

W. Arthur Lewis VS the Lewis Model: Agricultural or Industrial Development?

By

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INTRODUCTION

W Arthur Lewis is best known through the Lewis Model, which Michael Todaro suggested was “formulated by W. Arthur Lewis in the mid-1950s and later modified, formalized, and extended by John Fei and Gustav Ranis (2000 p. 84)”.¹ Yet this Model fails to capture Lewis’s essential ideas. In particular the suggestion that “the heart of the development problem lies in the gradual shifting of the economy’s centre of gravity from the agricultural to the industrial sector through labor reallocation (Fei and Ranis, 1963 p. 283)” has left generations of scholars with the view that Lewis saw industrialization as the key to development and that he underplayed the role of agriculture. This is ironic; in as far as Lewis had a sectoral focus it related to the raising of agricultural productivity especially in the food producing sector. In adopting a neoclassical approach and recasting the Lewis Model in terms of the techno-economic issues relating to sectoral transformation, Lewis’s insights that are rooted in the classical tradition are lost, in particular the socio-economic issues associated with capital accumulation. In addition, in neglecting the lessons that Lewis draws from his (open) world economy model the fundamental role that agriculture plays in Lewis’s thinking is overlooked. All of this is evident from a close reading of Lewis’s (1954) article, which is central to the Lewis Model, but it becomes even clearer when reading Lewis’s later writings on the topic including his reflections on his work as a development economist (1958, 1972, 1979, 1980, 1984, 1986, 1988).

Coming to terms with Lewis and Lewis Model is of interest for two reasons. The first relates to Lewis himself as a key development thinker. The second is of wider interest to the history of economics, as Lewis would not be the first thinker who has been celebrated in the literature but not in a manner that has allowed later scholars to understand his true perspective. In 1979 Lewis shared the tenth Nobel Prize in Economics with Theodore Schultz. In winning this

accolade Lewis did so from outside the mainstream making the award that more noteworthy. An indication of the persistence of interest in his work is the World Bank *World Development Report 1999/2000*, which in reflecting on the key lessons that have emerged from “fifty years of development experience” singles out Lewis. In its introduction it is “Lewis’s classic 1955 study *The Theory of Economic Growth*” that is seen as long recognizing “the complexity of the development process” (IBRD, 2000 pp. 1, 15). No other author is cited in this way.

In contrasting Lewis and the Lewis Model I pursue a path similar to that adopted by other critics of those who have sought to come to terms with initial contribution of original thinkers. In particular we can make reference Axel Leijonhufvud’s *Keynesian Economics and the Economics of Keynes* (1968). In an introductory chapter Leijonhufvud poses many issues relevant to this study. “It is the nature of all major theoretical innovations that the vision of the innovator and his audience are at variance. A flawed model is therefore likely to be ‘corrected’ so as to correspond to the interpreter’s view of the world rather than the originator’s (1968 p. 11)”.

While I am suggesting that Lewis has been inadequately treated in the Lewis Model it is important to note that both within the Caribbean where Lewis was born and the wider world there has always been a smaller group that has been conscious that there was more to Lewis than a programme for industrialization. A discussion of the Caribbean literature is presented in (Figueroa, 1993 Ch 2). For the wider literature we can refer to authors such as Philip Leeson (1979), Ronald Findlay (1980, 1989), Jon Wisman (1986), Barbara Ingham (1991) and Gerard Meier (various editions). In what follows I start by considering what Lewis sought to do in his (1954) article. I then outline the lessons to be derived from his national and world economy models and contrast the Lewis Model with Lewis with a view to providing some explanation

for their divergence. I then summarize Lewis's views on industrialization and conclude.

Throughout I seek to highlight the fact that industrialization was not Lewis's primary focus and that he did pay particular attention to agriculture.

LEWIS'S MODEL

In discussing Lewis's (1954) article it is convenient at different times to make reference to one overarching model, two main model types, or a series of models with one central assumption and others that vary with each application. The two main model types are differentiated in that one relates to a national economy while the others relate to the world economy. Both help Lewis to understand a significant problem in history and allow him to draw lessons for developing economies in the second half of the twentieth century. It is the national economy model that leads to the Lewis Model but it was the problem that relates to the world economy and hence to the issue of why some nations became rich while others remained poorer that was more fundamental to Lewis's life work and on which he spent his mature academic years (1978a, 1978b). "A number of developing economies had been developing for a long time: Ceylon (Sri Lanka), for example, for a hundred years. Why was the standard of the living of the masses so low? One could understand the much-exploited South Africa, but how for fairly enlightened Ceylon? (1986 p. 14),"

Lewis's approach was primarily exploratory and analytical rather than predictive or prescriptive. If Lewis is taken at his word, in (1954), his aim was to "understand, not to prescribe (1984 p. 134)". Lewis states that he was "walking down a road in Bangkok one morning in August 1952" when it occurred to him that by dropping "the assumption usually ... made by neoclassical macroeconomists - that the supply of labour was fixed" he could solve two problems that had troubled him. First, "What determines the relative prices of steel and coffee?" and second, what

explained the rising share of profits in nineteenth century Britain, while “real wages ... remained more or less constant” for the first 50 years of the industrial revolution. “An ‘unlimited supply of labour’ will keep wages down, producing cheap coffee in the first case and high profits in the second case. The result is a dual (national or world) economy, where one part is a reservoir of cheap labour for the other [Lewis’s parentheses]” (1980 pp. 3, 4). For the closed national economy model Lewis’s “chief historical example” was Britain prior to 1870 when “countries had virtually to be self-sufficient in basic necessities” (1972 pp. 75, 91). For the open models his inspiration was Britain’s interaction with the rest of the world post 1870 after which “the terms of trade are determined by international rather than national forces (1972 p. 91)”.

The problem of accumulation in the national economy model was of historical interest to Lewis but it was also an important contemporary development issue. In his reflections for the World Bank (1984) Lewis reports on the conclusions he comes to on the issue of financing development and how this relates to his model. “The bulk of the finance ... has to come from increases in private domestic saving. The problem was to elucidate how this comes about”. True to his historical approach he asks, “How had it come about in the nineteenth century? His answer is that, “For Europe it was from a rising share of profits in the national income” (1984 p. 132). By his own report it was his failure to find any theoretical solution from contemporary neoclassical or Keynesian economics that led him “to see what can be made of the classical framework in solving problems of distribution, accumulation and growth ... to see how far it ... helps us to understand ... contemporary problems (1954 p. 140)”. His main concern in the national economy model was therefore not industrialization. “The central problem in the theory of economic development is to understand the process by which a community which was previously saving and investing 4 or 5 per cent. of its national income or less, converts itself into an economy where voluntary saving is running at about 12 to 15 per cent. of national income or more (1954 p. 155)”. In discussing these

issues, Lewis demonstrates that his concerns go beyond the techno-economic neo-classical analysis to encompass the socio-economic concerns of the classicals. “If we ask ‘why do they [backward countries] save so little’, the ... answer is not ‘because they are so poor’.... The answer is ‘because their capitalist sector is so small’ (remembering that ‘capitalist’ here ... would equally apply to state capitalist) [Lewis’s parentheses]”. As such it is necessary to note that, “Behind this analysis lies the sociological problem of the emergence of a capitalist class, that is to say of a group of men who think in terms of investing capital productively.... Most countries seem to begin by importing their capitalists ... and in these days ... many are growing a class of state capitalists” (1954 pp. 159-60).

Lewis felt that various reformulations derived from his model could be useful including those produced by Ranis and Fei but he made it clear that his specification was central to his particular analysis.

The division of the economy into two sectors had to turn on profits. The two sectors are a capitalist and a non-capitalist sector, where a “capitalist” is defined in the classical sense as a man who hires labor and resells its output for profit.... This distinction was vital for my purpose. Other writers, with different purposes, have made different divisions. A now popular division is between industry and agriculture, but capitalist production cannot be identified with manufacturing.... The model is intended to work equally well whether the capitalists are agriculturalists or industrialists ... indeed in its first version ... the model presupposes that the capitalist sector is self-sufficient and contains every kind of economic activity. This explanation may serve to refute the charge that the model identifies economic growth with industrialization.

In the model, the noncapitalist sector serves for a time as a reservoir from which the capitalist sector draws labor. The original paper makes it clear that this labor does not all come from agriculture--a fact which has escaped the attention of many subsequent writers (1972 p. 76).

In presenting the (open) world economy model Lewis shifts his historical focus from the accumulation process in Britain up to 1870 to the nature of the global economy in the latter part of the nineteenth century when the effects of the new transportation technologies had transformed the possibilities for world trade. Lewis's perspective on the development of the world economy is set out succinctly in *The Evolution of the International Economic Order*.

As the industrial revolution developed in the leading countries in the first half of the nineteenth century it challenged the rest of the world in two ways. One challenge was to imitate. The other challenge was to trade ... the challenge to imitate ... was immediate.... a number of countries reacted immediately. Most countries ... did not.... This was the point at which the world began to divide (1978a pp. 7, 11).

As the world divided the gap between the levels of living in the temperate and the tropical world began to widen. Lewis seeks to understand why. Since the tropical world had in the main followed the option of trading rather than imitating the contemporary problem that Lewis wished to solve, related to the differential he noted in the relative prices of temperate and tropical products. As such the concern of the world economy model is with the factorial terms of trade consequent on the relative productivities of the domestic food producing sectors of the temperate and tropical worlds. This model is therefore even more remote from industrialization.

In both the national economy and the world economy models Lewis is looking at the case of what he described as overpopulated countries or in the latter case countries that produce products for

which there is an unlimited supply of labour available from overpopulated countries (mainly India and China). In the national economy model he is concerned to see how surplus labour might allow a particular country to develop rapidly. In the world economy model he seeks to show how the persistence of surplus labour on a world scale can limit the possibilities for development in a particular country. It is to the details of the lessons to be derived from this model that I now turn.

LESSONS FROM THE WORLD ECONOMY MODEL

The main conclusions of Lewis' static dual model of the world economy can be found in the (1954) article but this model only occupies a few pages at the end of the article and is largely presented in passing. In later works, especially (1978a, 1978b), Lewis provides a much clearer elaboration, drawing on history to make a stronger connection between the static model and the dynamic processes that he identifies in world history. In keeping with the thrust of the (1954) article he starts his discussion on the open economy with an assessment of what happens to the labour short country that exports capital. (Thus his initial discussions of the open economy are still within the framework of the national model.) It is in the analysis of the two sides of this relationship of capital exporting and importing and mutual trade between a labour scarce and a labour surplus economy that the world economy model emerges. He sets up a simple, Ricardian type, two country model in which each country produces one traded good which is not produced in the other country along with a common non traded good (food for domestic consumption). He concludes that, "workers in B [the labour surplus capital importer] are benefited only if productivity increases in their subsistence sector: all other increases in productivity are lost in the terms of trade". This he suggests provides "the key to the question why tropical produce is so cheap". To illustrate this he examines the case of sugar as an internationally traded commercially crop. So as to forestall any objections with respect to the relative physical productivity of sugar vis a vis other crops, he points to the enormous increases in physical productivity that have taken place in the tropical sugar

industry when compared with other crops, for example, wheat. “Nevertheless workers in the sugar industry continue to walk barefooted and live in shacks, while workers in wheat enjoy among the highest living standards in the world” (1954 pp. 182-3). The problem, as he discusses more clearly in later work is to be found in the low productivity of subsistence food production which lies at the base of the adverse terms of trade faced by tropical products (1987a pp. 15-20).

The contribution of the temperate world to the tropical world, whether in capital or in knowledge, has in the main been confined to the commercial crops for export, where the benefit mainly accrues to the temperate world in lower prices. The prices of tropical commercial crops will always permit only subsistence wages until, for a change, capital and knowledge are put at the disposal of the subsistence producers to increase the productivity of tropical food production for home consumption (1954 p, 183).

To raise the price of sugar you must increase the productivity of the tropical subsistence food economies.... The analysis applies to all tropical products of which an unlimited supply can be produced because unlimited natural resources exist, in relation to demand-e.g., land of suitable quality (1954 p, 183).

The main reason why tropical commercial produce is so cheap, in terms of the standard of living it affords, is the inefficiency of tropical food production per man. Practically all the benefit of increasing efficiency in export industries goes to the foreign consumer; whereas raising the efficiency in subsistence food production would automatically make commercial produced dearer (1954 p. 191).

The main lesson to be derived for the tropics from Lewis's world economy model is that increasing agricultural productivity as it relates to local food production is the key to economic development.² This perspective is clearly articulated in the (1954) article yet those who formalized and popularized the Lewis Model did so in a way that allowed many of their readers to miss this central element of his perspective.

LESSONS FROM THE NATIONAL ECONOMY MODEL

The Lewis Model was derived from the (closed) national economy model. We must therefore ask whether the lessons, which Lewis draws from it differ significantly from those derived from the world economy model or whether we should come to similar conclusions with respect to Lewis's core ideas and the attention he gives to industrialization. I identify four main lessons from the (closed) national economy model. 1] Overpopulation which at first appears to be a disadvantage can become an advantage in the process of development if it is possible to dynamize the capitalist sector however small it might initially be. "If unlimited labour is available at a constant real wage, the capitalist surplus will rise continuously, and annual investment will be a rising proportion of the national income (Lewis, 1954 p. 171)". 2] The rate of savings and investment must reach a critical level if development is to become self sustaining. As noted above Lewis was of the view that savings and investment would only reach the critical target of "12 to 15 per cent." if a capitalist/state capitalist class developed with a strong motivation towards accumulation. 3] Accumulation can proceed rapidly so long as wages are maintained at a low level but there are many forces that are unleashed by the transformation process, which can threaten its continuation. "The process [of rapid investment expansion] must stop when capital accumulation has caught up with population, so that there is not longer surplus labour. But it may stop before.... although there is surplus labour, real wages may ... rise so high as to reduce capitalist's profits to the level at which ... there is no net investment (Lewis,

1954 p. 172)”. Various factors could lead to this situation two of which were excessive trade union pressure and rising output per person in the subsistence sector. 4] If the process is to continue unhindered then action has to be taken to limit the countervailing tendencies.

It is in his discussion of the countervailing tendency inherent in rising agricultural productivity that we gain an insight into Lewis’s view of the relationship between industry and agriculture as well as the conditions that he would have considered ideal for development. A rise in productivity in the subsistence sector could tend to push up wages in the capitalist sector but this would only happen if the subsistence producers were allowed to keep the benefit of the increased production. In the real world Lewis would not have wished to either restrain the development of agricultural productivity or halt the process of accumulation. He presents two examples to show how both could be avoided. In Japan rents were raised “to prevent the farmer from getting all his extra production”. In the USSR “farm incomes per head were held down ... by raising the prices of manufactures relative to farm products, and levying heavy taxes upon the collective farms”. (1954 p. 174) Lewis’s discussion of rising agricultural productivity brings him back to one of his basic maxims. “It is not profitable to produce a growing volume of manufactures unless agricultural production is growing simultaneously. This is also why industrial and agrarian revolutions always go together, and why economies in which agriculture is stagnant do not show industrial development (1954 p. 173)”.

The former case is the best of both worlds. The process of accumulation that is initially dynamized by an expanding capitalist sector would increasingly be propelled forward by two sources of capital formation: agriculture and industry. Overpopulated countries lacked a productive agriculture and could thus not generate the surplus to follow the classic British path of an initial agricultural revolution followed by a later industrial revolution. But once the

initial process of accumulation is achieved in the capitalist sector it then becomes possible to raise agricultural surplus and simultaneously initiate an agricultural and industrial revolution which then support each other. The lesson of the model was not that overpopulated underdeveloped countries needed to industrialize. It was that a process of accumulation could start with capitalist enterprise, be it in the agricultural, mining, manufacturing, tourist or other service sector. Once initiated the productivity of the entire economy and notably the agricultural sector could be transformed leading to self sustaining development.

THE LEWIS MODEL VS LEWIS

The first problem with the Lewis Model is that the the dual economy has generally been portrayed in terms of industry and agriculture. This has left the impression that Lewis's primary concern was with the question of industrialization. Initially Ranis and Fei suggest that this usage is a mere convenience but later it becomes central to their model. They first present their model in terms of "the expansion of the capitalist or industrial sector as it is nourished by supplies of cheap labor from the subsistence sector (Ranis and Fei, 1961 pp. 534-5)," to which statement they append a footnote "to underscore the absence of any one-to-one relationship between the subsistence sector and agriculture, or between the capitalist sector and industry.... [This absence] does not, however, bar Lewis, or us, from using this shorthand terminology (Ranis and Fei, 1961 p. 535)". But what they describe as shorthand terminology becomes the essence of their model as it was seen by others and as it is appears in their later expositions.³ "The distinctive feature of the labor surplus ... economy is the predominance of an agricultural sector ... side-by-side with a small ... industrial sector (Fei and Ranis, 1964 p. 7).⁴ There is nothing fundamentally wrong with using this formulation, and Fei and Ranis produce a lot of interesting work based on the model they developed. The problem is that in as far as this formulation came to be known as the Lewis Model many of Lewis's own insights were missed. This did not go

completely un-noticed in the development economics literature. “Although Lewis's two-sector model did not so intend it, the capitalist sector in his model has, in practice, been identified with industry or the urban sector, while the non-capitalist sector has been identified with agriculture or the rural sector (Meier, 1976 p. 170),”

Lewis is correct in asserting that the dualism that he creates is vital to his model and that it is not possible to equate manufacturing with the capitalist sector. At the same time Lewis presentation in (1954) was incomplete and at times ambiguous or unclear. Partially in response to this Ranis and Fei seek “to construct a theory of economic growth which ... is rigorously formulated (1961 p. 534). But it must be recognized that the work they presented was not only different from Lewis’s in its precision it was also different in its foundation. A careful reading of the introduction to Ranis and Fei’s first article would suggest why this is so (1961 p. 533). It is not Lewis’s story to which they refer as their starting point but W. W. Rostow’s. Rostow’s article which they cite actually provides a better match as it seeks “to clarify the economics of the industrial revolution (1956 pp. 25-32)”. It is for their “analytic tool kit” not the basic character of the model that they “draw heavily on the work of ... Lewis” (Ranis and Fei, 1961 p.533).

This may also provide a reason why the (open) world economy model was relatively neglected. The diagrammatic techniques that Lewis used in the exposition of his (closed) national economy model were more trendy among the neo-classical and perhaps offered more scope for elaboration as Fei and Ranis have shown (1964). By failing to take full note of the importance of agriculture in the world economy model Ranis and Fei tend to leave the impression that Lewis neglected this sector. In fact they go as far as to suggest that Lewis “failed to present a satisfactory analysis of the subsistence agricultural sector” given that this “sector ... must grow if the mechanism he [Lewis] describes is not to grind to a halt (1961 p. 534)”. This criticism would be more appropriate if Lewis

was in fact building a neoclassical model of sectoral transformation but as I have demonstrated above Lewis was aware of the relevant issues. Any neglect on his part relate in large part to the nature of the task he set himself. His was an analytical model which could help to demonstrate the possibility for transforming the overpopulated tropical economies' which had a predominant subsistence and small capitalist sectors; the role that accumulation has to play and the social/institutional changes necessary to bring this about. In the hands of Fei and Ranis this becomes a prescriptive model rooted in the techno-economic issues of sectoral transformation. As we will see below they left their readers with no inkling with respect to two of Lewis's key ideas. The first was the central role he ascribed to raising agricultural productivity and the second was the distinctive path he proposed for industrialization in underpopulated as against overpopulated countries.

LEWIS AND INDUSTRIALIZATION

One of the many dichotomies Lewis established was that between countries which were overpopulated and those which were not. The Caribbean from which Lewis came fell for the most part into the former. We do not have to look far beyond Lewis's first available writings on this region (1935, 1936) to find statements on industrialization that begin to demonstrate a vision that went far beyond official policy perspectives and the points of view of many of his academic colleagues. "If the West Indies is not to become poorer and poorer with its steadily increasing population, it will have to follow in the foot steps of other agricultural countries and begin to develop manufacturing industries (IASB, 1938? p. 24),"⁵ This was an extremely forward looking statement coming five years before Paul Rosenstein-Rodan (with whom Lewis had much in common) published his well know article on the "Problems of Industrialization of Eastern and South-Eastern Europe (1943)". Indeed, Lewis identifies

possibilities for the tropical world which his more orthodox contemporaries did not recognize as being suitable for vast areas of Europe including Romania, Bulgaria and Greece (LCES, 1939).

Prior to the publication of his (1954) article Lewis had an opportunity to present presented his views on industrialization in Aspects of Industrialization prepared for the National Bank of Egypt (1953a p. 9). In the early 1950s he also had the opportunity to write reports assessing the prospects for industrialization in the two types of cases he identified: the overpopulated British West Indies and Ghana (The Gold Coast), which was not overpopulated. In the latter case Lewis conceded that “measures to increase the manufacture of commodities for the home market deserve some support”, but he stressed that they “are not the number one priority”, which was “a concerted attack on the system of growing food ... so as to set in motion an ever increasing productivity. This is the way to provide the market, the capital and the labour for industrialization”. (1953b, p. 22) For the British West Indies, “the case for rapid industrialization ... rests chiefly on overpopulation (1950 p. 1)”.

Agriculture ... will yield a decent standard of living only if the numbers engaged ... are drastically reduced, and this will be possible only if new employments are created outside of agriculture.... If agriculture is to give a higher standard of living, then industry must be developed. But equally, if industry is to be developed, then agriculture must give a higher standard of living, in order to provide a demand for manufactures. The agricultural and the industrial revolutions thus reinforce each other, and neither can go very far unless the other is occurring at the same time. Those who speak as if the

choice in the West Indies lay between agricultural ... and industrial development have failed completely to understand the problem (1950 p. 16).

Lewis expected that as a country developed it would become more industrialized even if it had been a very successful agricultural exporter. Yet this did not mean that development policy should focus on industrialization. Lewis calls on the examples of Australia, Denmark and New Zealand to make the point that “it is possible to grow rich by exporting agricultural products (1976 p. 143)”. The classical path to industrialization was the British road. Given its land and labour endowments he recommended that Ghana seek to follow this path. In the case of the British West Indies the agricultural and industrial revolutions would have to take place simultaneously. The development of agricultural productivity was in both cases the strategic goal but in the later case industrialization became a crucial tactical imperative. Given this profile it is a curiosity that Lewis came to be known best in terms of a Lewis model that has been embraced as a manifesto for industrialization. Lewis was a strong advocate of industrialization in specific circumstances, often against strong opposition or incomprehension but ultimately the future of the tropical world depended on raising agricultural productivity. “The most important item on the agenda of development is to transform the food sector, create agricultural surpluses to feed the urban population, and thereby create the domestic basis for industry and modern services. If we can make this domestic change, we shall automatically have a new international economic order (1978a p. 75),”⁶

By itself industrialization was never enough to eliminate poverty and secure development. Industrialization had to be part of a process that involved the fundamental transformation of the subsistence sector. Lewis was quite excited by the fact that tropical economies were able to not only produce but also export manufactures to the developed world. “This was like the

breaking of a spell. For over a century tropical peoples had been told that manufacturing industry was unsuitable for their countries, and that their comparative advantage lay in exporting agricultural commodities.” But while the export of manufactures was the only basis on which “fast industrialization could ... be sustained” (1984 p. 129). It was not enough.

So long as the bulk of tropical peoples are food farmers with relatively low productivity, tropical products are available to the rest of the world on an essentially low-wage basis.... we must recognize that the opening up of the markets of the industrial countries to imports of light manufactures from the tropics is essentially of the same kind; it is an additional opportunity to sell low-wage labour (1978b p. 244).

From the standpoint of the less developed countries this option begins as another kind of dependency, adding low-wage exports of manufactures to low-wage exports of primary products (1976 p. 155).

Countries were not poor because they were agricultural but because the average number of persons a typical farm worker could feed was low when compared with richer nations. The contact between the developed and the underdeveloped world had not had a major impact on the poverty of the tropical world because productivity had not been raised in the subsistence sectors. Trade did not bring about a transformation because there was an unlimited supply of labour available for the production of tropical products. In this regard Lewis notes the impact on the world economy that resulted when “in the second half of the nineteenth century ... fifty million people ... left India and China to work ... in the tropics”, which helped to “set the terms of trade for tropical ... agricultural commodities” (1978a p. 14). If the tropical world simply shifted from agricultural exports to manufacturing exports the impact would be very limited.

Only a simultaneous change within the local food-producing sector would make the difference. What Lewis says in relation to foreign investment in the commercial sector goes for local or foreign investment in the manufacturing sector.

This is not to say that the tropical countries gain *nothing* from having foreign capital invested in commercial production for export. They gain an additional source of employment, and taxation. The accumulation of fixed capital in their midst also brings nearer the day when the demand for labour will catch up with the supply (though even this will not raise wages in any one tropical country until they start to rise in all) (1954 p. 184) [Lewis's emphasis and parentheses].

As Findlay in his (Nobel prize tribute) article correctly concludes, “The development of labour-intensive manufactured exports is ... not regarded by Lewis as an appropriate strategy for LDCs in the long run, since he considers it to be a perpetuation of comparative advantage based on low-wage labour, reflecting low productivity in the subsistence sector (Findlay 1980 p. 72),” The advantage that the export of manufactured goods brings is that it serves as a vent for surplus labour in the subsistence sector. But until the supply price of labour begins to rise based on increased productivity in the subsistence sector capital will always be able to find cheap labour to drive down the price of goods exported from the tropical world.

Development, which is dependent on industrialization, cannot advance beyond a certain point unless agriculture makes progress. In the case of large economies that are less dependent on trade industry cannot get far unless it can accumulate capital based on a rising agricultural surplus and draw on an increasing labour force emerging from an increasingly productive agriculture. Lewis’s view was unequivocal; even where industry was vital for development its progress was ultimately dependent on the transformation of the subsistence sector.

CONCLUSION

From quite early in his career Lewis was a very strong advocate of industrialization. He was a pioneer in this field; in as far as he recognized that the industrialization would eventually have to spread to areas of the globe that neither his academic colleagues nor their counterparts in the colonial bureaucracies had considered in their wildest dreams. But the appending of Lewis's name to a model where "the underdeveloped economy consists of two sectors: a traditional, overpopulated rural subsistence sector ... and a high-productivity modern urban industrial"; and where "The primary focus of the model is on both the process of labor transfer and the growth of output and employment in the modern sector" (Todaro 2000 p.84) has done little to help readers understand how he perceived development. In fact, the Lewis Model as it was formalized by Fei and Ranis and popularised by other authors has left many generations of scholars with the view that Lewis saw industrialization as the essence of development.⁷

This perspective is not supported by a careful reading of the (1954) article and it has little to do with Lewis's worldview. For Lewis the ability of Britain, and every nation that has followed it, to have an industrial revolution has been dependent on a related agricultural revolution. For labour scarce tropical countries Lewis advocated a path of development that more closely matched the classic British road. The focus of development policy was to be on raising the agricultural surplus. For overpopulated tropical countries he advocated a programme of industrialization that would simultaneously transform the subsistence sector. In as far as Lewis has been confined within the Lewis Model many of his insights have been missed. This is not a problem unique to Lewis. It is ironic that in popularising aspects of the work of original thinkers one runs the risk of condemning their other ideas to greater obscurity. In the case of Lewis fifty years have passed since the publication of his pioneering article (1954). It is perhaps time that the full range of his contribution now be reassessed.

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NOTES

¹ The definitive contributions of these authors were published in two articles and a book (Ranis and Fei, 1961, Fei and Ranis 1963, 1964).

² There are other lessons which Lewis draws including the importance of the difference between real and money cost and the differences that arise in the application of the doctrine of comparative costs to labour short and labour surplus economies. Given my focus I am not seeking to deal with all the insights that Lewis presents.

³ For example, in an early comment on their model Harry Oshima suggests that “In their ... model, the migration of the workers from agriculture to industry is the central process around which the theory is constructed (1963 p. 448)”. They do not contest this specification in their reply (Ranis and Fei, 1963).

⁴ At a later date, Ranis and Fei seem to be aware of some difficulties involved in interpreting the dual model in this fashion. “Lewis's organizational dualism as between a traditional and a capitalistic sector may or may not completely map into the notion of agricultural and non-agricultural sectors (1982 p. 36)”.

⁵ This undated, unattributed pamphlet was written by Lewis for the International African Service Bureau, which was a pan-Africanist organization led by the Trinidadian George Padmore (interview Mark Figueroa Arthur Lewis May 25, 1989).

⁶ Lewis's interest in agriculture can be seen from his earliest works (1935, 1936). This interest remains strong throughout the years leading up to the development of his model (1949, 1951a, 1951b, 1954a)

⁷ To be fair to Fei and Ranis, we should note that when they formalized their model they did not name it the Lewis Model and their work is far more complex than what is usually presented to students as the Lewis Model.