PROPOSAL FOR DISSERTATION

TOPIC- Structural Change and Productivity Growth in Developing Countries

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INTRODUCTION

One of the earliest and most central insights of the literature on economic development is that development entails structural change. The recent emergence of data on value-added and sectoral employment shares in developing countries has reignited the interest of researchers in economic growth induced by shifts in employment shares across sectors. Structural change is a shift or change in the primary ways a market or economy functions or operates. Such change can be caused by factors such as economic development, global shifts in capital and labor, changes in resource availability due to war or natural disaster or discovery or depletion of natural resources, or a change in the political system. The dual-economy model predicts that holding productivity constant, labor reallocation from less to more productive sectors, also known as "structural change" results in an improvement in economy-wide productivity. The countries that manage to pull out of poverty and get richer are those that are able to diversify away from agriculture and other traditional products. As labor and other resources move from agriculture into modern economic activities, overall productivity rises and incomes expand. The speed with which this structural transformation takes place is the key factor that differentiates successful countries from unsuccessful ones.

Large productivity gaps can exist even among firms and plants within the same industry. These gaps tend to be much larger in developing countries than in advanced economies, whether between plants or across sectors. They are indicative of the allocative inefficiencies that reduce overall labor productivity.

The upside of these allocative inefficiencies is that they can potentially be an important engine of growth. When labor and other resources move from less productive to more productive activities,

the economy grows even if there is no productivity growth within sectors. This kind of growth-enhancing structural change can be an important contributor to overall economic growth.

LITERATURE REVIEW

Recently, a small number of papers have examined the extent and impact of structural change in developing economies. For example, McMillan et al. (2014) studied the effects of structural change on overall productivity growth in a cocktail of low, middle, and high-income countries from Africa, Latin and North America, Europe, and Asia. They found a growth-reducing effect of structural change in both Africa and Latin America even though structural change seemed to affect Africa's growth positively after 2000. Their study, which covered the period 1990 to 2005, was limited by data unavailability for the pre-1990s and post 2000's.

De Vries et al. (2015) extend this dataset by studying the implications of structural transformation in Africa and its impact on productivity growth from 1960 to 2010 with a self-constructed dataset. They also found Africa's long-run development pattern to be comparable to that of Latin America but did not find the same growth-reducing effect as McMillan.

Isaksson (2010) concluded that whatever the objective of productivity measurement is, productivity increases are associated with higher output, all things equal. However, productivity levels are not homogenous across sectors within the same economy or even firms within the same sector. Out of this heterogeneity emerges one of the fundamental theories of growth; structural change- whose underlying assumption is that variations in intersectoral productivity levels create a signal that directs efficient resource allocation within the economy.

The foundation for this "structuralist" thinking was laid by Lewis (1954), who assumed a dual-economy model characterized by productivity differentials between the agricultural (traditional) sector and the manufacturing (modem) sector. Workers in the agricultural sector, which is characterized by surplus labor, earn the average value of labor since the "real" marginal product of labor in agriculture, MPL_a, approaches zero. Assuming wages in the manufacturing sector remain constant, the persistent low agricultural productivity, which determines the minimum wage, (w), will create a positive wage differential, ro which acts as an incentive in reallocating labor from agriculture to manufacturing.

Chenery (1960) argued that while growth in overall productivity is often accompanied by a rise in the share of the manufacturing output, this does not hold for all countries. He argues that growth patterns vary with countries as natural resource endowments that are key to the growth process are heterogeneous across countries. Thus, an economy with a comparative advantage in agricultural production could grow without increasing its share of manufacturing production by importing relatively cheaper manufactured goods to offset the shortage created by the smaller domestic supply capacity.

LITERATURE GAP

If one wants to capture structural change truly, one probably needs more extended time series. Structural change is a slow process that takes decades to show up in data. Most of the existing literature does not consider periods longer than ten years.

None of the papers focus on the determinants of the productivity growth owing to structural change.

RESEARCH QUESTION

In the case of developing countries, how does structural change affect productivity, and what factors underlie the magnitude of growth induced by structural change in these regions?

RESEARCH OBJECTIVE

This thesis aims to test the empirical predictions of the dual-economy model using sectoral-level data from twenty-seven developing countries in Sub-Saharan Africa, Asia, Latin America, the Middle East, and North African regions and to investigate the determinants of the contribution of structural change to the growth process at the country level. Moreover, to determine whether the structural change has been productivity-enhancing or productivity-diminishing.

DATA AND ANALYSIS

This paper uses only secondary data, and the two main sources of data are- the Groningen Growth and Development Center (GGDC) 10-sector database and the World Bank's WDI database. The sample consists of the following countries- China, India, Indonesia, Malaysia, Philippines, Thailand, Morocco, Egypt, Argentina, Bolivia, Brazil, Chile, Costa Rica, Mexico, Peru, Venezuela, Botswana, Ethiopia, Ghana, Kenya, Mauritius, Malawi, Nigeria, Senegal, Tanzania, South Africa, and Zambia.

The first period, from 1980 to 2000, is intended to capture the effects of several significant global events. First, for Latin America, this represents the Latin American debt crisis that led to the 1980s being dubbed as the region's lost decade. For Sub-Saharan Africa, this marked the beginning of major structural adjustment programs with neo-liberal market reforms targeted at

financial, capital, and labor market deregulation, removal of trade protection which affected firm performance, and labor reallocation. For the Asian sample, it was equally a period of major macroeconomic reforms. The Indian liberalization reforms of 1991 and the Chinese reforms of the 1980s are prominent examples.

The sustained growth that reforms brought about in Asia, post-2000, led to a surge in world commodity demand, pushing up commodity prices and helping many commodity-exporting economies of Latin America and Sub-Saharan Africa to accumulate much-needed foreign exchange to maintain macroeconomic stability and support their growth efforts. The post-2000 period was also associated with increased globalization which helped many firms in developing countries to learn best practices and new technologies needed to improve productivity. Thus, I choose 2001 to 2010 as my second period.

The analysis of data will be split into 2 parts. Part 1 will use value added and employment shares data from the GGDC database to compute the sectoral productivity and intersectoral productivity gaps using annual time series data on value-added and employment shares in each sector. The intersectoral productivity gaps will be computed by measuring the dispersion of sectoral productivity levels around the mean of overall productivity.

In Part 2, I will apply panel regression analysis to the data from the WDI database to estimate the determinants of the computed structural change component of productivity growth.

The dependent variable will be the structural change over five-year periods from 1980 to 2009. This will allow me to capture the dynamism involved in the process of structural change itself. The independent variables include a measure of labor market rigidity, the share of agriculture in employment at the beginning of each period, imports, exports, and the sum of both as shares of GDP, and domestic investment as a proxy for physical accumulation. The measure of

agricultural share in employment at the beginning of the period will be taken from the GGDC 10-sector database. Imports of goods and services will be taken from the WDI and it represents the dollar value of all goods such as merchandise, freight, insurance, and royalties. It also includes the value of services as communication, construction, financial, and government services. On the other hand, investment is proxied by data on gross fixed capital formation drawn from the WDI. It includes land improvements, plant, machinery, and equipment purchases, the construction of roads, railways, and public, private, commercial, and industrial buildings.

TENTATIVE TIMELINE

25th November	Submission of literature review
10th January	Interim presentation
30th January	Submission of Chapter I and II
15th February	Submission of Chapter III and IV
15th March	Submission of Chapter V
30th March	Submission of Final Dissertation

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