

From Manufacturing Led Export Growth to a 21st Century Inclusive Growth Strategy for Africa

Joseph E. Stiglitz

Cape Town

November 15, 2017

Export-led growth model behind 20th century growth miracles

- Unprecedented growth in East Asia—closing the gap in income per capita/standards of living with advanced countries
- Major shift from import substitution model that prevailed earlier
- Deconstructing success
 - Open economy allowed one to avoid complexity of material balance equations— all one had to have was enough foreign exchange
 - Export led growth generated necessary foreign exchange
 - Didn't need to generate demand to absorb new supply
 - No need to worry about demand constraints
 - Flexible and correctly managed exchange rate, open economy, and “attentive” producers suffice to absorb supply
- That model won't be working in the future in the way that it did in the past

Outline

- I. Deconstructing success
- II. The (relative) decline of manufacturing and its implications
- III. A new framework for learning-led growth
- IV. Review of issues particularly germane to Africa
- V. Key elements of a development strategy for Africa
- VI. Rethinking role of government
- VII. Concluding remarks: Reformulating development thinking

I. Deconstructing success

- Exports provided basis for **learning**
 - What separates developed and less developed countries **is** a gap in knowledge
 - Transfer of technology could be accomplished in numerous ways (buying technology, FDI)
 - Important spillovers to other industries
 - Institutional spillovers (e.g. education) even to other sectors
 - Demand for educated individuals—of benefit elsewhere in the economy
- Exports provided basis for **tax revenues**
 - Finance needed for government expenditures—infrastructure, education, technology
 - Hard to tax informal sector

Deconstructing success of export-led growth

- Generated **employment** in urban sector—key in supporting structural transformation
 - Generated jobs for new entrants into the labor force
- **Mechanisms for promoting exports**
 - Access to credit at near commercial rates—provided incentives for entrepreneurs
 - Limited direct support
 - Variety of industrial policy instruments
- **Natural system of accountability**
 - Successful firms proved profitable

II. The (relative) decline of manufacturing and its implications

- Victim of own success: productivity exceeds rate of increase in demand (share of manufacturing in GDP declining everywhere as next slide shows)
 - Some vertical disintegration of service components of manufacturing gave appearance of more rapid disappearance of jobs
 - Vertical disintegration can have real consequences (e.g. for wages and flows of knowledge)
- Even with emerging markets taking larger share of manufacturing jobs, and with shift of jobs from China to Africa, new manufacturing jobs will only absorb a fraction of new entrants into labor force
 - Can still have impacts disproportionate to size
 - Countries may have a natural comparative advantage in some niches (or in some cases, even be able to create a comparative advantage)
 - But unlikely to have impacts that manufacturing export led growth had in China and East Asia

Manufacturing Share of GDP (%)

	<u>2000</u>	<u>2015</u>
World	19	15
E. Asia & Pacific	25	23
ECA	19	16
LAC	17	14
North America	16	12
South Asia	15	16
Sub-Saharan Africa	11	11
Low-Income	10	8
Lower Middle Income	17	16
Upper Middle Income	24	21
High Income	18	15

Source: WDI

Industrialization Trends and Africa

- The share of manufacturing in GDP was once so highly correlated with per capita income that the IMF used the term “Industrial countries” to refer to high income countries until some 15 or so years ago
- The relationship became an inverted U shaped one some 2 decades or so ago
- And more recently the height if the inverted U has been declining, i.e. the peak level of income at which manufacturing’s share begins to shrink has been falling
- But Sub-Saharan Africa began its deindustrialization much too prematurely and rapidly : manufacturing’s share peaked in 1977 at about 17% and then declined almost continuously: 10% by 2000 and 11% in 2015.
- This “underindustrialization” of SSA should mean more scope for catch-up industrialization notwithstanding the headwinds posed by global technological trends

III. A new framework for learning-led growth

- Based on “deconstructing” export-led growth
- Multifaceted growth strategy, with different facets reflecting different aspects of manufacturing export-led growth
 - Export-led manufacturing naturally combined structural transformation and urbanization, movement to a learning economy, openness that meant one could simply focus on foreign exchange constraint (ensuring that one had the foreign exchange one needed), and job creation for new entrants into the labor force to maintain reasonably high employment

- May need to combine multiple strategies
 - Manufacturing—more directed, more limited, where possible, taking advantage of natural advantage (mineral resources)
 - Challenge for job creation will be greater because of AI
 - Competition for low skilled manufacturing may result in a race to bottom—need to be careful in giving tax breaks
 - Agriculture—basis of employment, but can be restructured in ways that are more dynamic, with more learning, learning to learn, a kind of transformation *in situ*
 - Mining and oil—important for foreign exchange (maximize revenues, taking advantage as much as possible of spillovers)
 - Services—will be the growth sector of the future but in Africa agriculture also has enormous potential both in its own right and by stimulating the manufacturing and service sectors as ACET’s Africa Transformation Report 2017 released earlier this week argues (see below)
 - Understand implications
 - Understand how to maximize growth potential and how to manage transition
- Government may need to take a more active role if there is to be successful structural transformation
 - Shadow prices for learning, learning spillovers, jobs, and foreign exchange may also entail deviations from market-only solutions

Agriculture-led Economic Transformation

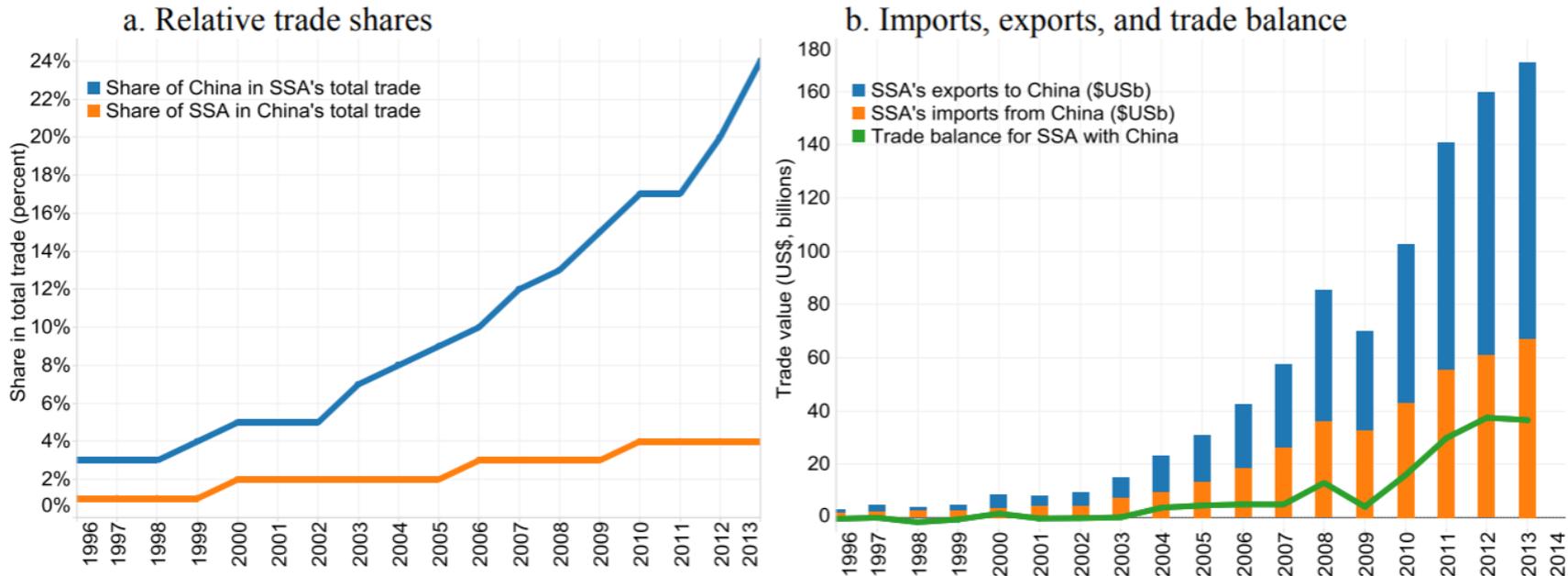
- The African Center for Economic Transformation's 2nd major report released on Oct. 10 is timely and welcome.
- Argues that for many African countries: *“agriculture presents the easiest path to industrialization and economic transformation. Increasing productivity and output in a modern agricultural sector would, beyond improving food security and the balance of payments (through reduced food imports and increased exports) Sustain agro-processing, the manufacturing of agricultural inputs, and a host of services upstream and downstream from farms, creating employment and boosting incomes across the economy.”*

IV. Review of Issues particularly germane to Africa

- Exports remain highly dependent on commodities—from which learning benefits may be limited, making modernization transition all the more difficult
- Increasing reliance on trade with China may also be problematic
 - Continuing colonial tradition of exporting low value added commodities?
- Low education levels in many African countries presents particular challenge to modernization
 - Increases importance of learning
 - Opportunities for job creation in education sector
- Deindustrialization (as a result of structural adjustment policies) puts Africa at a disadvantage at the moment
 - But again provides opportunities for expansion
- Jobs will be a key issue: major shortfall of jobs
 - Any development strategy must address this issue

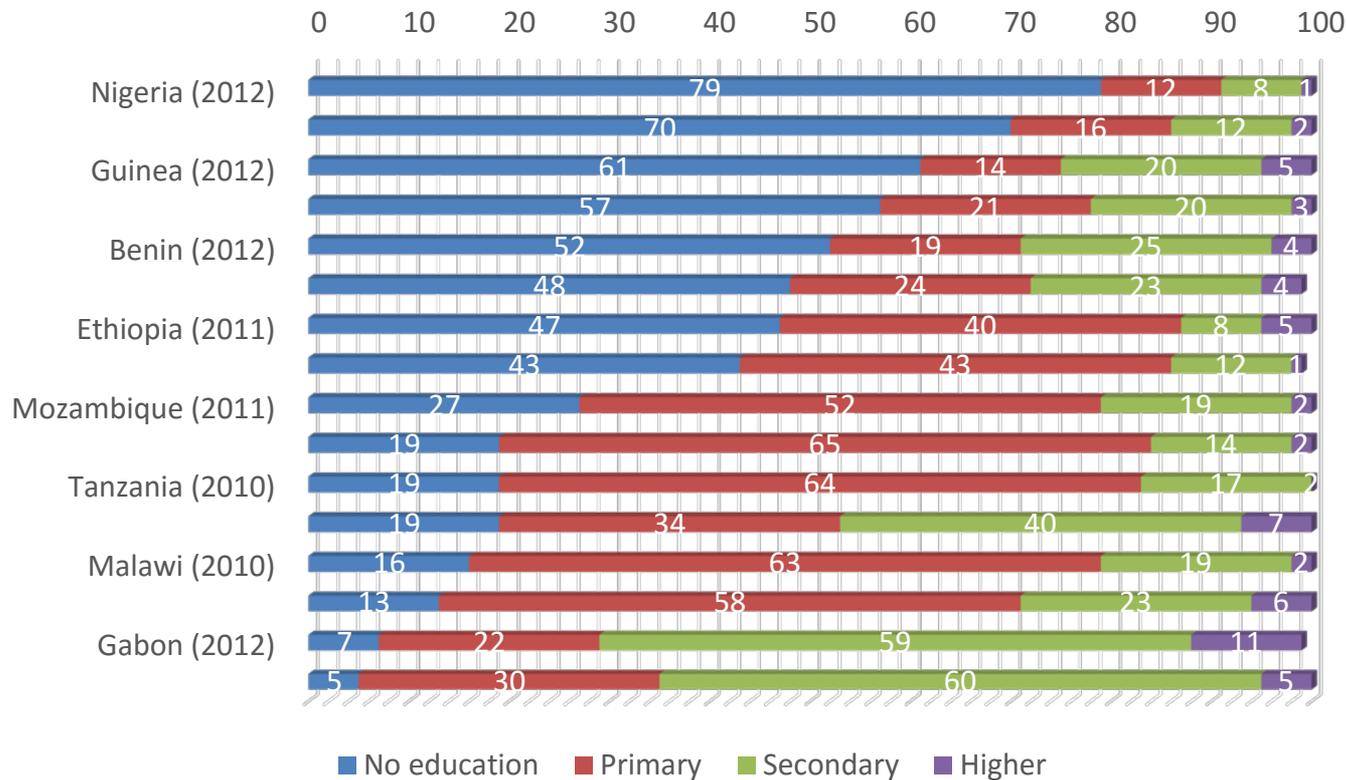
Trade with China

Figure 1 Trade between China and SSA



Source: World Integrated Trade Solution Data, World Bank

Distribution of active population according to education level



Note: Only countries with data after 2009 are included. Number are in percent.

Source: Demographic and Health Survey, reproduced from Chevallier and Le Goff 2014.

Deindustrialization

Value added, employment, and relative labor productivity by sector

Sector	Sectoral Shares								Relative			
	Value Added				Employment				Productivity Levels			
	1960	1975	1990	2010	1960	1975	1990	2010	1960	1975	1990	2010
Agriculture	37.6	29.2	24.9	22.4	72.7	66.0	61.6	49.8	0.5	0.4	0.4	0.4
Industry	24.3	30.0	32.6	27.8	9.3	13.1	14.3	13.4	4.4	3.7	3.5	2.6
Mining	8.1	6.2	11.2	8.9	1.7	1.5	1.5	0.9	15.7	22.4	23.3	19.5
Manufacturing	9.2	14.7	14.0	10.1	4.7	7.8	8.9	8.3	2.5	2.8	2.4	1.6
Other Industry	7.1	9.2	7.3	8.9	3.0	3.8	3.9	4.2	8.5	5.8	5.3	2.9
Services	38.1	40.7	42.6	49.8	18.0	20.9	24.1	36.8	2.7	2.5	2.4	1.6
Total Economy	100	100	100	100	100	100	100	100	1.0	1.0	1.0	1.0

Note: Table shows GDP, Employment, and relative productivity levels in Sub-Saharan Africa. Relative productivity level is the ratio of the sector and total economy levels.

Source: deVries, Timmer, and deVries (2013): Structural transformation in Africa: Static Gains, Dynamic Losses. <http://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=1041&context=ijad>

Deindustrialization

Value added by sectors (% of GDP)

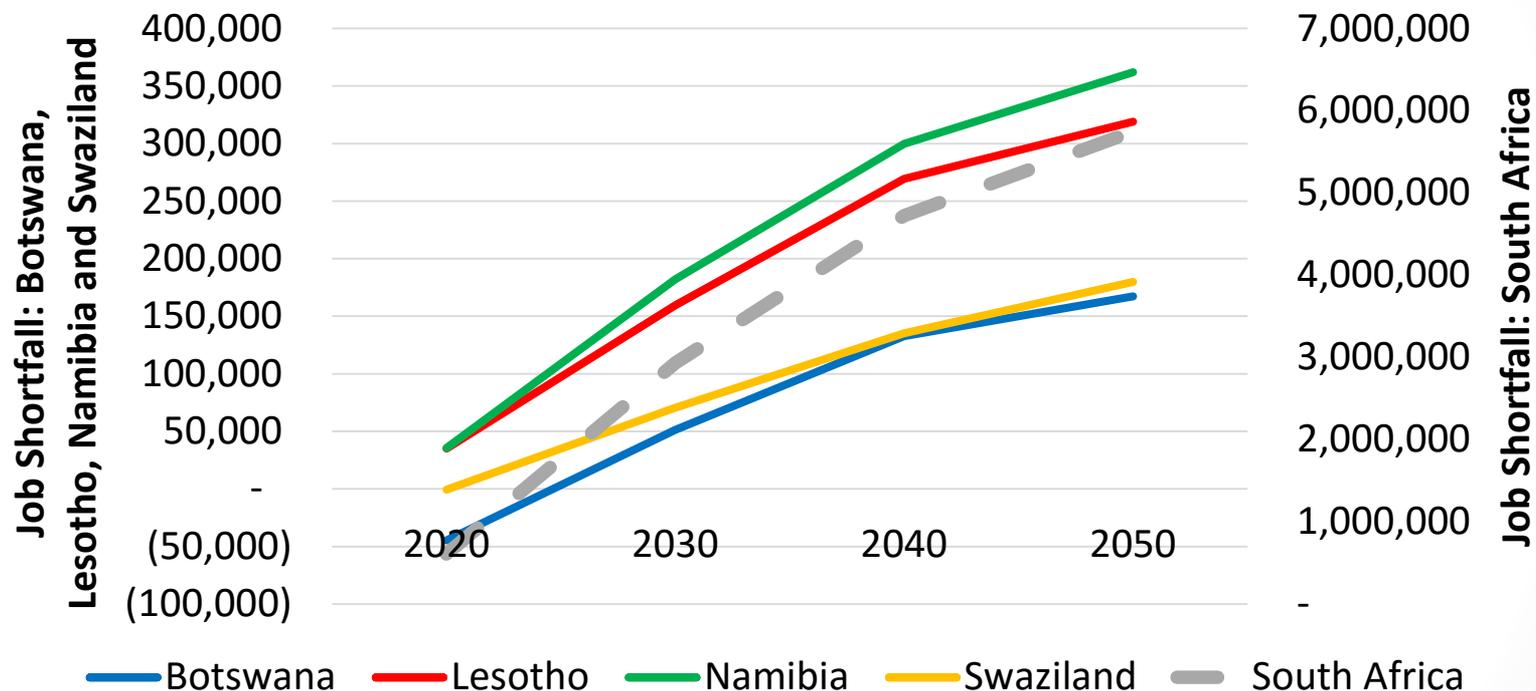
	1981	1990	2000	2010	2016
Agriculture	23.7	23.4	19.6	17.8	17.9
Industry	35.4	33.7	36.5	27.4	23.7
Manufacturing	15.0	13.5	11.3	10.3	10.5
Services	42.1	41.8	43.9	54.8	58.3

Source: World Bank Development Indicator

Demographic Explosion: Dividend or Disaster?

- By 2100 World's population projected to rise by 4 billion of which 3.2 billion in Africa
- Africa's working age population to rise by 2.1 billion or more than the global increase of 2 billion
- Africa likely to need to generate roughly 500 million jobs over the next 20-25 years to absorb the stock of un/under employed and the increase in the labor force
- Whether and how to make this a demographic dividend is of vital importance not just to Africa but the world
- Complicated not only by the relative decline of manufacturing but also its falling labor intensity

Projected Job Shortfall in selected countries



Note: Projected Job Shortfall (difference between the number of jobs needed to keep unemployment stable at today's levels and the projected number of jobs available if job creation continues at the same rate as seen in the recent past).

Source: The World Bank.

V. Key elements of a development strategy

- Manufacturing
- Natural resources
- Agriculture
- Service sector

Manufacturing

- Niche manufacturing/limited import substitution
 - Emerging markets can undertake research and become leaders in particular sectors—Brazil and China illustrate
 - “Shadow prices” may lead to some protection for jobs in the SR, some encouragement because of learning, and fix benefits in the medium to long run
- Pushing manufacturing further towards more complex products
- Strengthening links between “modernized” agriculture and manufacturing
- Further steps to maximize **learning** from industrialization by
 - South-South cooperation—expanding markets
 - Taking advantage of natural advantages—natural resources
 - Managed protectionism—helping “infant economies grow”
 - Import substitution unfairly got bad name
 - Balancing carefully costs against benefits, constant reassessment
 - Declining future potential role changed calculus
 - Trump has changed calculus
 - Internet has changed calculus
 - **The urgent need for jobs along the transition path has changed calculus**
 - Balanced education—not just emphasis on primary education
 - Advance complexity—not context with current comparative advantage

Natural resources

- Standard lessons of resource curse have not yet been learned by most countries
 - Need to maximize revenues from natural resources from well designed auctions and contracts
 - It may be necessary to auction off different parts of the production process, rather than to have a bid for a “manager”
 - Contracts need to be complemented by excess profit taxes
 - Countries need to be careful not to sign investment agreements that circumscribe ability to change taxes and regulations
 - Those that have signed such agreements should exit or renegotiate (e.g. South Africa)
 - Even with these agreements, it may be preferable to change contracts (e.g. Israel)
 - Sovereign wealth fund—both to manage cyclical variability and to prevent exchange rate appreciation
 - Manage exchange rate for competitiveness in other sectors
- New lesson: industrial policies can exploit a variety of forward, backward, and horizontal links
 - Possible losses in SR in return for long run learning
 - But careful appraisal of trade-offs required
 - Absence of current spillovers is not necessarily evidence that there aren’t potentially long run profitable linkages.

Agriculture

- Need robust agricultural sector to provide full employment, including by stimulating manufacturing and services
 - Seek to add learning dimension to agriculture and other sectors
 - Modern agriculture can be very “advanced”
 - Focus on non-labor saving innovations—better crop mix, better fertilizers
 - Focus on “learning” —developing skills useful in modern economy
 - Transforming farming from *traditional practices* to modern farming
 - To reduce need for foreign exchange—using it for areas where it cannot be replaced

Service sector

Move to service sector may have many implications

- Smaller production units
 - Part of explanation of seemingly **lower productivity growth** (Baumol's disease)
 - Some may be measurement problem
 - But not inevitable
 - Less R & D: more need for cooperative R & D, government R & D
 - Larger productivity differences across firms
 - Increased need for government to push “creating a learning society” to reduce productivity differences
- Many services can be more easily inserted into the global economy through internet
 - Especially if there can be quality certification, either through peer monitoring or certification services
 - Increasing need for skills training, including languages

Service sector—more market power, more inequality

- High levels of product differentiation, links to oligopoly manufacturing may lead to more market power
 - Profits from servicing Deere Tractors, not manufacturing them
 - Location matters more—natural product differentiation (monopolistic competition)
- Compensation more linked to individual productivity, greater differences in productivity within and between firms, leading to **greater inequality**

VI. Rethinking role of government

- **Need for government** in structural transformation, especially in developing countries
 - Important resource constraints—costly to move from “old economy” (jobs, sectors, technologies) to new; imperfections of capital markets become particularly evident in process of transformation (assets of those in “old economy” diminished, so they don’t have resources to make necessary investments or provide collateral)
 - Important learning externalities
 - Evident even in earlier Western transformation from agriculture to services
 - Even more in service sector economy—closing knowledge gap between small production units

Role of government in transition to service sector economy

- Government plays an important role in many key service sectors (though less than in some other regions)
 - Education
 - Health
 - Will need to expand that role
- Housing services
 - Process of urbanization will require large investments
 - With large job creation potential
 - Government will need to take a more active role
 - Including in planning “livable cities”—important part of well-being
- Agricultural Services
 - Input supply
 - Marketing
 - Extension
 - Finance

Taxes and money

- Should lead to greater need for progressive taxation (to provide for increased need for collective goods, including common research), but dispersed production may lead to decreased ability to collect taxation
- Modern technology allows creation of an economy based totally on e-money—currency is no longer needed
 - With e-money, income can be better traced and a progressive tax imposed
- In absence of e-money (current system), may need to impose progressive indirect system
 - Heavy tax on goods purchased by wealthy, like expensive cars, expensive foods, especially when imported, large homes
 - Can be made WTO compliant in most countries, since much of the *specific* goods purchased by wealthy are imported (tax on luxury biscuits vs. biscuits eaten by ordinary individuals) and *can be integrated into industrial policy (import substitution)*

Rethinking industrial policy

- Some service sectors are more amenable to learning
- Some learning in specific services has more spillovers to others
- General principles of industrial policies still apply (including for agriculture)
- Need to identify “learning” and “learning spillover” service sectors and agricultural activities
- These can have much of the benefits of the learning provided by manufacturing

VII. Concluding remarks:

Reformulating development thinking

- Success in development over past 60 years was greater than anyone anticipated—contrast Myrdal's predictions for Asia with what happened
- There is an enormous gap in knowledge, as well as in resources, that has to be closed
- Most of the advanced countries are engaged in service sector—80% or more
 - So if there are disparities in standards of living, it relates to productivity in these service sectors
 - There are huge disparities in productivities within countries, even greater between countries

Reformulating development thinking

- The basis of the success of growth over past half century was export-led growth
 - We have deconstructed what enabled manufacturing to provide this growth spurt, this structural transformation
 - It won't be able to do so in the future to anything like that extent
 - There has to be another strategy—that performs some of the essential roles that manufacturing export-led development did

Reformulating development thinking

- Successful development policy will need to be explicitly more multi-pronged, addressing separate “challenges” that manufacturing sector addressed simultaneously
- We have shown how a coordinated {Agriculture, Manufacturing, Mining, Service Sector} strategy has the prospect of attaining the same success of the old manufacturing export-led strategy
- Government will need to play an important role in the new structural transformation towards a modern economy—which will not in general be a manufacturing economy but a modern *services* economy and in Africa’s next phase of development modern agriculture will also be vital

Some references

African Center for Economic Transformation, *African Transformation Report 2017: Agriculture Powering Africa's Economic Transformation* Accra and Washington DC: ACET 2017 <www.acetforafrica.org>.

Delli Gatti, D., M. Gallegati, B. Greenwald, A. Russo, and J. E. Stiglitz, "Mobility Constraints, Productivity Trends, and Extended Crises," *Journal of Economic Behavior & Organization*, 83(3): 375– 393.

_____, "Sectoral Imbalances and Long Run Crises," in *The Global Macro Economy and Finance*, F. Allen, M. Aoki, J.-P. Fitoussi, N. Kiyotaki, R. Gordon, and J.E. Stiglitz, eds., IEA Conference Volume No. 150-III, Houndmills, UK and New York: Palgrave, pp. 61-97.

Greenwald, B. and J.E. Stiglitz, *Creating a Learning Society: A New Approach to Growth, Development, and Social Progress*, New York: Columbia University Press, 2014. Reader's Edition published 2015.

_____, "Helping Infant Economies Grow: Foundations of Trade Policies for Developing Countries," *American Economic Review: AEA Papers and Proceedings*, Vol. 96, No. 2, May 2006, pp. 141-146.

_____, "Learning and Industrial Policy: Implications for Africa," in *The Industrial Policy Revolution II: Africa in the 21st Century*, Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel (eds.), Houndmills, UK and New York: Palgrave Macmillan, pp. 25-49.

Noman, A. and J.E. Stiglitz, "Introduction and Overview: Economic Transformation and Learning, Industrial and Technology Policies in Africa" in *Industrial Policy and Economic Transformation in Africa*, Akbar Noman and Joseph E. Stiglitz (eds.), New York: Columbia University Press, 2015, pp. 1-29.