RELATIONSHIP BETWEEN INCOME INEQUALITY AND STRUCTURAL TRANSFORMATION IN DEVELOPING ECONOMIES

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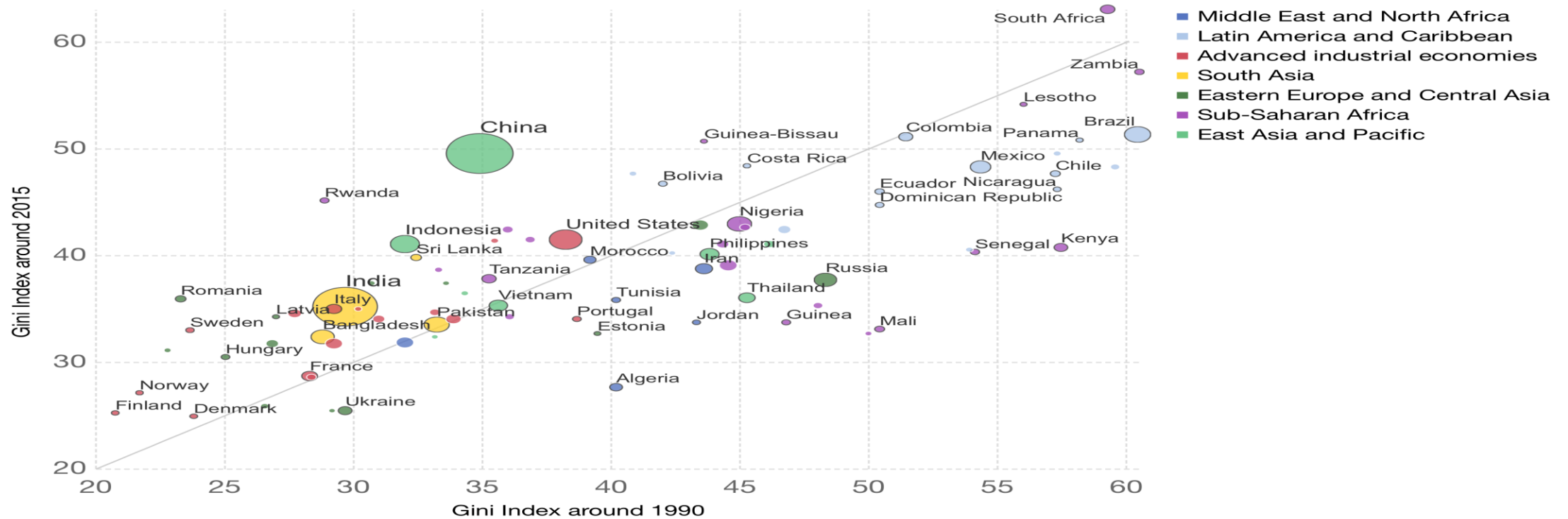
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Outline

- Overview:
    - Income Inequality- trends
    - Structural transformation
- Inequality-structural transformation linkage: Empirical Analysis
    - Data and Methodology
    - Results
- Findings and Conclusion

Income inequality trends

Inequality in 1990 vs 2015
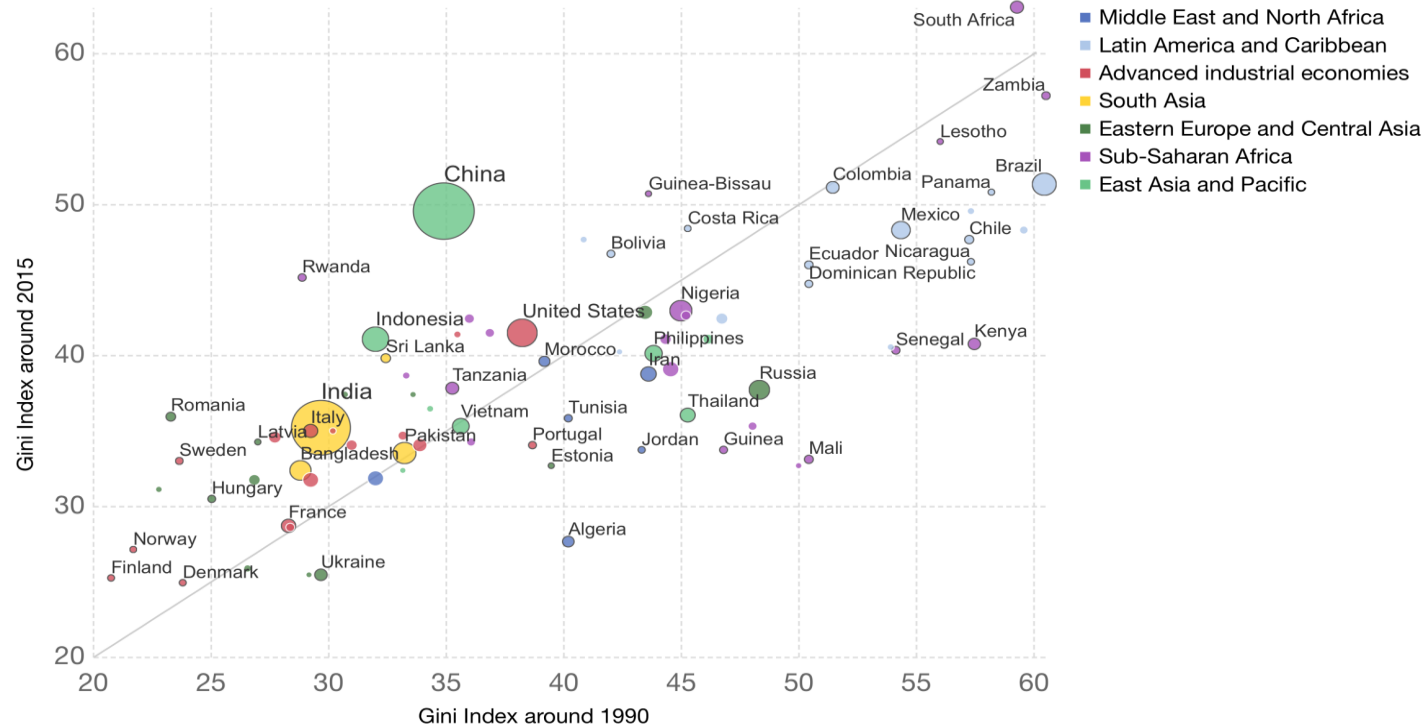A higher Gini index represents higher inequality.

Our World in Data

Source: Povcal (2018), The Chartbook of Economic Inequality (2017), Kandbur et al. (2017) Table 1.B   CC BY
Note: Estimates are based on household survey data of either incomes or consumption. All countries for which comparable surveys within five years of each reference year were available are shown.

Income inequality trends

Inequality in 1990 vs 2015
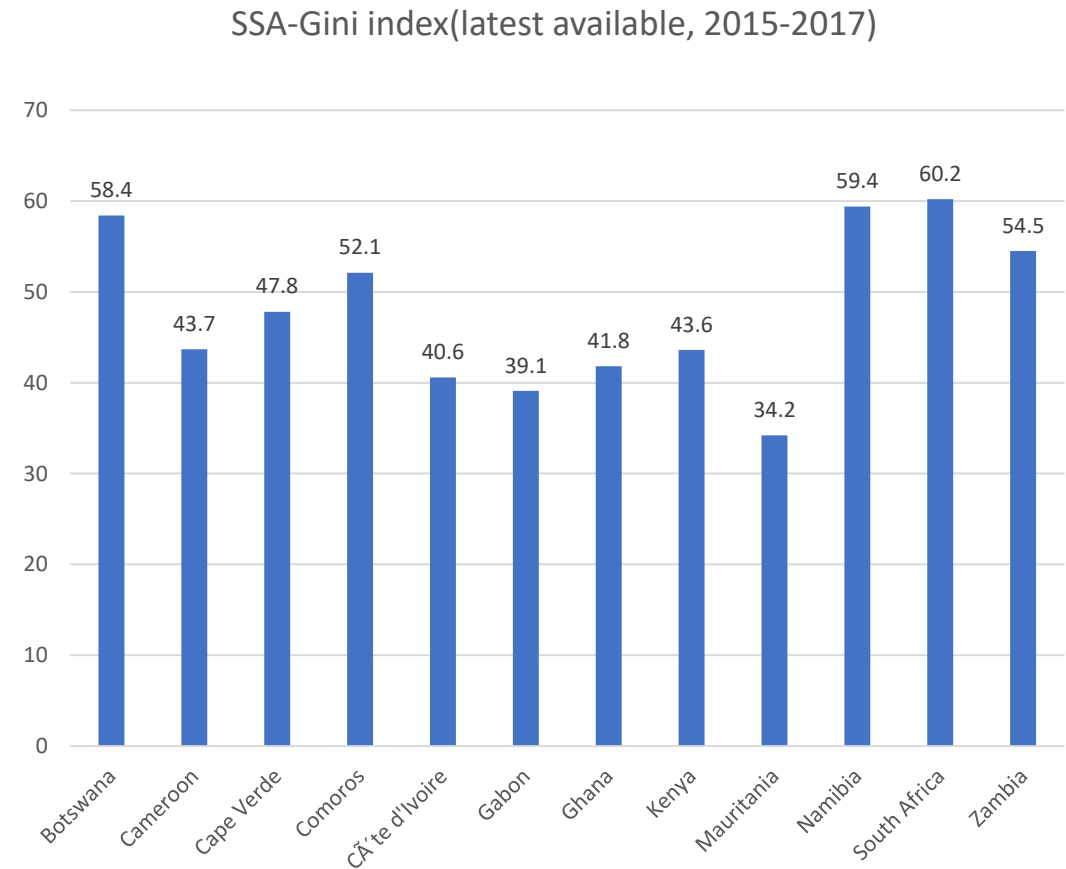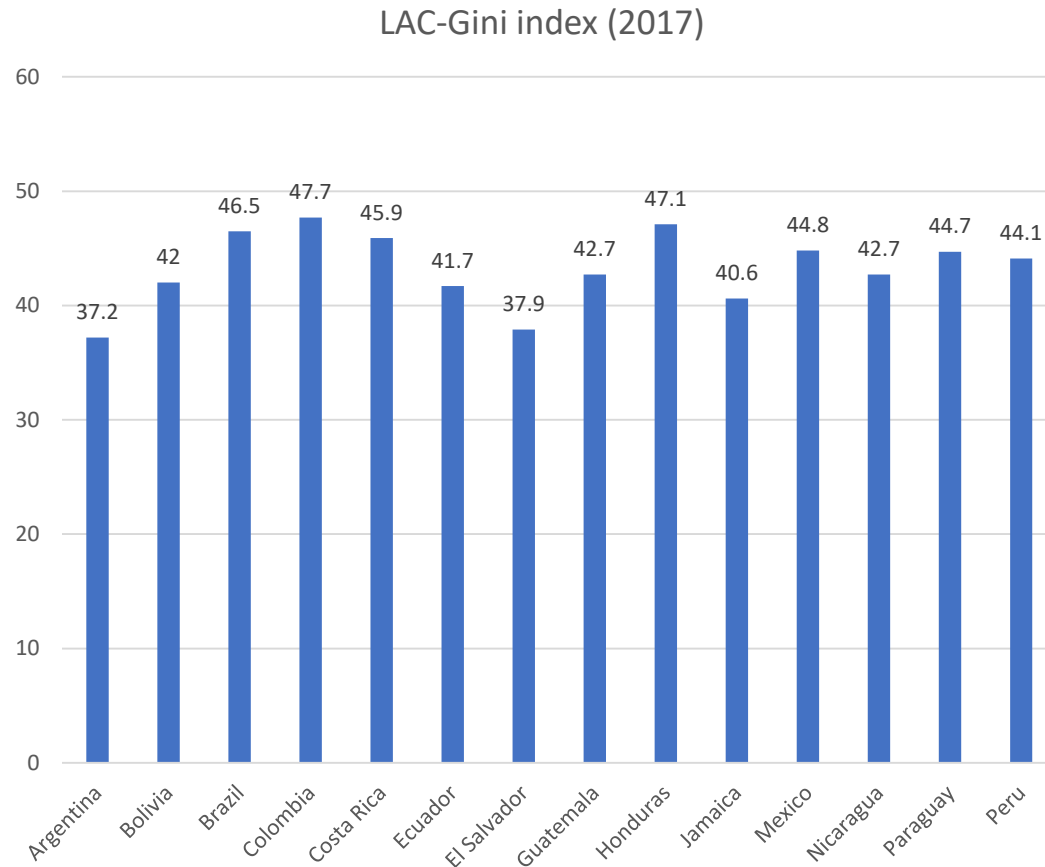A higher Gini index represents higher inequality.

- Considerable diversity in the level of inequality across countries and regions.

- There is a widespread between the highest inequality countries in LA & SSA, and the lowest inequality countries in Scandinavia.

- LAC- very high levels of inequality, but many experienced a decline in the level from 1990 to 2015.

- SSA- Heterogeneity in income inequality levels within the region –increase trend among many countries from 1990 to 2015.

Source: Povcal (2018), The Chartbook of Economic Inequality (2017), Kandbur et al. (2017) Table 1.B   CC BY
Note: Estimates are based on household survey data of either incomes or consumption. All countries for which comparable surveys within five years of each reference year were available are shown.

Gini Index-Latin America & Caribbean and Sub-Saharan Africa

LAC-Gini index (2017)

Argentina: 37.2
Bolivia: 42
Brazil: 46.5
Colombia: 47.7
Costa Rica: 45.9
Ecuador: 41.7
El Salvador: 37.9
Guatemala: 42.7
Honduras: 47.1
Jamaica: 40.6
Mexico: 44.8
Nicaragua: 42.7
Paraguay: 44.7
Peru: 44.1

SSA-Gini index(latest available, 2015-2017)

Botswana: 58.4
Cameroon: 43.7
Cape Verde: 47.8
Comoros: 52.1
CÃ´te d'Ivoire: 40.6
Gabon: 39.1
Ghana: 41.8
Kenya: 43.6
Mauritania: 34.2
Namibia: 59.4
South Africa: 60.2
Zambia: 54.5

Source: Standardised World Income Inequality (SWIID) database, version 8

Structural transformation

- Structural transformation is a process whereby labour moves from low productive to higher productive sectors, and this reallocation raises labour productivity which contributes to economic growth (Martins, 2019).

- In developing countries, labour productivity in agriculture is considerably lower than in the non-agricultural sector (Gollin et al., 2014).

- This suggest reallocation of labour from agriculture to industry and services would considerably boost aggregate productivity and economic growth in developing countries.
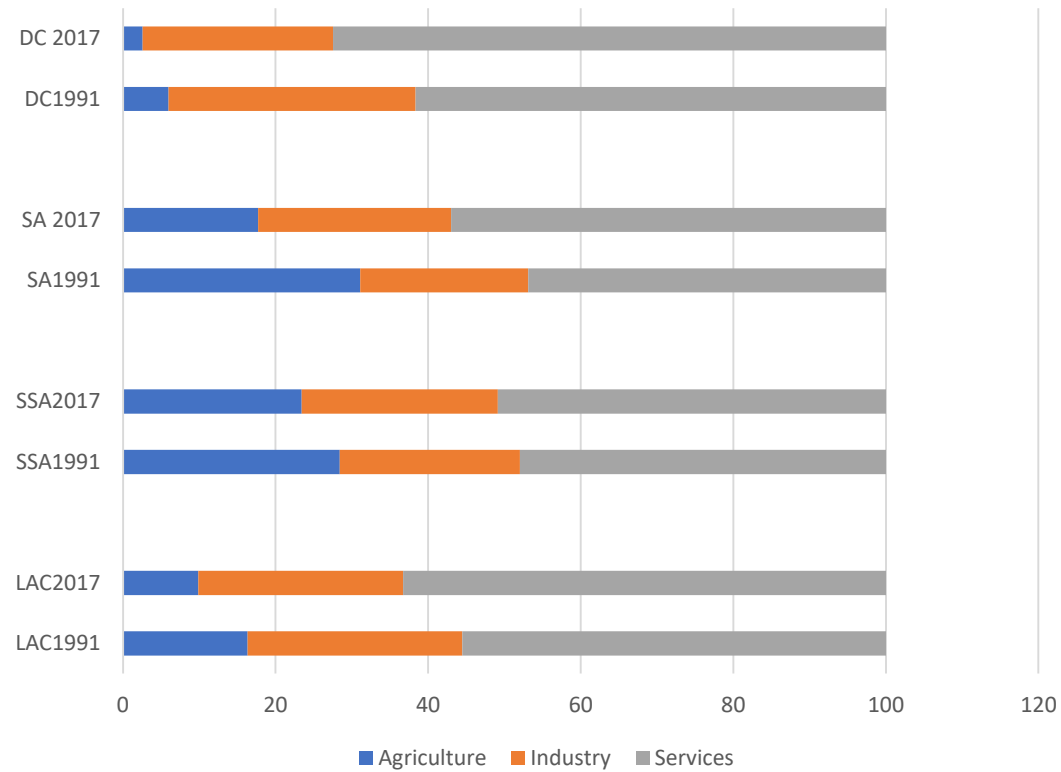
Structural transformation ctd.

- Agricultural share in value added has decreased across regions, but still high in Sub-Saharan Africa (SSA) and South Asia (SA), though in Latin America and Caribbean region it has fallen.

- Considerable increase in the contribution of service sector across regions.

- Interesting fact: the share of industry has not picked up in any of the developing regions.

- Signals premature-deindustrialization.
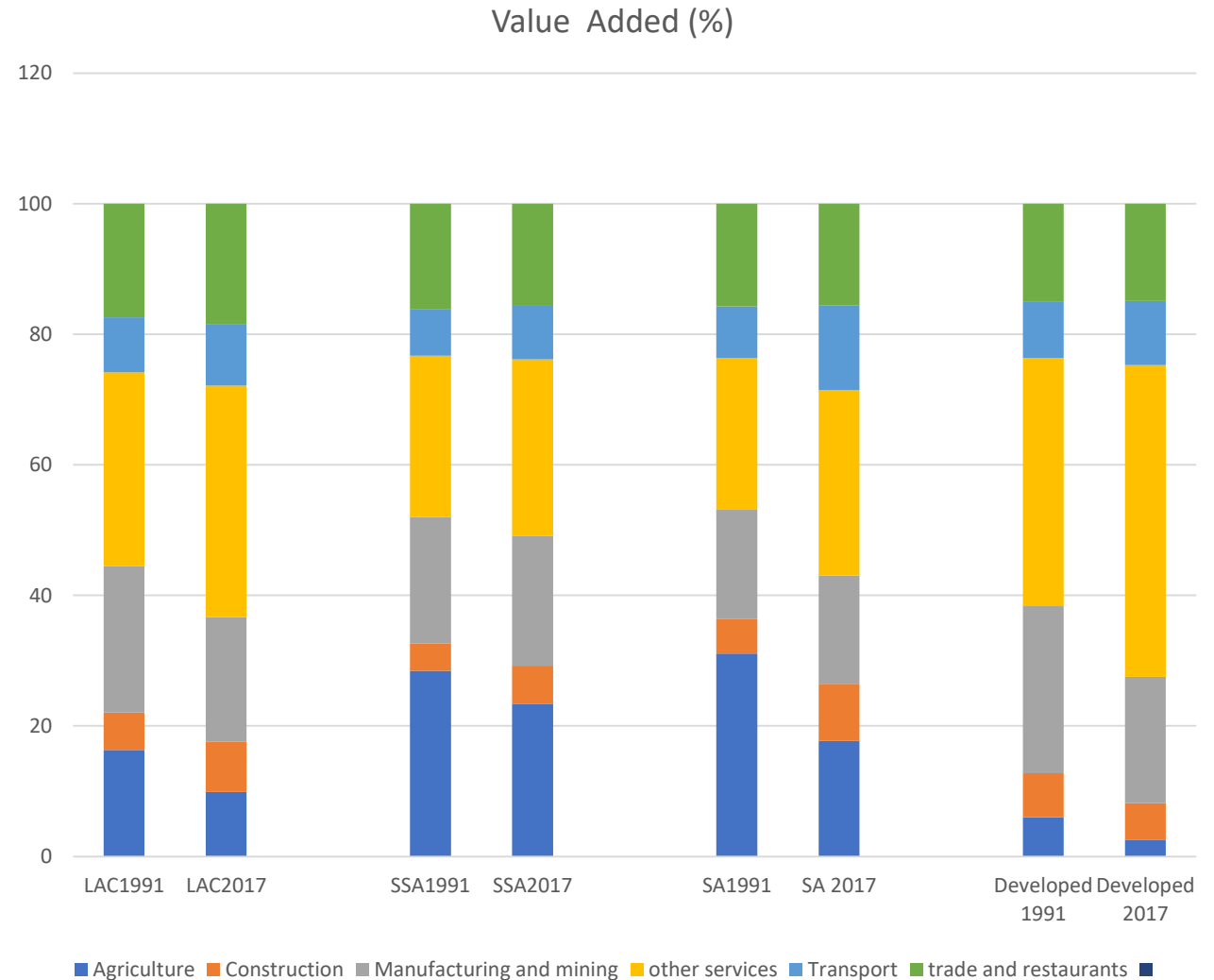
Value Added (%)

Source: UNSD dataset of national accounts

Structural Transformation ctd.

Value added (%)

Employment (%)

Source: UNSD dataset of national accounts

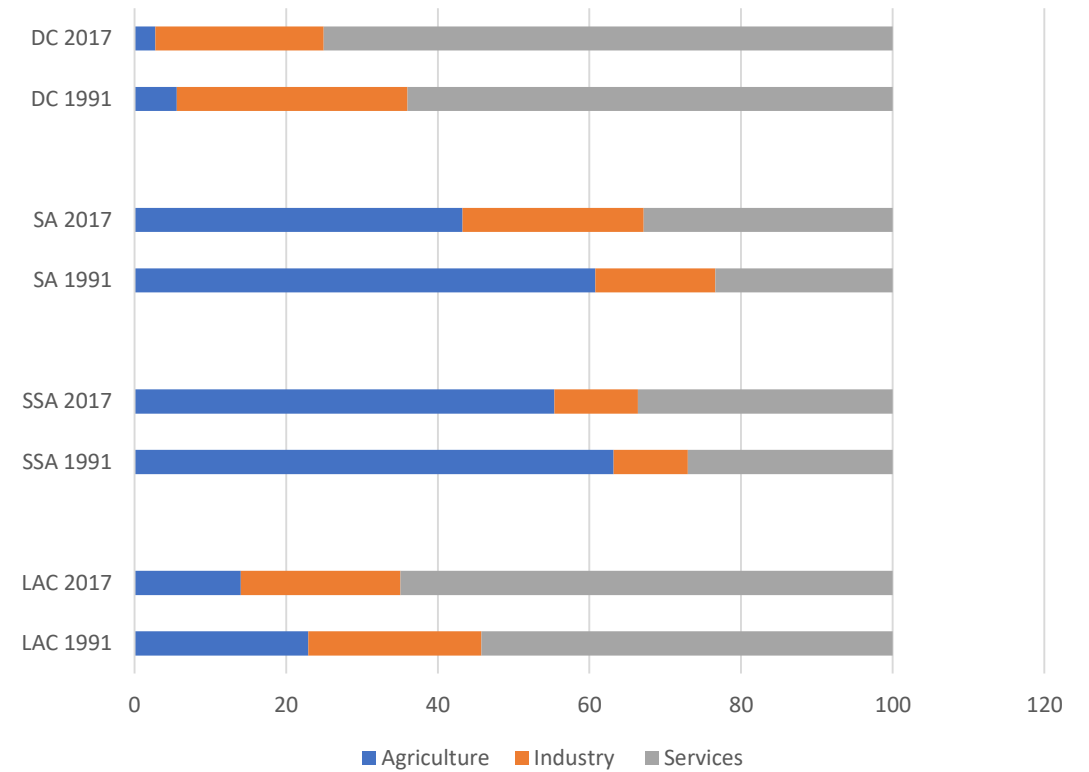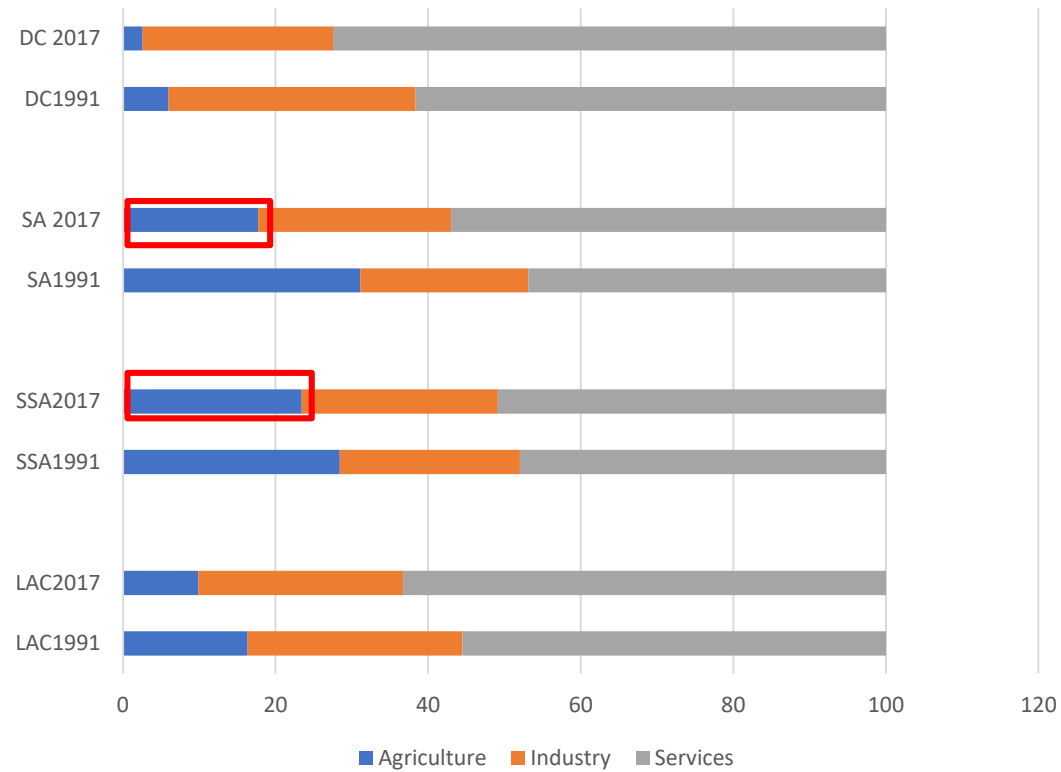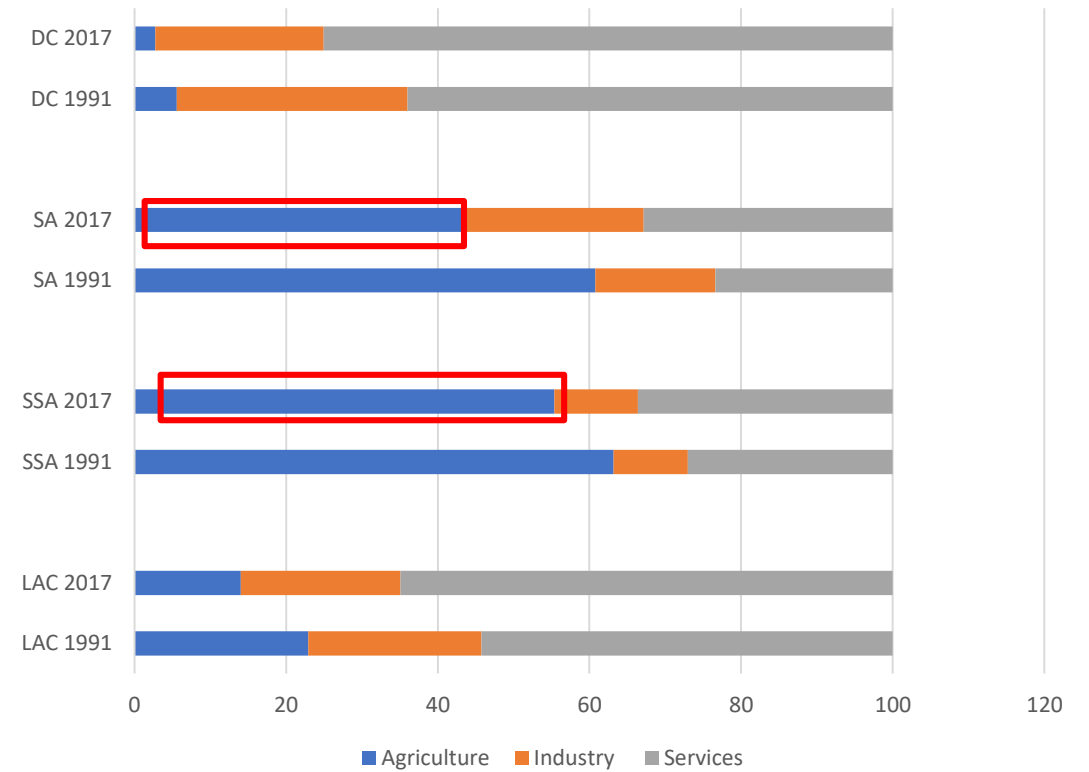Source: World Employment and Social Outlook (WESO) database of ILO

Structural Transformation ctd.

Value added (%)

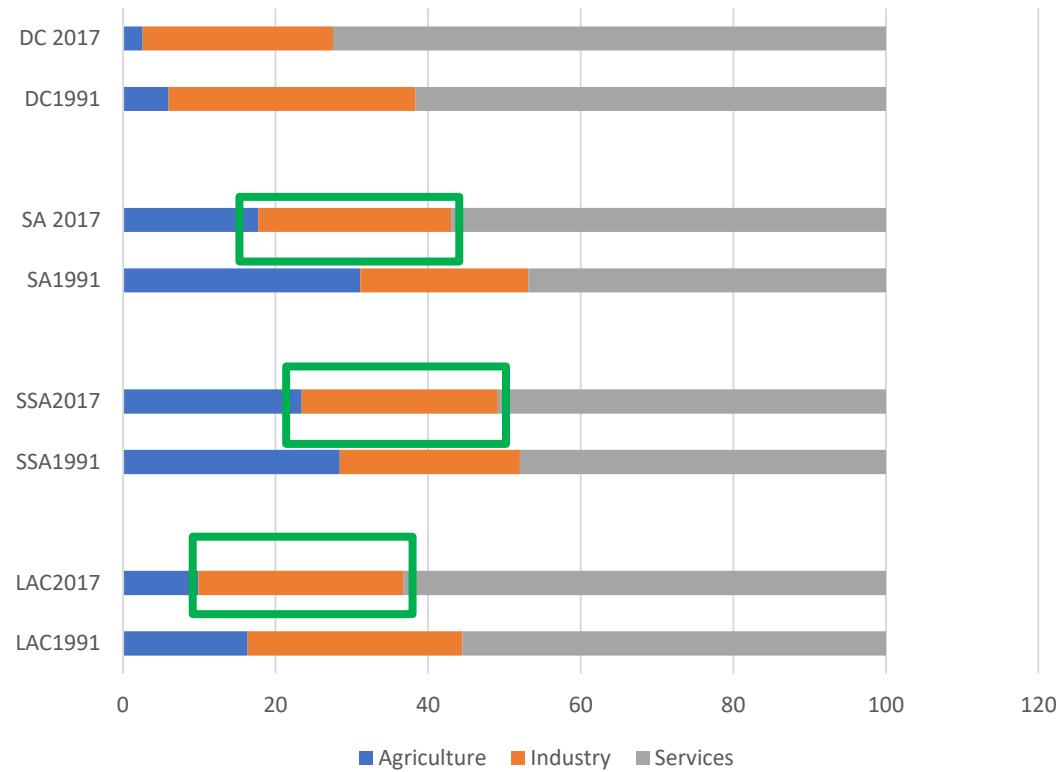Source: UNSD dataset of national accounts

Employment (%)

Source: World Employment and Social Outlook (WESO) database of ILO

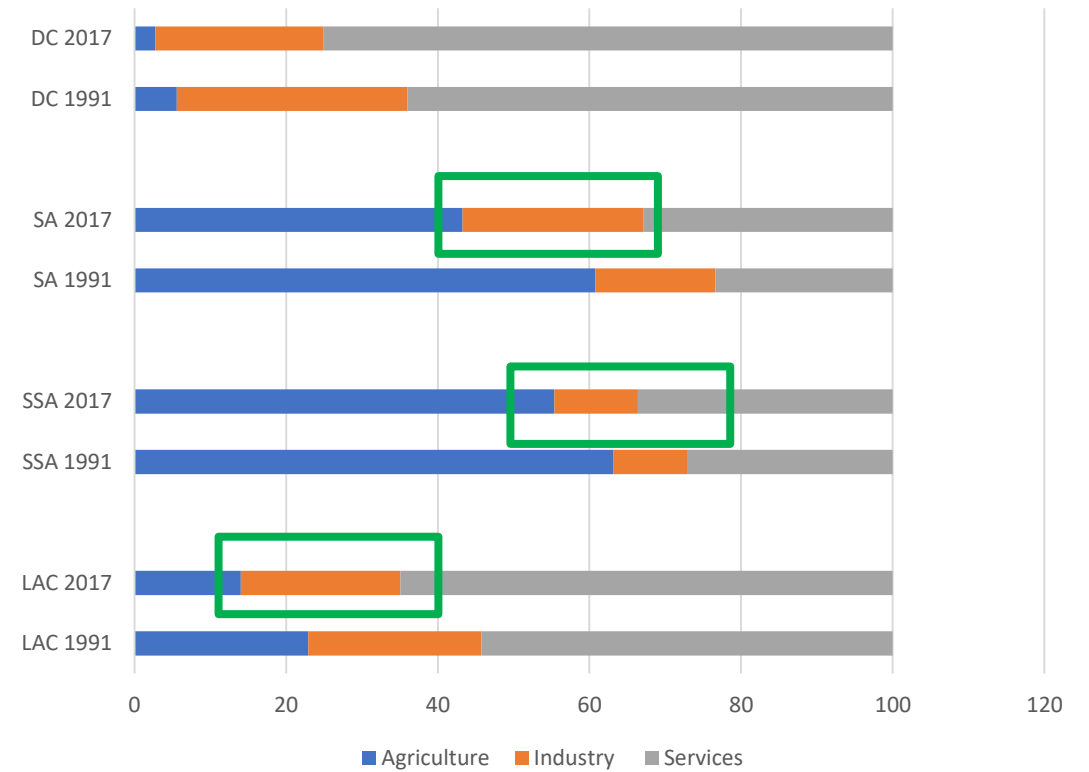11/9/2019

Structural Transformation ctd.

Value added (%)

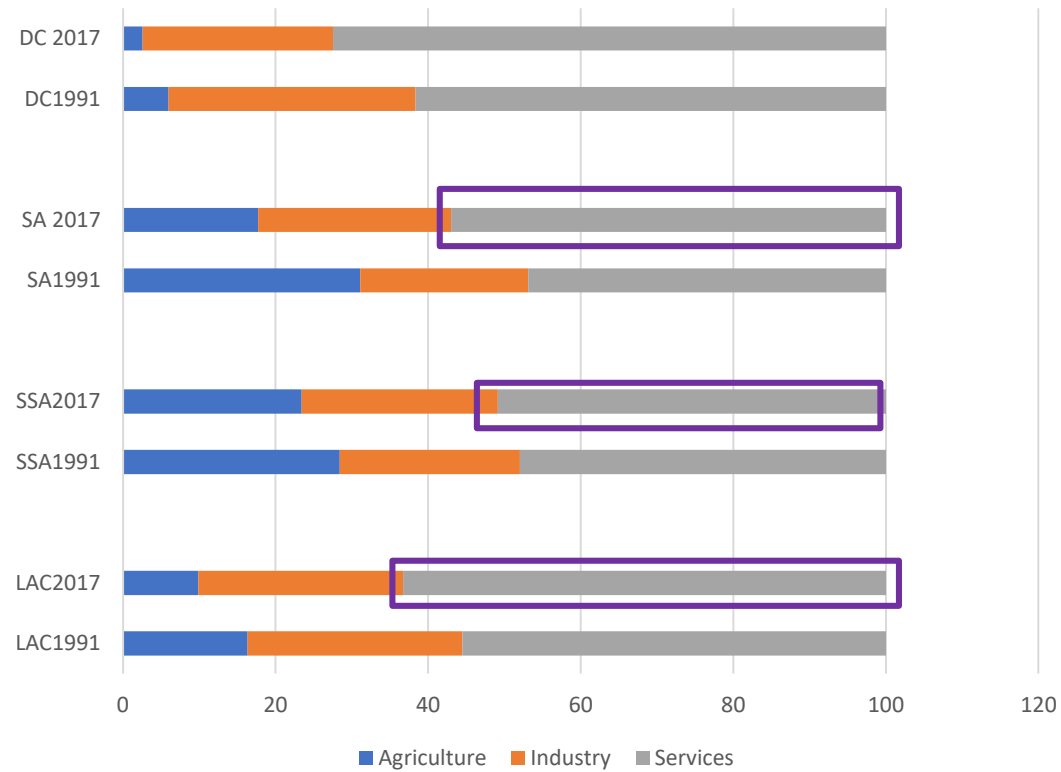Source: UNSD dataset of national accounts

Employment (%)

Source: World Employment and Social Outlook (WESO) database of ILO

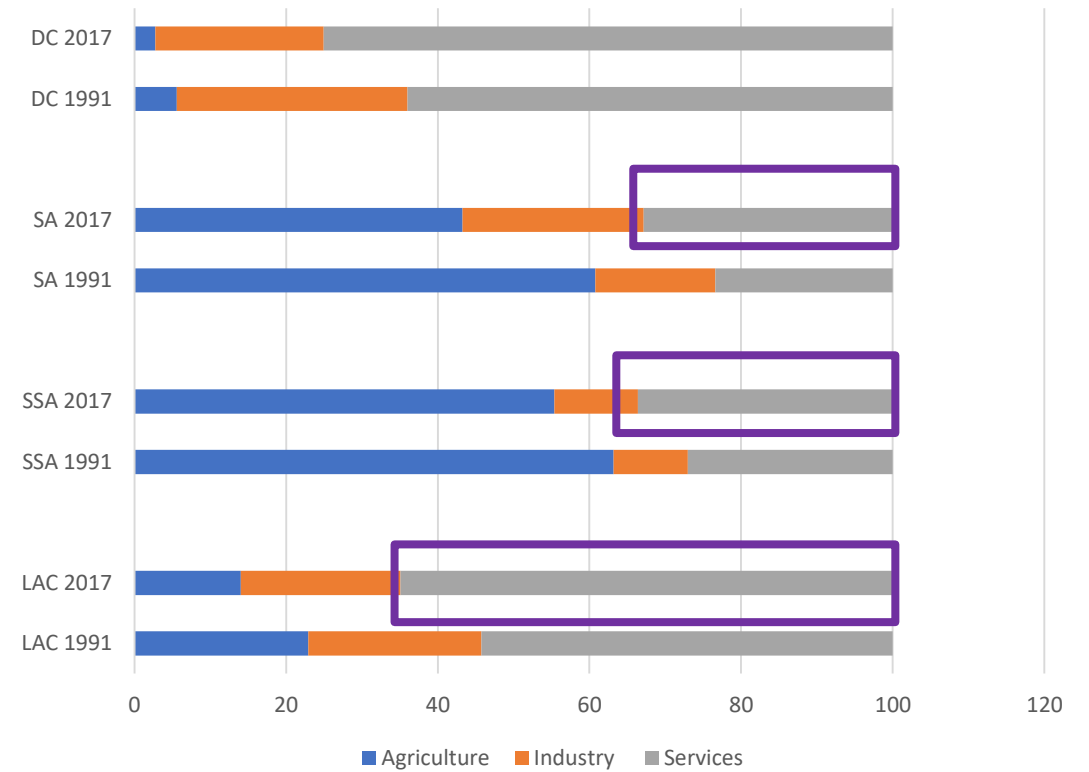# Structural Transformation ctd.

Value added (%)

Employment (%)

Agriculture   Industry   Services

Agriculture   Industry   Services

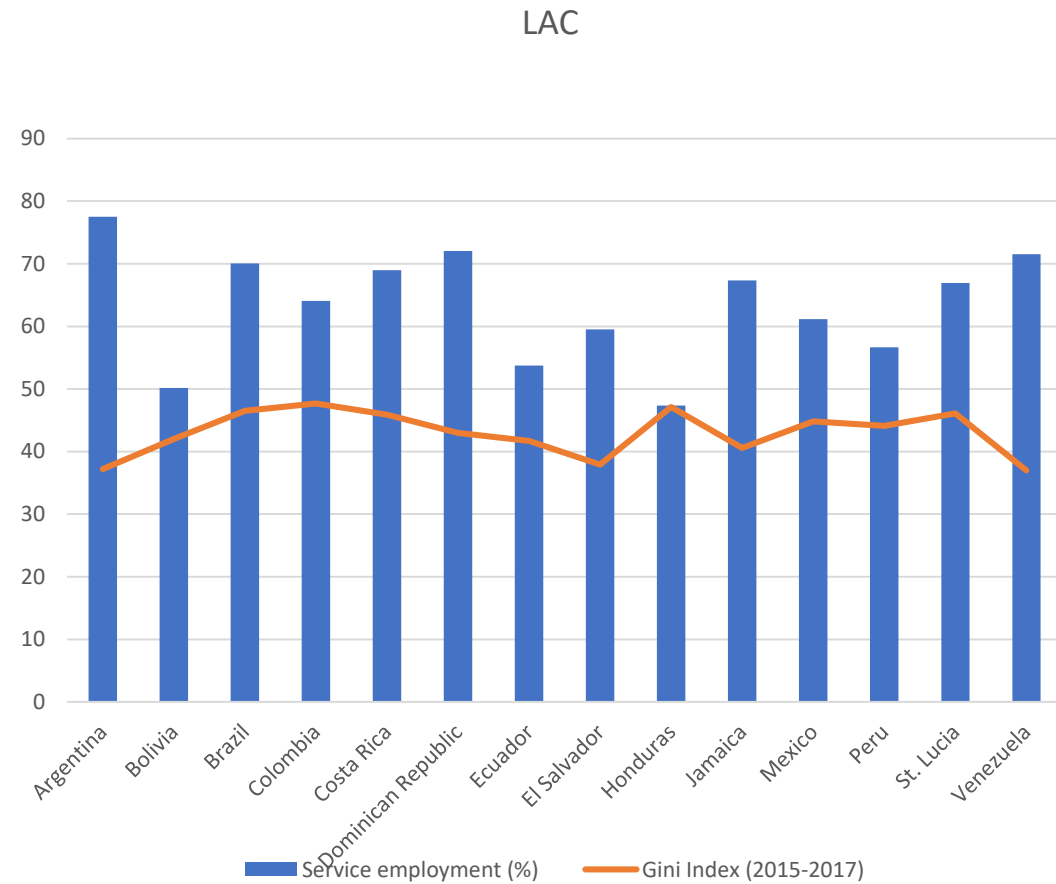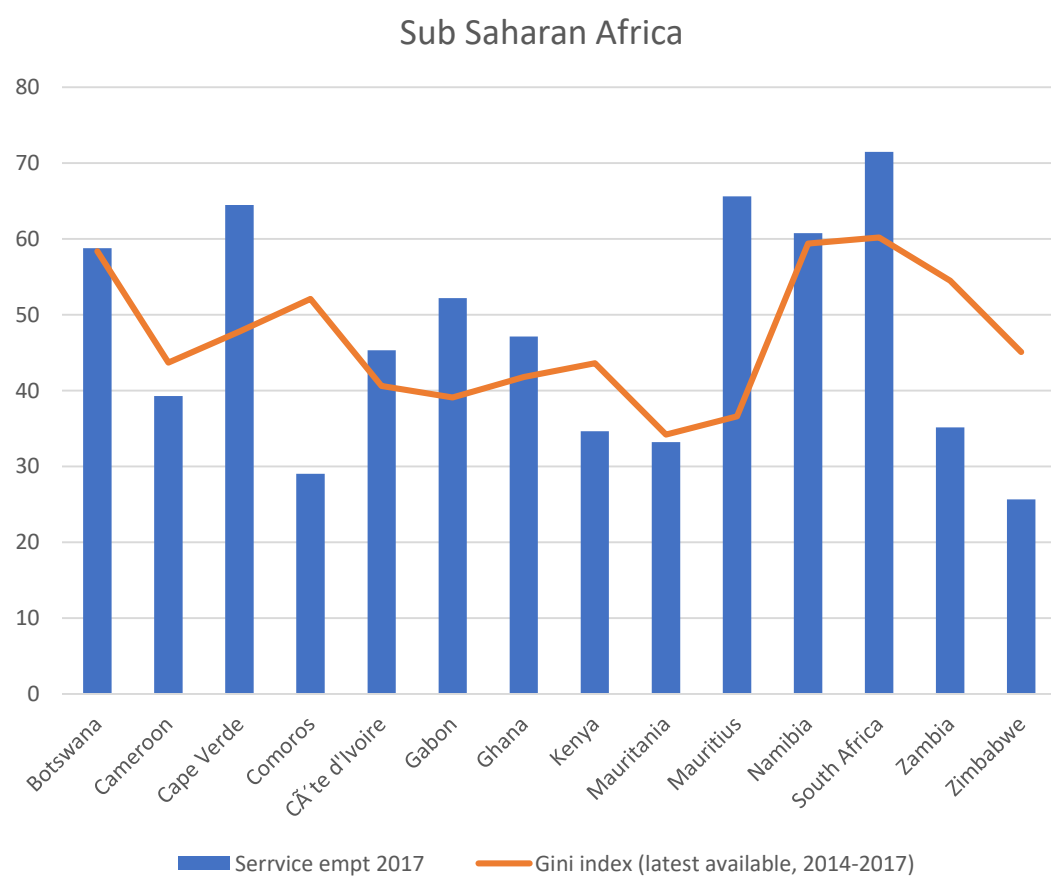Source: UNSD dataset of national accounts

Source: World Employment and Social Outlook (WESO) database of ILO

Structural transformation and inequality Relation

Sub Saharan Africa

LAC

Legend: Serrvice empt 2017 — Gini index (latest available, 2014-2017)

Legend: Service employment (%) — Gini Index (2015-2017)

Source: Standardised World Income Inequality (SWIID) database, version 8, and WESO dataset

Structural transformation and inequality Relation :Empirical Analysis

- Data source : WESO (ILO), UNSD and WDI (World BanK).

- Time Period: 2001 to 2016

- Countries: 19 countries -Middle income countries in LAC , SSA and South Asia.

- Research question: How does the structural transformation component in labour productivity affects the income inequality in the developing regions.

- Methodology:
  - Shapley decomposition of labor productivity (Martins 2019).
  - System GMM technique.

Methodology: Shapley decomposition
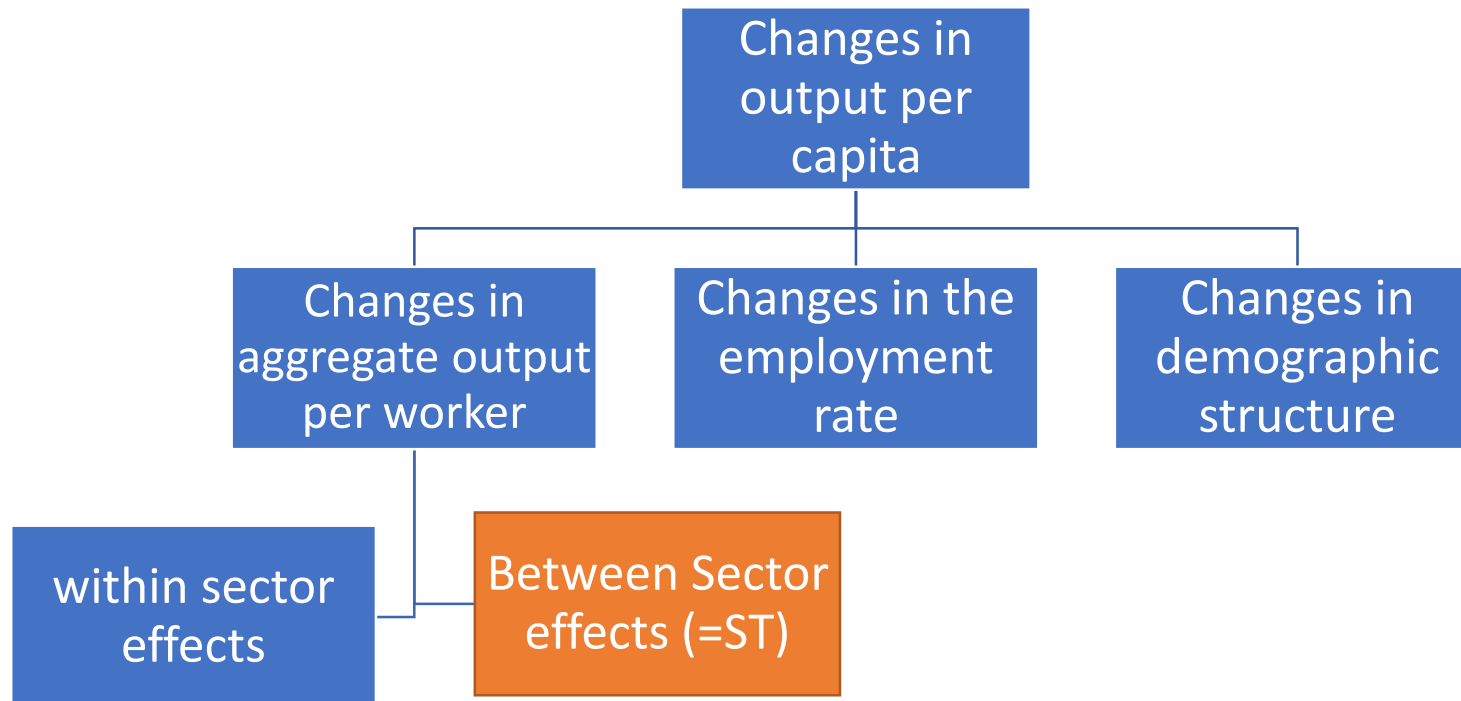
Source : Martins (2019)

Methodology Ctd.

- Dynamic panel estimation: System GMM technique

$$Y_{i,t} = \delta Y_{i,t-1} + \beta \boldsymbol{X}_{i,t} + \mu_i + \phi_t + e_{i,t}$$

- Dependent Variable ($Y_{i,t}$): Gini Index (Model 1), Income share of lowest 10% (Model 2)

- Explanatory variable : Structural transformation (between sector effect on change in labour productivity from Shapley decomposition)

- Other Control Variables : Log GDP, LFPR, Population growth rate and GFC growth rate

Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Gini index	279	42.3	10.097	24	59.5
Lowest 10% income share	265	2.090	1.136	0.4	4.5
Structural transformation	303	0.002	0.241	-0.984	0.813
Log GDP	304	24.660	1.553	21.947	28.506
LFPR	304	66.716	7.103	45.378	81.712
Growth rate of population	304	0.681	0.985	-2.170	2.554
Growth rate of GFC	304	23.105	1.578	20.217	26.97

Income inequality-structural transformation relationship

Dependent variable	Gini index	Lowest 10 percent income share
	Model (1)	Model (2)
Lag Gini Index	0.687***	
Lag value of Lowest 10 percent income share		0.970***
Structural transformation	0.981**	-0.211***
Log GDP growth rate	-0.0377*	1.73
LFPR	-0.1008	0.211*
GFC growth rate	-3.269*	0.071
Population growth rate	0.006	0.0003
constant	-6.598	0.507
AR(2)	0.725	0.992
Hansen	0.97	0.999
Difference-in-Hansen	0.488	1.000

Findings and Conclusion

- Reallocation of labour across sectors can influence the income inequality in the economy.

- Premature-deindustrialisation and rising informal service sector might influence income distribution in the developing countries.

- Considering the heterogeneity across countries and regions- both in inequality and structural transformation trends- emphasizing any single sector will not be the solution.

- The challenging task ahead - generate more productive and formal employment opportunities in the service sector, given the threat of deindustrialisation trend especially in SSA and LAC.

THANK YOU