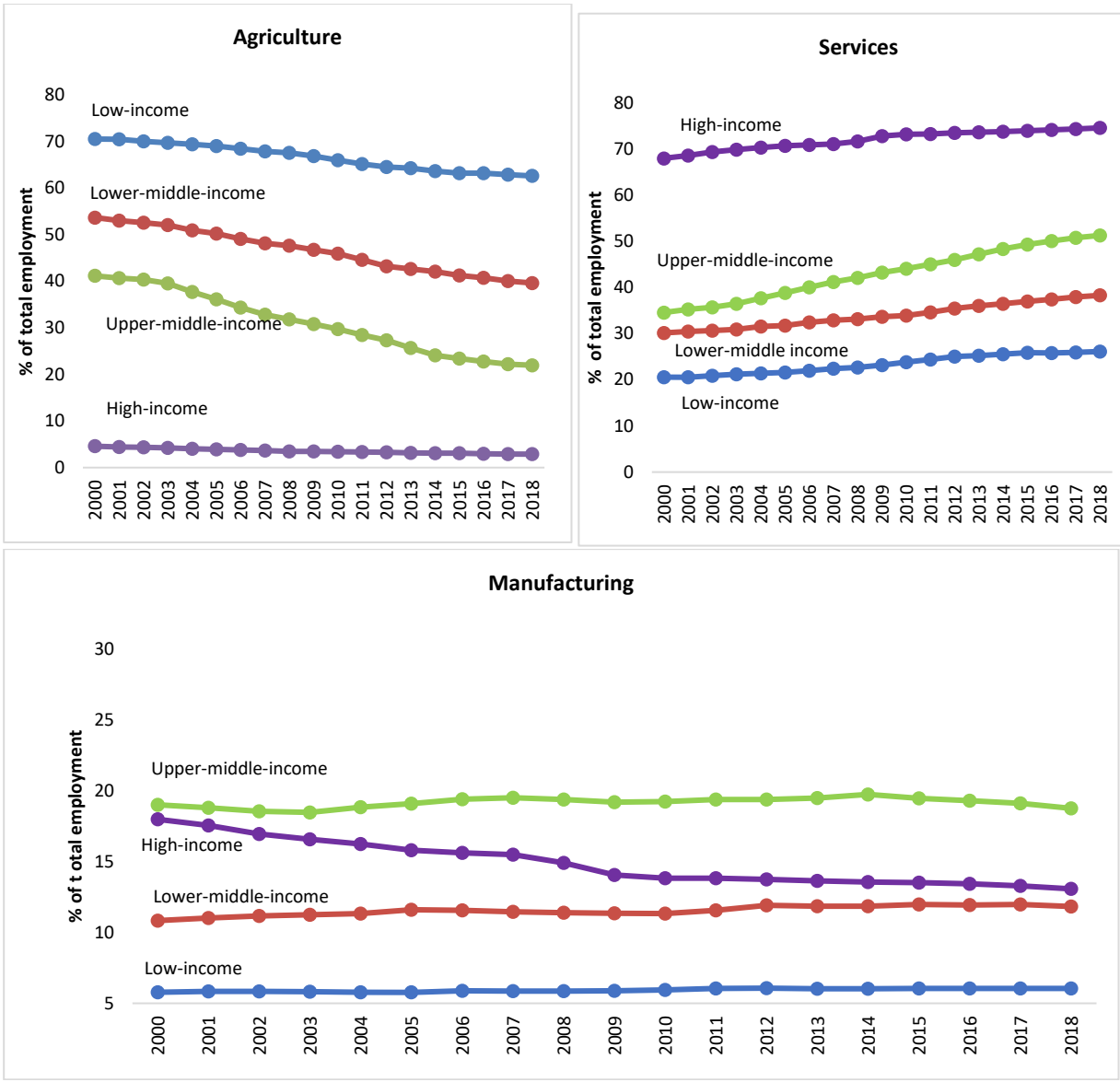
ET can often directly affect poverty when labour-intensive manufacturing wage labour opportunities are open to people from poor (or near-poor) households. This has been the case in Bangladesh and Cambodia for example (Keane and te Velde, 2008). Increases in productivity in Brazilian agriculture have been shown to benefit the manufacturing sector through increased availability of labour as workers shift to manufacturing (Bustos et al., 2016). Analysis of growth pathways for Nepal (Lemma and te Velde, 2017) shows that an increase of 1% in gross value added in the agriculture and manufacturing sectors has the greatest direct employment-generating effects disadvantaged groups i.e. rural and female workers.

There is some evidence that creating poverty-reducing jobs in manufacturing is becoming harder for developing countries, as manufacturing now tends to peak at a significantly lower rate of employment (18%) than in the past (at approximately 30% of employment), as well as peaking at lower income per capita levels, also referred to as premature deindustrialisation (see Rodrik, 2016 and Felipe et al., 2019). However, this does not mean there is no future in manufacturing employment in global terms. And the rate in African countries is often much below 10%, sometimes as low as 1% in terms of formal employment.

Gollin (2018) notes that the percentage of employment in industry has in global terms remained relatively stable over the past three decades. Focusing on manufacturing *vis-à-vis* other broad sectors, Figure 3 examines the evolution of sectoral employment patterns (as a percentage of total employment) between 2000 and 2018. One conclusive observation is that transformation is

linked to a decrease in the share of labour in agriculture, and that other sectors have absorbed this labour depending on the context (Diao et al., 2018). High- and upper-middle-income countries have seen a decline in manufacturing sector employment; lower-middle-income countries and to a much smaller degree also low-income countries have seen an increase. The services sector sees an increase in employment across all income groups. A review of the employment impacts of growth within sectors shows that both manufacturing (particularly so for textiles and agro-processing) and services sector employment generation is higher than that for agriculture (Basnett and Sen, 2013).

Figure 3: Agriculture, services and manufacturing sector employment, 2000–2018 (% of total employment)



Source: ILO (2019)

The trend in manufacturing employment could have positive developmental impacts, as employment in manufacturing tends to have greater inequality reduction effects than employment in agriculture or services. Recent analysis (Baymul and Sen, 2019) finds that across 32 developing (low- and middle-income) countries in Asia, Latin America and Africa, employment trajectories in agriculture and manufacturing have had different inequality effects. Whereas there is a negative relationship between the share of manufacturing employment and inequality, this trend has not been seen for agricultural employment. The research also finds that a higher share of employment in services is positively correlated with higher inequality for all country income groups.

Not all productive sectors may be suitable to directly create better jobs that could reduce inequality or benefit the poor. The development of mineral-based extractive economies tends to be enclave in nature; significantly less labour-intensive (de Vries et al., 2015) (though there are exceptions – small-scale mining (e.g. Democratic Republic of Congo compared with Zambia) can be a major employer, making it an especially sensitive issue for governments negotiating carbon emissions agreements seeking 'just transitions'); and with few links to the informal economy, except in the enclave where workers' consumption needs may be met informally and locally. Mineral development can have negative macroeconomic correlates (e.g. overvalued real effective exchange rates), which constrain economic diversification, manufacturing and agricultural exports, which are part of pro-poor growth. A services-based transformation can also generate widespread employment, though this tends to be for more highly educated people, and to exclude the poor, but different services sectors have different effects (Balchin et al., 2016). The International Labour Organization (ILO) (2018) provides a summary of how structural change does not necessarily ensure 'more and better jobs'. That is, growth through the extractive sector provides only limited employment opportunities, and growth of information, communication and technology (ICT) services jobs has benefited mainly higher-skilled workers in India rather than the poor.

Increased agricultural productivity is important for poverty reduction in low-income countries but productivity increases in other key sectors can also have a poverty-reducing effect. Recent literature finds that increasing agricultural productivity in low-income countries has a strong poverty-reducing effect. Ivanic and Martin (2018) use the GTAP 9[2] database, combined with household surveys, to simulate poverty impacts of productivity increases across different sectors in developing countries. The paper finds that, at lower income levels, agricultural productivity and services sector productivity increases have greater direct poverty-reducing effects, through increases in wages and decreases in producer and consumer prices, at the $1.25 a day level.

This evidence should not come as a surprise: a new profile of the global poor (Castañeda et al., 2018) places 80% of the extreme poor (counted as having less than $1.90 a day) and 75% of the moderate poor (less than $3.10 a day) as rural dwellers. Agricultural growth and transformation are, therefore, a critical part of inclusive ET (as is the movement out of agriculture into higher-productivity sectors). The development of a commercial small farmer class generates employment and demand for the goods and services produced in the (mostly informal) rural and urban nonfarm economy (Mellor, 2017). Bangladesh, China, Indonesia, Malaysia and Vietnam all generate examples of state-supported small farm development that has diversified rural economies (Henley, 2016); Cambodia has only recently begun to support its smallholder sector to a degree.

Large countries, such as China, India and Pakistan, are an exception to the agricultural productivity rule, according to the Ivanic and Martin (2018) analysis. In such cases, an increase in industrial productivity has led to a greater reduction in poverty through larger increases in wage rates for unskilled workers in the industrial sector than in agriculture. As an example, the analysis identifies Pakistan, where increases in productivity in manufacturing have a greater productivity-alleviating effect than agriculture, explaining that approximately one fifth of the labour force works in manufacturing, hence the poverty-alleviating effects of growth in the sector can be significant (Ali, 2014). In Cambodia, the garment manufacturing sector has helped directly create jobs for the poor: between 1995 and 2008, it created 350,000 jobs, of which 90% were taken by females, the majority from impoverished rural household (Dasgupta et al., 2011). In Bangladesh, garment employment represents approximately 2.5% of the workforce but is

[2] https://www.gtap.agecon.purdue.edu/databases/v9/

estimated to help keep approximately 10% of the country's population out of poverty (Shepherd and Diwakar, 2019).

A decomposition of effects at the disaggregated sector level shows more nuanced poverty reduction effects. Dorosh and Thurlow (2018) find that increases in agricultural productivity do have higher poverty-reducing effects as against aggregated non-agricultural sectors. However, when these non-agricultural sectors are disaggregated, there are sub-sectors that also have high poverty reduction and consumption inequality reduction effects – that is, manufacturing, specifically agro-processing, and trade and transport.

Diversification of production as well as associated trade diversification could provide an important mechanism for inclusive ET. While increases in agricultural productivity show potential poverty reduction effects, the diversification of agricultural production could also contribute. For example, there are positive correlations between crop diversification and incomes in several developing countries, as Feliciano (2019) illustrates. In Zimbabwe, crop diversification has been found to increase agricultural productivity and raise farmer incomes (Makate et al., 2016); similar results were found in El Salvador and Honduras (Bravo-Ureta et al., 2006). In addition, diversifying into higher-value agricultural goods presents increased income opportunities for farmers, as shown in Burkina Faso, Ghana and Senegal (Douxchamps et al., 2016) and Ethiopia (Emana et al., 2015), for example.

Export diversification matters in achieving economic growth that has employment impacts. Importantly, the type and sophistication of products that a country makes can contribute to faster growth rates (Hausmann et al., 2005). Empirical evidence shows that countries tend to diversify (and then concentrate production again) as their level of income increases (Imbs and Wacziarg, 2003). United Nations Conference on Trade and Development (UNCTAD) (2018) analysis on export diversification and employment creation shows that increased export diversification has a positive impact on total employment, labour force participation and industrial sector employment, whereas vulnerable employment declines. While the results are found to be equally valid in developing and developed countries, especially regarding industrial sector employment, the strength of the correlation is lower for African countries as their level of industrialisation has remained relatively low.

Diversification can also contribute to poverty reduction by decreasing the level of income inequality. Improving the level of economic complexity, which is the degree to which a country is diversified into the export (and production) of more complex goods, contributes to a reduction in income inequality owing to a range of factors (education, institutions, etc.) that allow it to produce a more complex and diversified range of products (Hartmann et al., 2017). Human capital (i.e. the skills and education base of a country) increases the degree to which economic complexity can reduce income inequality (Lee and Vu, 2019). While higher levels of poverty lead to a greater degree of export concentration, human capital development, aid for trade and financial development levels have been shown to mitigate the degree of concentration for a set of 109 developing countries between 1980 and 2014 (Gnangnon, 2019).

The type of diversification matters in the relationship between ET and poverty. An increase in export diversification has led to poverty reduction in Tanzania; however, based on the experience of Asian countries, the poverty reduction effect would have been stronger if diversification had been vertical (i.e. products moving up the value chain), as opposed to the horizontal (i.e. more products) diversification that occurred in Tanzania between 1980 and 2015 (Lwesya, 2018).

The diversification which contributes most to poverty reduction is in the context of 'growth from below' (GfB), explored in Shepherd et al (2019). This involves usually small-scale or micro-investment in smallholder agriculture, the rural nonfarm economy, and the urban informal sector, and is often facilitated by migration between these sectors and geographical areas. Households diversify into these sectors and thereby manage the risks which arise from

depending on one of them alone. They can also select which economic activities to concentrate on at a given time. Such diversification lies at the core of stories and statistics on poverty reduction.

As a result, assessment of economic transformation need to include what happens in the informal and small-scale economies, as well as the formal, large scale. The Chronic Poverty Report in Growth (Shepherd et al, 2019) argues that governments interested in rapid poverty reduction need to re-balance their support for 'growth from above' (GfA) - medium-large scale investments supported by large scale infrastructure – with support to GfB. This issue is taken up below in the discussion of informal firms participating in economic transformation.

There are also ways in which ET may be less poverty-reducing than initially thought, and there are likely to be instances of job losses and increased pockets of poverty. This would be the case if formal firms or new production structures replaced activities that were carried out in inefficient ways using old technologies. One example is when a formal supermarket takes on staff but replaces informal sellers (and when it is geared to richer consumer segments). In another example, Jouanjean et.al (2016) discusses how more efficient trade corridors increase trade but reduce the scope for informal activities around inefficient borders (e.g. retail, travel services or other vulnerable services). While the majority passing through the borders will benefit, the livelihood of some people may worsen without complementary actions. Border districts may contain very large numbers of people. This is often exactly the kind of nonfarm occupation poor people need to diversify and get out then stay out of poverty. Efficient trade in the sense of absence of barriers (e.g. bans on food export) is good for informal cross-border traders.

Some poor people may also be excluded from new activities for reasons of race, gender, location or other. Digital opportunities depend on broadband access, which is less available in rural areas. Some digital activities may also be less available for women (e.g. in fintech, agritech) compared with the activities replaced (garments assembly, subsistence agriculture). Some castes are adversely integrated in the modern economy in countries such as Nepal or India (see CPAN, 2014_, so any new activities in a transformed economy may bypass some people. ODI-CDRI (2019) discusses some of the opportunities and challenges with new digital applications in Cambodia, such as transport apps. Many *tuk-tuk* drivers have signed up to digital transport apps (which is good for urban consumers), but not everyone is digitally literature and hence some may lose out from digitally inspired economic transformation (not all digital transformation equates to ET, but there are many links).

In conclusion, there are many ways in which the poor are expected to benefit directly or indirectly from a transformed economy, but there are also instances where the (some) poor lose their jobs or are excluded from some of the benefits. While there may be a net benefit, not everyone will gain unless there are complementary policies in place. It means that it is important to monitor both employment trends and losses.

3.2 Economic transformation, intermediate sectors and poor producers

ET can lead to poverty reduction indirectly by reducing the costs of intermediate inputs used, particularly in production processes engaged in by poor households.

Reduced input prices can increase competitiveness and reduce poverty among poor producers. ET could lead to a reduction in factor prices for goods and services, which can contribute to increased productivity. For example, reducing the cost of materials can help decrease production costs, contributing to firm-level (and aggregate sector-level) growth, in turn potentially leading to a combination of more jobs and higher incomes, which could lead to a

reduction in poverty. ET could lead to reduced product and service prices through two main mechanisms.

The first comprises the direct effects of increased productivity in sectors that generate inputs into production processes engaged in by the poor. As productivity improves, the price of goods and services should decrease, which can have positive effects on other sectors that make use of such inputs. The second involves increasing access to goods through international trade, which could decrease prices by improving access to goods. For example, a study on reducing fertiliser prices (an important input into farming) in Malawi found a negative association between the price of fertiliser and farmer incomes as well as the price of fertiliser and production (Komarek et al., 2017). In Bangladesh, an increase in the production of rice with an associated reduction in prices led to faster growth in associated downstream sectors such as rice milling by reducing input prices (Murshid and Yunus, 2016).

3.3 Economic transformation, formal–informal linkages and poverty reduction

The literature on ET is often discussed in terms of formal sector increases. However, the poorest people work mostly in the informal sector. A crucial issue therefore involves understanding how the informal sector is connected to ET through linkages between the formal and informal sectors.

The informal sector could also contribute to ET through its links to formal enterprise. Cross-country evidence suggests that informal employment (as a percentage of total non-agricultural employment) is correlated with poverty rates across a subset of 180 data points over the 2002–2015 period for 43 developing countries. Nevertheless, one of the findings of a new 11-country study that the Chronic Poverty Advisory Network (CPAN) has undertaken on sustained and transitory escapes from poverty is that, while a formal job is perceived as the surest way to a sustained escape, sustained escapes are more likely to occur through informal sector entrepreneurship and employment (Diwakar and Shepherd, 2018). The finding highlights that informal employment can also have pro-poor outcomes (rather than just being a sink for poor jobs for poor people), in addition to acting as a potential safety net during negative employment periods (Loayza and Rigolini, 2011).

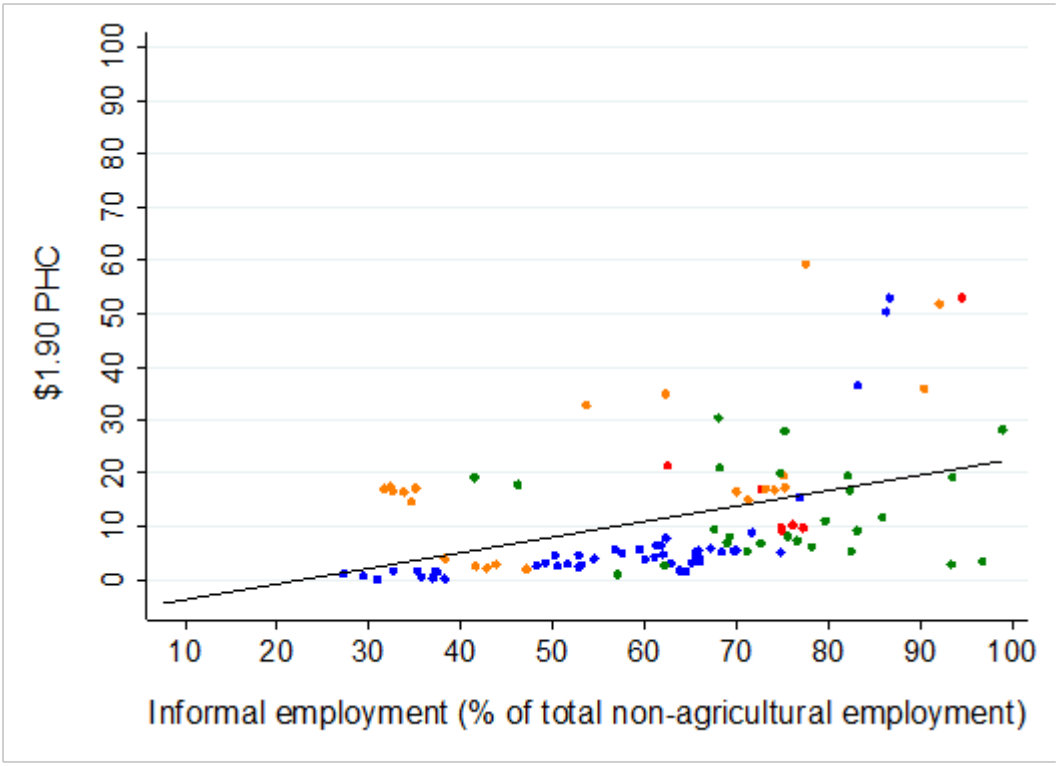
Additionally, the importance of the informal sector varies by region and country. For example, in Senegal, almost all the value addition in agriculture and forestry comes from the informal sector (Benjamin and Mbaye, 2012); in West Africa, informal and cross-border retail trade, often run by small, self-employed women traders, is an important source of value addition (Shepherd et al., 2019). These wide-ranging processes of informalisation suggest that encouraging the informal sector to formalise is not enough (ILO, n.d.). Instead, enabling the informal sector is necessary (Box 1).

Evidence from India suggests that the informal sector can respond dynamically to ET. As industry rose in prominence, there was an observed increase in the level of informal employment both in areas usually associated with informality (services such as retail trade and construction) and in manufacturing (Bhattacharya, 2010). Further, ‘modern’ informal firms (i.e. informal firms that make some use of capital, make standardised goods and are based in a fixed location) in India are also shown to have greater links to firms in the formal sector than traditional informal firms with no or limited capital use, with no fixed location and providing very low value-added services (Pieters et al., 2010).

The existence of pre-existing networks or links between formal and informal enterprises within value chains suggests that, even when there is a transformative shift at the firm level (i.e. a firm moves up the value chain), these productivity changes may also affect informal firms that feed

into the supply chain (Chen, 2006), either by promoting transformation within the informal firms or by generating productive opportunities for new informal firms. Over time, however, it is expected that the degree of informality in the industrial and services sectors declines as resources are allocated away from agriculture (Atesagaoglu et al., 2017).

Figure 4: Informal employment and poverty go hand in hand



Source: Authors' analysis based on data from WDI (2018) and PovcalNet (2018)

Box 1: Enabling the informal sector

Governments need to develop and implement cross-government plans to improve the quality, quantity and security of work for the poorest people (Scott et al., 2013: 7). The informal sector needs to be recognised by economic planners, included in national statistics and in national policy frameworks (CPAN, 2015). Policy-makers need to recognise and measure the informal sector's contribution to the economy and the barriers that informal sector workers and entrepreneurs face. Policy and implementation could focus on improving the conditions of the informal sector (CPAN, 2015: 29), reducing harassment and eviction of informal sector operators and reducing opportunities for corruption that restrain 'growth from below' (ibid.: 8). This would also lay the foundation for workers to benefit from minimum wages, freedom of association and other rights, ideally in ways that do not undermine the growth potential of the sector. Improved education and skills upgrading (including developing curricula aligned to industrialisation and inclusive sustainable growth) is important for the informal sector (UNECA, 2015). However, on its own this will not improve informal sector workers' productivity and incomes; access to credit, public utilities and ICTs and ensuring the macroeconomic framework is more employment-focused are also important (ibid.).

Source: Extracted from Shepherd et al. (2019)

Krishnan et al. (2019) discuss how micro, small and medium-sized enterprises (MSMEs) can be integrated in the formal economy through value chain development, in the textiles, garments

and leather sectors in Kenya. They examine seven ways in which MSMEs can link into value chains:

- *backward linkages* (supporting manufacturing of core parts required for intermediary products (1); providing intermediary services (2))
- *complementary linkages* (facilitating services not directly linked to manufacture of the product (3))
- *forward and logistical linkages* (manufacturing part of the final product (4); producing the core product (5); offering finishing services (6))
- *integrated linkages* (where MSMEs have relatively integrated backward and forward linkages and compete with large firms (7)).

Box 2 provides examples of how MSMEs in Kenya are integrated into textiles, garments and leather value chains.

Box 2: Integrating MSMEs into formal value chains – practical examples from leather, textiles and garments value chains in Kenya

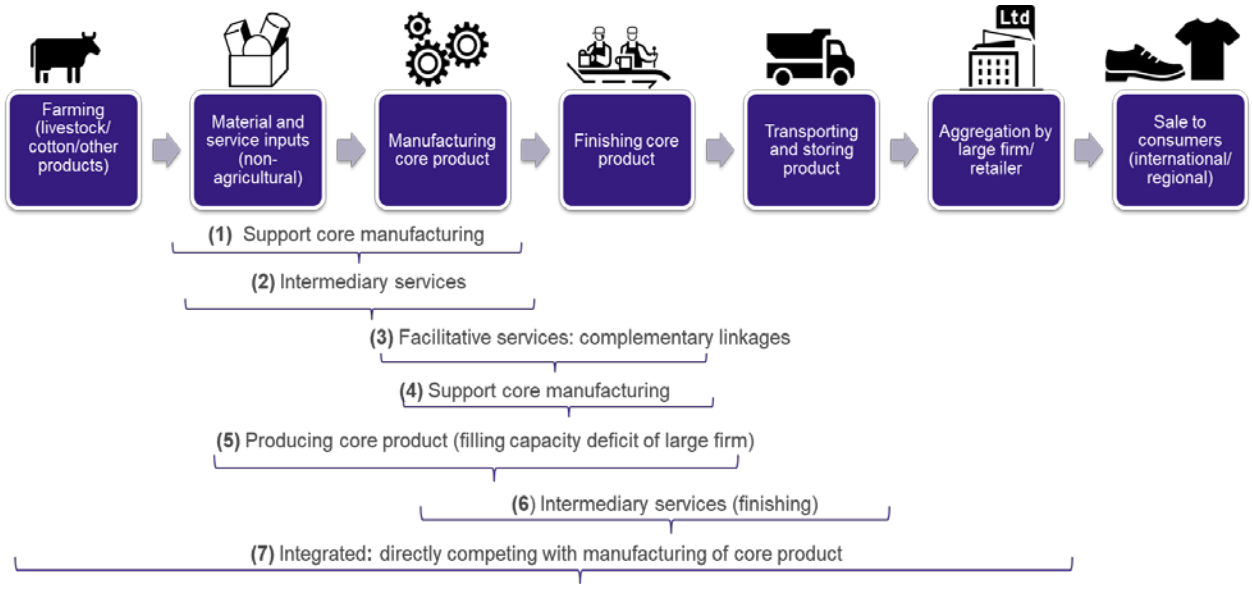
Krishnan et al. (2019) illustrate how MSMEs can be successfully integrated into formal value chains. For example, MSMEs perform slaughterhouse functions in leather value chains. The Dagoretti slaughterhouses are three MSMEs that directly employ approximately 250 employees and indirectly employ 60,000. They supply large volumes of raw leather and hides to larger enterprises, although, owing to a lack of extension services (health and safety, training in skinning), they are unable to increase productivity. In another part of the leather value chain, Preca, in Limiru cluster, is a three-year-old MSME with around 15–20 employees that has successfully developed linkages with the major shoe manufacturer Bata. Preca provides Bata with high-quality leather produced using mechanisation, allowing Bata to craft high-quality upper soles for shoes that meet the requisite international standards. Finally, Stealth Hides and Tanneries, located in Nairobi's Industrial Area, participates across the leather value chain. While Stealth has core competence in tanning and supplying semi-processed leather, the firm has expanded into manufacturing car upholstery, which is sold to local automobile manufacturers and also exported to Egypt.

Thika Textile and Rivatex are Kenya's two largest milling companies in the textiles value chain. These mills are important as they purchase cotton gin, dyes, chemicals and embroidery services from MSMEs, while also selling their final product to other MSMEs in garment manufacturing. However, these mills are not operating at full capacity, primarily because of lack of orders and high-quality cotton available to them from ginneries.

The Uhuru Market textile and garment cluster has a membership of about 180 individuals and specialises in the development of thread and fabric for uniforms, which are currently in shortage across Kenya. If supported better, this cluster could substitute for imports of textiles, thereby reducing overall transaction costs for garments firms and increasing their competitiveness.

Tulip specialises in overalls, dust coats and t-shirts, and is an interesting example of a garment manufacturing MSME that has successfully relocated to an economic processing zone. The firm has 200 sewing machines and employs 60 staff, and has successfully upgraded and improved the overall quality of its garments through technology transfer from Sri Lanka.

Figure 5: Pathways for MSME linkages into value chains



Sources: Krishnan et al. (2019)

Foreign direct investment (FDI) contributes to ET (Lemma, 2018; te Velde, 2019) **and, through its productivity spillover effects, can have an impact on poverty**. These spillovers enable knowledge and technology transfers, increase productivity and facilitate local capital (Borernsztein et al., 1998). These spillovers help create jobs and contribute to export diversification levels (Alfaro, 2015). The sector composition of FDI matters. FDI flows to primary sectors can have negative aggregate growth impacts, but FDI to manufacturing or services sector have more beneficial effects (Alfaro, 2003; Aykut and Sayek, 2007; Walsh and Yu, 2010). More developed financial sectors strengthen the positive productivity and growth impacts of FDI (Saidi et al., 2014; Alfaro and Chauvin, 2016). There are positive welfare impacts of FDI. Technical skills imparted through FDI knowledge spillovers to the local labour force have an income-raising effect (Dasgupta, 2012). Integration into global value chains through FDI is shown to have poverty-reducing effects within Association for Southeast Asian Nations countries between 1995 and 2011 (Uttama, 2015), while a wider-ranging literature of the direct impacts of FDI finds that it tends to have positive impacts on poverty (Magombeyi et al., 2017). There is also very strong econometric evidence for vertical spillovers from foreign-owned firms to local firms through backward linkages.

A more dynamic and prepared informal sector would facilitate better linkages to the formal sector (and hence an improved impact of ET) and also lead to an improved contribution to ET. Unfortunately, it is a challenge to transform small into large firms (Newman et al., 2016; Woodruff, 2018), and formalisation is not necessarily associated with transformational results. Many small firms in developing countries are not interested in or prepared for growth, or face major constraints. For example, Hsieh and Klenow (2014) and Eslava and Haltiwanger (2017) suggest that small firms in poorer countries (e.g. Colombia, India, Mexico) grow three to four times less fast than in the US.

The informal sector also contributes to the ET process through shifts in labour allocation and productivity. In Tanzania (Diao et al., 2018), 94% of the country's labour productivity rate growth between 2002 and 2012 occurred in very small informal sector firms. Formalising the informal sector is not necessarily effective. Benhassine et al. (2018) examine whether efforts to formalise informal firms are worthwhile, in terms of both firm efficiency and revenue to government, based on a randomised experiment with about 3,600 informal businesses in Benin. Firms that were encouraged to formalise did not necessarily experience higher sales or business profits. Moreover, the costs of encouraging formalisation at a general level may

exceed added tax revenue. The best firms to target for formalisation are those that are already close to being formal anyway, since the costs of formalisation efforts could be relatively cheap.

Evidence from Brazil and India (de Vries et al., 2012) suggests labour movements from the informal sector to the formal sector *can* have growth-enhancing effects where productivity increases are large enough to overcome employment losses in the informal economy, but there is no clear empirical evidence to understand the poverty effects of such structural shifts.

In addition, there may be significant labour mobility costs to workers in developing countries when entering the formal labour market, when compared with entry into the informal labour market (Arias et al., 2018). This means that, even when there are opportunities to increase employment in more productive sectors, employment may be created in the informal sector rather than the formal sector. Informal jobs in transformative sectors can have higher labour productivity rates than those in non-transformative sectors: informal sector firms operating in the manufacturing sector in Kenya were shown to have higher labour productivity levels than informal firms in the services sector (World Bank, 2016). Moving employment to the formal sector may be facilitated by decreasing the cost of formal labour hiring (Bosch and Esteban-Pretel, 2012); however, the impact on poverty of easing such a transition is unclear.

Increased demand stemming from transformation can be met through production in the informal sector. The increased provision of goods and services through transformation can be delivered by the informal sector. ET can generate a mass of consumers (or a middle class) who then also support informal sector providers of goods and services. Groups such as manufacturing sector workers that are involved in the transformation process can demand informal sector products and services from informal sector providers,. This is the case in Indonesia, where 75% of informal firms sell their goods and services only in the same local market within which these goods and services were produced (Rothenberg et al., 2016). How much the informal sector can help meet this demand depends on the strength of the links between the informal sector and the transformative sectors. For example, by 2009 in Zanzibar, growth in tourism had not translated to pro-poor growth, as only 10% of the sector's earnings were captured by the poor. This was attributed to the limited links between the sector and local producers, as most goods used by tourism were imported (Steck et al., 2010).

Rapid urbanisation that often occurs as ET takes place can lead to an increase in the informal sector, part of which can be attributed to increased demand for cheap informal sector services (i.e. small food kiosks or clothing repairs) stemming from growth in the urban population (Elgin and Oyvat, 2013). Evidence from Bangladesh shows that workers voluntarily move from waged employment into self-employment (associated with entrepreneurial informality) owing to a desire to start their own business and not necessarily because there are no other employment opportunities (Gutierrez et al., 2019). This means that, if the opportunity to create a business arises as a result of new opportunities generated by ET, there may be some degree of movement of waged employment into self-employment aimed at fulfilling new market demand.

A relevant distinction here is between production and consumption cities (e.g. Gollin et al., 2016). Many East Asian countries have transformed while creating manufacturing jobs in and around cities (productive cities drawing in labour) whilst African countries have exhibited transformation patterns where rural agricultural labour shifted towards (consumption) cities servicing consumer demand (e.g. through retail trade), without industrialisation. The former transformation pattern is more desirable for the poor.

Finally, not all spillovers and linkages between the formal and informal sector are positive. Some linkages can foster overreliance, which may lead to vulnerability to shocks, which can in turn drive people back into poverty. There may also be direct displacements when the formal sector replaces informal sector activity. This means it is important to monitor indicators such as the quality and quantity of linkages, and the size and dynamics of the informal sector. For example roads can make formal sector-produced goods cheaper and displace local artisans.

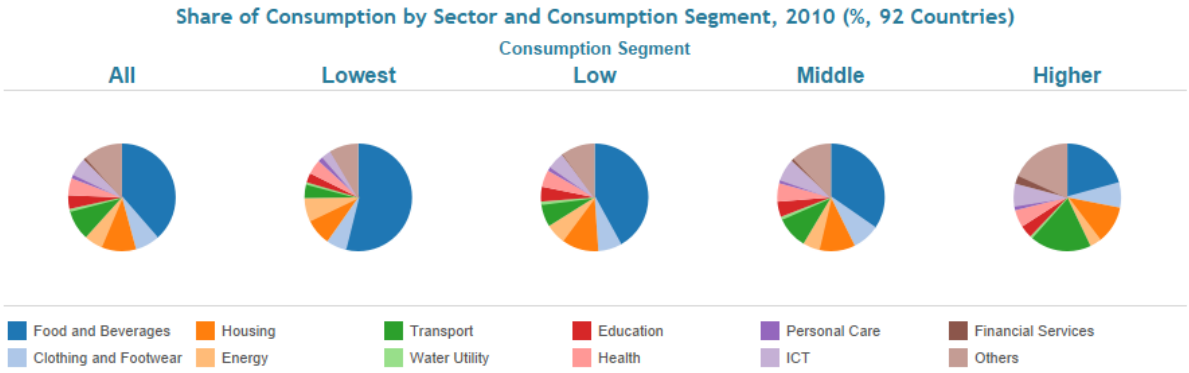
4 PATHWAY 2: CONSUMPTION

The second major transmission channel from ET to poverty is through consumption (see Figure 2). ET can be beneficial for poverty reduction by increasing access to, and reducing the price of, goods (e.g. food) and services (i.e. housing or finance services) used by the poor. There may also be instances where certain transformation patterns are less poverty-reducing, such as when it leads to more concentration and higher mark-ups and hence higher consumer prices. If concentration is powerful enough, it may incentivise production away from commodities consumed by poor people, and thereby increase the prices they have to pay for those goods in the medium to long term.

Reduced consumer prices can benefit low-income households. Different transformation pathways affect poverty by affecting the volume and price of products in their consumption baskets. ET affects consumer prices through the same mechanisms that affect production factor prices – that is, lowering costs by increasing production or productivity (e.g. of food or housing products) and increasing access through trade. Reductions in consumer prices can be particularly beneficial to the poor if they affect relatively price-inelastic goods that poor people need, such as food.

Data from the Global Consumption Database of the World Bank (2010) show how consumption is split among different consumption segments across 92 developing countries[3] (see Figure 6). The lowest consumption segment (with a consumption level below $2.97[4] a day) concentrates consumption mainly on food, followed by clothing, housing and energy. Transformative changes that reduce the prices of these products and services can have significant pro-poor outcomes.

Figure 6: Consumption by sector and consumption segment



Source: World Bank (2010)

For example, a study on price shock consumption impacts on the poor in South Africa found that the poorest households typically tend to cut back most on non-electrical energy consumption – that is, coal and paraffin (Dubihlela and Sekhampu, 2014); in addition actually reducing the price of electrical power can help reduce poverty, as an increase in its consumption has been shown to have poverty-reducing effects in a panel of 12 African countries over a period of 33 years (Okwanya and Abah, 2018).

As discussed above, an increase in agricultural productivity has been found to have pro-poor benefits by reducing consumer prices of food, therefore increasing real disposable incomes of

[3] Defined as middle- and low-income countries in the database.

[4] US$ PPP 2010 level.

net food consumers in developing countries (Ivanic and Martin, 2018). Reduced rice prices in Bangladesh owing to increased rice productivity benefited poor households by reducing the overall price of their food basket (Murshid and Yunus, 2016). Reductions in farming input prices have been shown to have positive impacts on consumer prices and associated positive impacts on poverty incidence rates (Hemming et al., 2018).

Certain demand-side risks on the consumption side that can also occur, for example the urbanisation process often associated with structural transformation, can lead to an increase in demand for housing in urban areas, as has occurred in China (Garriga et al., 2017) and Myanmar (Gelb et al., 2017). If the demand for housing outweighs cost reductions associated with productivity increases in the sector there may be a constraint in the housing market which could potentially adversely affect the poor.

ET is associated with a more efficient and stable financial sector (te Velde and Griffith-Jones, 2013; Tyson and Beck, 2018)**, which can lower the cost and improve the availability of finance, which can alleviate poverty.** Improved access to finance, in turn, is an important enabler of ET. Access to finance is usually required by firms in order to allow them to carry out transformative processes – that is, investing in human or physical capital. Improved access to finance can benefit the poor. Evidence from Kenya (Ellis et al., 2010a) shows that increased access to formal sources of finance can help poor households invest in activities that are more likely to contribute to increased incomes and poverty reduction. Similarly, evidence from Indonesia (Dewi et al., 2018) also finds a long-run relationship between financial development and poverty reduction within the country; it has also been shown to improve household welfare in Nigeria (Dimova and Adebowale, 2018). By contrast, evidence from India (Ayyagari et al., 2013) finds a strong negative relationship between financial deepening and rural poverty, with a particularly strong impact on reduced poverty rates among the self-employed in rural areas.

Inclusive transformative business practices can provide consumption goods for the poor. Bottom-of-the-pyramid products can provide goods targeted to the poor, which can help reduce their share in the consumption basket. Transformative products such as the M-Pesa money transfer platform, which is estimated to have lifted approximately 2% of Kenyan households out of poverty (Suri and Jack, 2016), cheap Reliance cellular telephones in India and Bangladesh's Grameenphone (Garrette and Karnali, 2010) could reduce the amount of money the poor spend on goods, potentially freeing this up for more productive purposes, such as education, or expenses that can have direct welfare impacts, such as healthcare.

Improved transport infrastructure can help reduce poverty by increasing access to markets. In Ethiopia, poverty incidence rates were lower for the rural poor who had better access to rural market towns, where access was facilitated by better road transport links (Dercon and Hoddinott, 2011).

There can also be feedback loops and two-way effects between ET and poverty reduction through the consumption route. For example, **there are macroeconomic benefits to ET that could positively affect consumption prices that would benefit the poor.** An increase in productivity of staple crops for consumption can help keep inflation low, lowering input and consumption prices and stabilising exchange rates, with positive knock-on effects across multiple sectors. For example, an increase in rice productivity with a correlated decrease in the price of rice in Bangladesh helped keep inflation low and stabilise the exchange rate (Murshid and Yunus, 2016), which in turn can help exports and the poor.

Employment can increase demand for goods and services provided by the local market. Increased employment levels generally lead to increases in consumption (Dossche et al., 2018). Increased levels of employment in higher-value (i.e. higher-income) jobs should lead to an increase in demand for goods within the national economy. As workers gain more disposable income, their demand for goods and services should increase (assuming limited inflation growth), fuelling growth in the local market.

Not all patterns of transformation will lead to lower prices. Transformation may be linked to greater concentration and market power, which can affect consumer prices and product availability. An interesting example is the emergence of supermarkets, which could replace local traders, and could increase or decrease availability, and increase or decrease prices, compared with availability in corner shops. IMF (2019) examines the macro-economic effects of a rise of concentration and corporate market power, arguing it may lead to increased mark-ups, price increases and inflation. It warns that further increases in market power may reduce labour market incomes, for example. Much depends on market practices, such as abuse of market dominance and anti-competitive practices (Ellis et al., 2010b). While IMF (2019) estimates that mark-ups have increased faster in developed countries (8% over 2000–2015) compared with emerging markets (1.5% over 2000–2015), they suggest that further increases in already-powerful firms could reduce investment and labour income shares. It will be important to monitor concentration (market structure), market power behaviour and price-cost mark-ups (market performance). The risks are strongest in middle-income countries without strong anti-trust frameworks.

5 PATHWAY 3: GOVERNMENT SERVICES AND THE WIDER CONTEXT

ET supports higher tax revenues and affects the wider context, such as through resilience to climate change, or through social norms, which can enhance the position of the poor. We discuss the links between transformation and the tax base (5.1) and how this may help the poor (5.2). We also discuss other links and relevant feedback loops (5.3).

5.1 Economic transformation and the tax base

The level and trends in tax to gross domestic product (GDP) ratios are often lower in poorer economies than in developed countries. Explanations centre around absence of growth in the fundamental tax base even where GDP is increasing, and increasing difficulties in taxing the bases that are growing, including natural resources, footloose multinationals and wealthy individuals. Formal sector employment and earnings (the income tax base) and private sector spending (the indirect tax base) are crucial aspects of the tax base relevant for increasing tax/GDP ratios in a sustained manner. If these bases are not growing at the same rate as GDP, it will be difficult to increase the ratio of tax to GDP (Morrissey, 2013).

The lack of ET largely explains relatively low tax to GDP ratios in low-income countries. A large proportion of the population, in agriculture or the informal sector, are difficult to tax because they have low incomes (and expenditures) or are unregistered. The share of agriculture is fairly consistently associated with lower tax revenue, although the share of manufacturing (expected to imply a larger tax base) is only weakly associated with a higher tax ratio (possibly because wages and profits are low to maintain competitiveness).

Bhattacharya and Akbar (EPS-Peaks, 2013) argue that tax revenue generation (as a percentage of GDP) in least developed countries (LDCs) has stagnated throughout the period 2000–2010. Relative volatility of tax collections in African LDCs was caused by the performance of oil-exporting economies. In contrast, efforts in tax collection in the Asian LDCs were low (in comparison with their African counterparts), but steady, thanks to the manufacturing sector. Growth in non-agricultural production capacity would lead to a more predictable and resilient tax base. Success of this approach in LDCs would also depend on their higher economic growth, leading to creation of new productive capacity, employment and income. There is also a need for consideration of the distributional consequences of tax-raising policy, with some taxes falling more heavily on the poorest compared with others.

5.2 Using government revenues for pro-poor spending.

Governments can use increased tax revenue (generated through more growth, or through a different tax base, both owing to transformation) in various ways to support the poor, especially through human development, provided they spend it effectively. Government revenues have to be available for pro-poor spending. If they are invested in big infrastructure and debt, they are not. So there are potentially very large trade-offs here, with very wide effects on the poor, and anyone who depends on public services. The poor cannot afford to substitute for these by buying private services or paying fees for public services, so lose out most. But the vulnerable non-poor may also not be able to invest in economic activities if they are having to pay fees for services.

Human development, especially education, can be a strong aspect of pro-poor ET. Human development also helps interrupt the intergenerational transmission of poverty (Diwakar and Shepherd, 2018). Cross-country evidence shows that an increase in health and education

spending is correlated with a reduction in poverty. Moreover, countries making strong poverty progress also have the largest increase in government spending on education as a percentage of GDP. The fact that it is the change in expenditure on health and education that appears to make the difference, rather than initial levels of spending, suggests that the evolution of a political settlement – particularly one that promotes increases in pro-poor public expenditure on human capital – is critical to getting benefits from transformation for poor people.

Publicly backed subsidies and changes to import tariffs that facilitate ET can also provide pro-poor outcomes. Subsidies or reductions in import tariffs can be aimed at reducing the price of input factors in order to support ET either at the national level or for specific sectors. A systemic review looking at the impact of agricultural input prices (through subsidies) found positive links between reduced input prices, agricultural productivity and farmer incomes (Hemming et al., 2018). Evidence from Indonesia finds that a reduction in import tariffs has helped firms become more competitive, as the price of intermediate goods declines, leading to an increase in employment for low- and medium-skilled workers as well as wage increases, albeit only for medium skilled workers (Kis-Katos and Sparrow, 2015).

Government-assisted programmes can help with asset accumulation. For example, in Bangladesh, it was found that increased asset accumulation levels backed by a public asset redistribution scheme led to a greater degree of poverty reduction for participating females in rural villages, increasing incomes of participants by 21% after four years *vis-à-vis* non-participating control groups (Bandiera et al., 2017).

5.3 Wider context and feedback loops

Different pathways of ET may also affect poverty indirectly through the effects on the wider context. For example, a transformed economy with a large manufacturing base is likely to have different implications for the voice of employees and unions (Rodrik, 2016) compared with one where there are large amounts of low-skilled services workers or large amounts of self-employed start-ups. Rodrik argued that industrialisation had helped develop the labour movement, expansion of voting rights and the welfare state.

ET may also link with human rights, which is a further way in which the poor experience transformation. For example, the production base is more diversified in a more transformed economy, and this may lead to different dynamics compared with one that depends on a few powerful firms. A change in the structure of the economy (from an economy where elites dominate a 'business as usual' economy towards an economy where financial resources are not skewed towards a few) may also affect the ability of a country to get out of conflict, with obvious poverty effects. ET is also linked to female empowerment, as examined by Fox (2015). She identifies four roles: (i) females engaged in market work (labour force participants); (ii) women as leaders in the care economy (household work); (iii) female children/adolescents; and (iv) women as individuals, consumers and citizens (e.g. power and agency outcomes; gender-based violence and civic participation). Some of these effects are not measured by Figure 2, but could nonetheless be important.

Moreover, there are feedback loops across and within the pathways of change that are not conveyed diagrammatically, for ease of visualisation. For example, lower prices of essential goods in the consumption basket of the poor could lead to more household investments in education, which could positively influence the types and quality of livelihoods. In this way, poverty outcomes would reinforce each other and lead to virtuous cycles of change. Moreover, these outcomes in turn could also link to productivity shifts over time, thus affecting the entire framework of change. Relatedly, the arrows earlier outlined in Figure 2 are meant for illustrative purposes, and do not reflect a strictly 1:1 mapping. Production structures do not only affect quality of employment and links to the informal and formal sector; in addition, diversification also affects the consumption baskets and so forth.

One addition would be to include the state of the macro-economy. A more transformed economy may lead to greater poverty reduction when there is greater macro-economic stability with higher mean incomes and lower price and exchange rate variability, for example.

An important further addition to the current framework that could be made more explicit is the impact of ET on poverty through environmental effects and increased resilience or exposure to environmental shocks. Business-as-usual growth, whereby the increase in economic activities is not decoupled from resource use, may lead to resource degradation (e.g. of land and water) and this can have effects on the poor and other disadvantaged groups. Increased water scarcity has important gender implications, since it is women and girls who fetch and carry water – a chore that is time-consuming and hazardous and can have high opportunity costs in terms of girls' education and the economic opportunities available to women and girls (WSP, 2010). More water efficient transformative growth can help. Economic growth can also lead to pollution and health hazards through traditional energy use. A more transformed economy can better plan resource use, including through smart, more connected, cities and greater energy efficiency and investment in renewable energy. ET that involves agricultural innovation can be good for the poor and the environment.

ET is about doing things differently, and new production methods could also be more energy efficient, which may be good for the poorest if there are fewer carbon emission and less environmental pollution. Cantore et al. (2016) show that energy efficiency and productivity are correlated at the firm level. UNIDO's IDR 2020 show that firms that engage with advanced digital technologies are associated with more patent development with green content.

While economic progress may lead to more environmental degradation (scale effect) with negative consequences for the poorest, economic progress associated with transformation could also be associated with environmental benefits through the composition and techniques effects. In addition, ET may increase the resilience of households, firms, sectors and countries to large environmental shocks. ET can build up fiscal buffers and lead to more institutional development and more options to diversify in production and consumption, all of which would be helpful to build up resilience in the case of environmental shocks (Diwakar and Shepherd, 2018).

6 INDICATORS

How do we know whether a specific ET pathway is more poverty-reducing than another pathway? This section proposes a range of indicators that can help us identify whether a pathway is more poverty-reducing based on the reviews suggested in Sections 3–5.

Figure 7 links indicators to the conceptual framework as proposed in this paper. The analytical framework first considered the poverty impacts of changes to production systems, which could be the 'direct' impacts of ET, or indirect. Based on the literature and data analysis, the paper proposes a set of potential indicators that could be used to assess whether the productive transmission pathway could have positive poverty impacts. The paper also provides indicators for ET-poverty transmission through increased consumption of goods and services at lower cost and, finally, increased provision of 'government services', better institutional frameworks, norms and rights and the effects on environmental degradation and resilience to shocks that would result from the process of ET.

Figure 7: Proposed indicators to assess the broad links between ET transmission pathways and poverty reduction

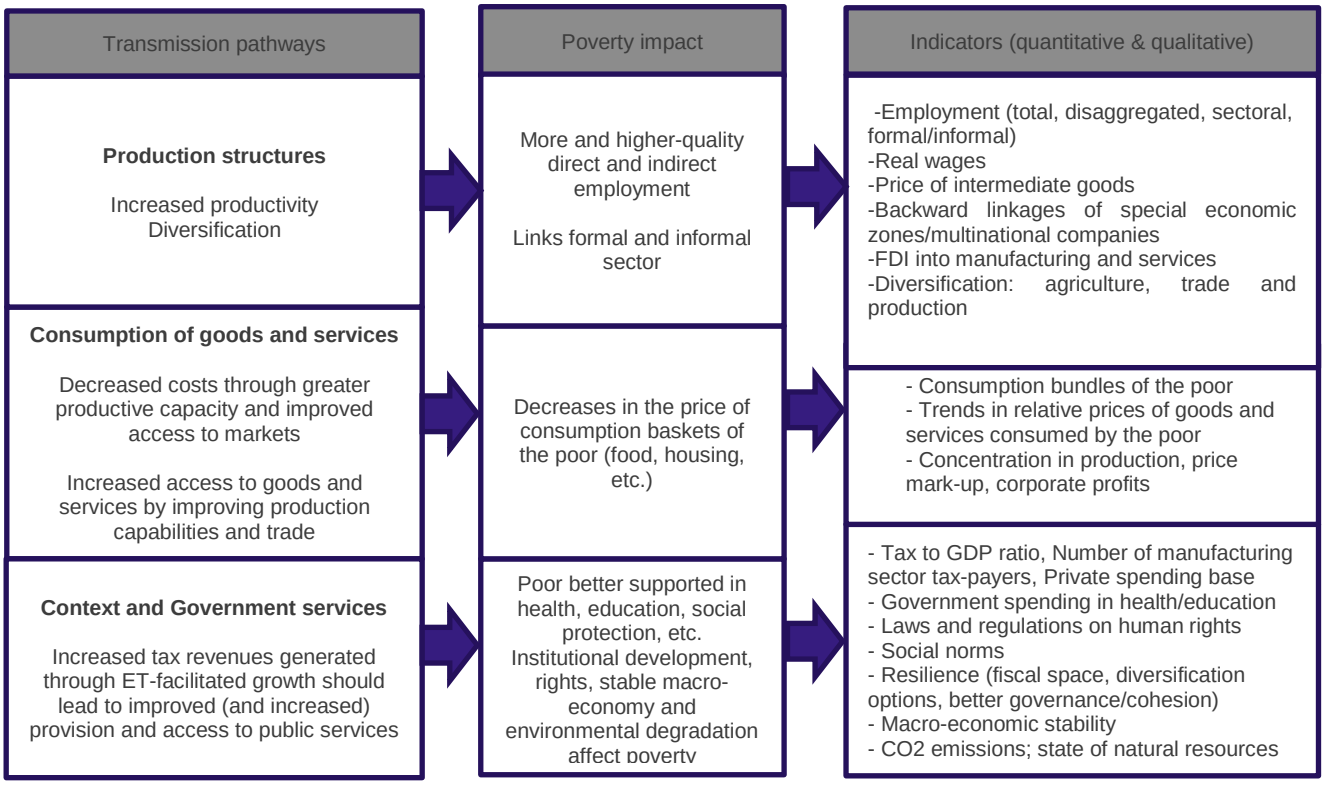


Table 1 (below) provides a more granular look at the indicators, including a brief description of their poverty relevance and the expected type of movement the indicators would show that should indicate potential poverty reduction outcomes.

Table 1: Summary of indicators

Area	Indicator	Expected shift	Rationale
Production	Employment rates	Increase	A job-rich transformation path tends to have a higher poverty-reducing effect
	Real wages	Increase	The quality and wages of jobs link directly to poverty reduction
	Levels and rates of employment disaggregated by type (gender, disabilities, less-skilled)	Movement towards better representation of disadvantaged groups at national level	Transformation paths creating jobs for disadvantaged people directly is more likely to reduce poverty
	Sectoral structure of employment (agriculture, manufacturing, services)	Short term: increase in agriculture employment Long-term: increase in manufacturing and services employment	Agricultural productivity, manufacturing employment and some services sectors exhibit better poverty outcomes – i.e. lower inequality levels
	Prices (real) of intermediate products (e.g. fertiliser, materials)	Reduction	Lower intermediate prices tend to be beneficial for poor producers
	Backward linkages of special economic zones/ multinationals to the local economy (local sourcing)	Increase	More backward linkages (as opposed to 'enclave' investments) are more likely to involve local firms with linkages to the poor
	Foreign direct investment into manufacturing and services	Relative and absolute increase of FDI level in manufacturing/services	Increased FDI into manufacturing and services tends to have productivity and poverty-reducing effects
	Agricultural diversification, trade and production diversification (e.g. revealed comparative advantage or Hausmann product space)	Increased diversification; Increased complexity;	A more diversified and complex economy is associated with poverty reduction and lower inequality levels
Consumption	Changes in consumption bundles of the poor matching productivity changes in sectors producing these	Increased number of goods in consumption bundles	Improves access for the poor to goods and services
	Trends in relative prices of goods and services consumed by the poor	Reduced price of goods in consumption bundles	Lower prices would reduce the cost of consumption by the poor, especially for goods such as food and energy
	Market power, concentration, corporate profits and price mark-ups	Unclear	The use of market power owing to more concentration may lead to higher corporate profits and higher consumer

			prices bad for the poorest
Government services	Tax to GDP ratio, number of manufacturing tax-payers, private spending base	Increase	A more transformed economy is likely to provide a larger and more resilient tax base, which can be used for the poor
	Allocation of revenue to debt servicing and capital repayments	Avoid excessive debt	A transformed economy is likely to need a hike in infrastructure investment, which may conflict with pro-poor spending
	Maintenance of adequate food/forex reserves to enable emergency food purchases and timely pro-poor market interventions	Stabilise food prices	Forex may be prioritised for economic transformation at the expense of food security
	Distribution of government spending on health and education	Increased in relative and absolute terms	Increased expenditure in education and healthcare links to more productive opportunities and poverty reduction
	Laws and regulations around human rights	Qualitative shift towards 'better' regulations and adherence to international treaties	More inclusive institutions help the poor

7 CONCLUSIONS

This paper has discussed a number of transmission mechanisms through which ET affects poverty: through production, consumption and the wider context (including government services). Some of these mechanisms are better developed than others. We have used this to develop a range of indicators that can be used to judge the likelihood of transformation pathways being more poverty-reducing.

Our analysis suggests ET is more poverty-reducing in the presence of, among others:

(through the production route)

- higher employment rates
- more jobs for poor, low skilled workers, especially in the manufacturing and services sectors
- stronger growth in real wages, especially through productivity increases in rural areas
- higher agricultural productivity linked to higher wages
- lower prices of intermediate goods and services used by poor producers
- more extensive backward linkages from formal firms and more local sourcing from special economic zones
- greater shares of foreign direct investment in manufacturing and services sectors that are employment-rich with extensive local linkages
- a more dynamic informal sector (e.g. characterised by higher productivity, greater resilience and dynamic segments) that can link with and contribute to a transformed formal sector
- a more inclusive private sector employing more poor people and whose products and services are fulfilling the needs of the poor (with bottom of the pyramid business models).

(through the consumption route)

- lower prices of goods and services consumed by poor consumers
- lower price mark-ups and competitive market behaviour.

(through government and other indirect routes)

- a more dynamic tax base consisting of more tax-payers based on a more diversified private sector
- a greater share of public spending devoted the poorest directly (such as health and education)
- manageable levels of debt, macro-economic stability and forex availability for emergency food security measures
- less resource degradation (less land degradation, less water scarcity, less water, land and air pollution)
- fewer carbon emissions
- enhanced resilience (measured through greater macro-economic space, more social cohesion through less inequality and politically inclusive though inclusive institutions that respect the rights of the poorest and most vulnerable)
- a more stable macro-economy.

The paper has used selected evidence to support the development of the broad mechanisms and the more detailed indicators (some are more easily measured than others). The next steps would include developing the framework in more detail and implementing this in a number of countries to examine its operability and country specificity. A further major step would be to develop policy implications from this.

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