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Agriculture, Development and Urban Bias

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SUMMARY

Throughout history, agriculture-led development strategies with state support programs have been essential to achieving rapid economy-wide growth, poverty reduction and structural transformation. Yet over the last three decades, the domestic and international policy environments have continued to discriminate against agricultural development in the poorest countries. This paper studies the causes and manifestations of this 'urban bias', including discrimination in domestic pricing policies and in the international trade regime, decreasing financial support from LDC governments and aid donors, and increasing neglect of agriculture in development theory and economic research. The authors conclude that urban bias remains a persistent and paramount obstacle to sustained growth and poverty reduction in the least developed countries.

KEYWORDS: agricultural development, urban bias, agricultural policies, foreign aid.

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1. INTRODUCTION

A large literature shows that investments made by developing countries in agriculture – but also in rural infrastructure, health and education - are both pro-growth and pro-poor. Yet over the last three decades there has been an inefficient and systemic bias against agriculture and the rural economy in the allocation of developmental resources. The bias is inefficient because no currently advanced country of some size became advanced without the agriculture sector first achieving substantial productivity gains in the early stages of development. The bias is systemic because it has fundamental institutional causes grounded in the political economies of both the developing and developed countries, and in the development profession itself. In this paper we argue that, because the bias has systemic institutional causes, it may rightly be labelled the contemporary manifestation of ‘urban bias’.¹ We document its existence, explore its causes, and urge its correction.

Economists have long been aware of urban biases. Biases against rural development were part of the ‘backwash’ effects identified in the 1950s by Myrdal (1958). In the 1970s, World Bank President Robert McNamara (1973) made special note of the insufficient resource allocation to agriculture on several occasions. Lipton (1977) popularized the term ‘urban bias’ and elevated the problem to a position of primary importance. Bates (1981) provided a detailed analysis of discrimination against African agriculture. Other classic works focus on trade-based discrimination against agriculture (Little, *et al.*, 1970; Krueger, *et al.*, 1991). Binswanger and Deininger (1997) provided an authoritative exploration of the domestic political economy determinants of the bias against agriculture. And more recent works also note urban biases in contemporary development policy (Rola-Rubzen, *et al.*, 2001; The World Bank, 2003; Byerlee, *et al.*, 2005).

The objectives of this paper cut across all these strands of the development literature insofar as we aim to: (a) review and summarize available evidence on the impact of agricultural growth on economic development and poverty reduction; (b) demonstrate that despite agriculture’s importance, it has been persistently neglected in recent decades (in some dimensions increasingly neglected) by both donors and developing country governments; and (c) identify some of the reasons for the persistence of urban bias.

A broad summary of our findings is presented in Table 1, which demonstrates the numerous dimensions of urban bias. Within the least developed countries (LDCs) themselves, market failures and adverse colonial inheritances pose structural obstacles to

market-led agricultural development. These structural disadvantages have typically been compounded by systemic political economy forces in the LDCs, which bias policies against smallholders in particular. Urban biases originating within LDCs are compounded by protectionism in the international trade regime resulting from an ironic ‘rural bias’ in the political economy of OECD countries. And despite a mass of evidence indicating the importance of agricultural development, foreign aid agencies have sharply decreased agricultural aid levels as well as research efforts towards agriculture. We also conclude that urban biases are closely linked to development theory itself, especially with regard to the role of the state and the manner in which industrialization is best achieved.

The pervasiveness of urban bias, its costs, and its stubborn institutional and ideological roots, lead us to suggest that Lipton’s (1977) strong conclusion is still valid today: urban biases are the largest institutional impediment to growth and poverty reduction in the world’s poorest countries. Yet thirty years on from Lipton’s original conclusion, the importance of urban bias is still insufficiently recognized in development theory and practice today.

<insert Table 1>

2. THE ROLE OF AGRICULTURE IN DEVELOPMENT

Substantial government involvement in agriculture seems to be a necessary precursor to both agricultural development and overall economic progress. Therefore any policy which discriminates against LDC agriculture is likely to hinder economic growth and poverty reduction. A truly substantial body of work from economic theory, economic history and contemporary empirical analysis strongly supports these claims.

In terms of theory, Lewis (1954), Johnston and Mellor (1961) and the literature following these frameworks, argue that agriculture is a relatively labour intensive source of employment, thereby economizing on scarce capital and imports. It aids growth by providing cheap food, raw materials, labour, savings, and demand for non-agricultural goods.² More widely, agricultural growth is also a key determinant of food stability and nutrition, poverty reduction, and political stability.

In terms of economic history, in the 19th Century the strong agricultural performers among the now advanced, Western countries subsequently developed most rapidly (Adelman and Morris, 1988).³ Many authors also argue that a Green Revolution occurred before or contemporaneously to the Industrial Revolution in Europe, its offshoots, and

Japan (Rostow, 1960; Ohkawa & Rosovsky, 1964; Bairoch, 1973; Lipton, 1977; Crafts, 1985; Allen, 1994; Overton, 1996). Also the more recent experiences of Taiwan and South Korea highlight the importance of pre-war agricultural growth to their post-war industrialization (Wade, 1990; Kang & Ramachandran, 1999). And evidence on a broader subset of LDCs suggests that agricultural transformation was pivotally important at early stages of development, both in the manner predicted by Lewis (1954) and in terms of breaking down the social barriers to growth in traditional rural societies (Adelman and Morris, 1967).

In terms of contemporary empirical analysis, modern econometric and simulation techniques have been used to gauge the ‘multiplier’ effects of a sector’s growth rate on other sector’s growth rates, or each sector’s contribution to aggregate growth. These studies can be broadly divided into cross-country studies (which present either aggregate or continent-specific results), and country studies. In a very extensive literature review we found that *all* cross-country studies which attempt to gauge the sectoral sources of aggregate growth in LDCs find that agricultural gains have the strongest linkages of all sectors to growth in other sectors and to aggregate growth. Because of important externalities (discussed below), agriculture’s contribution to growth is significantly larger than its output share would suggest (Gollin, *et al.*, 2002; Timmer, 2002; Bravo-Ortega & Lederman, 2005; Tiffin & Irz, 2005; Diao, *et al.*, 2006).⁴ Case studies demonstrate that the magnitude and the transmission channels of agriculture’s multiplier effects vary substantially, depending on the tradability of inputs and outputs, agricultural employment shares, consumption patterns, distributional impacts of income and assets, the abundance of underemployed resources, and, indirectly, a range of policy factors (Delgado, *et al.*, 1998; Dorosh & Haggblade, 2003).⁵ Nevertheless, most case studies which perform analogous tests or simulations find that agriculture’s multiplier effects on the rural economy, or on the economy as a whole, are larger than those of any other sector (see reviews in Byerlee *et al.* (2005), Lanjouw and Lanjouw (2001) and Thirtle *et al.* (2003)).⁶

In sum, there is overwhelming evidence from theory, history and contemporary analysis that agricultural growth is a precondition to broader growth. A further important point is that agricultural growth is quintessentially pro-poor growth. The reasons are now well known: agriculture is generally labor intensive and skill-extensive, so that agricultural growth creates additional employment with low entry barriers. Increased agricultural productivity also lowers food prices for both the rural and urban poor, who typically

spend most of their household budgets on food. Especially productivity growth on small family farms is very pro-poor; Lipton (2005) argues this has been driving world wide poverty reduction from 1700 to the present day. And again, the empirical evidence in this context is impressive. Numerous cross-country and country-specific studies conclude that agricultural productivity is a major source of poverty reduction, and almost certainly *the* major source at lower levels of development (Huppi & Ravallion, 1991; Datt & Ravallion, 1996; Gallup, *et al.*, 1997; Bourguignon & Morrison, 1998; Ravallion & Datt, 2002; Timmer, 2002; Warr, 2002a; Warr, 2002b; Thirtle, *et al.*, 2003; Ravallion & Chen, 2004; Bravo-Ortega & Lederman, 2005; Byerlee, *et al.*, 2005).

There is an additional ‘stylized fact’ which suggests that urban biased policies are especially harmful: public support programs are a *necessary* precondition for growth in agricultural productivity - not merely helpful, but essential. There are both theoretical and historical reasons supporting this contention.

Theoretically, the large multiplier effects of agriculture to broader growth and poverty reduction are externalities to the sector itself, a notion already implicit in the early work by Lewis (1954) and especially Johnston and Mellor (1967). Private investors will therefore under-invest relative to the social optimum, so government has an important role to play in coordinating their economy’s sectoral development. A second theoretical reason for state involvement in the agricultural transformation is that market failure is pervasive in underdeveloped agriculture. Binswanger and Deininger (1997), for example, provide numerous examples of market distortions due to information asymmetry (e.g. between smallholders and wholesalers), high transaction costs (e.g. in altering production modes), labor market distortions (e.g. efficiency wages, sharecropping), extreme volatility and covariance of incomes (e.g. missing agricultural insurance markets, distorted land markets), and the indivisibility of many rural investments (e.g. R&D, marketing, roads and irrigation). These distortions in just about every aspect of producing and selling agricultural outputs justify a judicious and quite extensive ‘industrial policy’ towards agriculture. Successful support programs have historically included pricing, taxation, and trade policies as well as direct and indirect support for agricultural research, extension, technological innovation, quality management, information provision, infrastructural investment, human capital development, and export potential. It is important to note that such policies clearly go beyond a Washington-Consensus role for the state restricted to infrastructure, law and order and human capital investments.

The historical record suggests that this kind of purposeful ‘industrial policy’ for the agricultural sector indeed is *sine qua non* for successful agriculture-led growth at early and intermediate development stages. All European economies and their offshoots as well as the successful industrializers of East Asia (including China) followed government-led agrarian transformations to invigorate growth and poverty reduction in both the farm and non-farm economies. Several of them (South Korea and Taiwan, especially) began their path to development with substantial land reform,⁷ which arguably mitigated the most critical market failures.⁸ They then proceeded to administer moderately low food prices to suppress real wages, which in turn facilitated industrial expansion. These food price distortions were essential but not excessive, did not last very long, and were counteracted by government policies which subsidized agricultural inputs, decreased risks associated with production and prices, and invested in new agricultural technologies (Wade, 1990). In contrast, less effective governments in other regions struggled with land reform and kept agricultural prices low without providing sufficient public expenditure, especially on R&D and extension activities (Krueger, *et al.*, 1991; Lipton, Michael & Ahmed, 1997; Kherallah, *et al.*, 2002; Fan & Rao, 2004). Indeed, the empirical evidence accumulated by a range of studies suggests that public investment in agriculture – especially in research and extension - yields particularly high returns and is critical for this sector’s growth, more so than is the case for expenditure on other productive sectors (Lipton, 1987; Fan & Pardey, 1998; Fan, *et al.*, 2000; Fan & Rao, 2004; Fan, *et al.*, 2005).

3. SOME OBJECTIONS CONSIDERED

If state-assisted agricultural growth is essential to broader development, then urban biases which distort prices and public expenditures against agriculture will indeed be very costly. This conclusion raises the question of why state-assisted agricultural growth strategies do not receive more support from LDC governments, aid donors, and the development profession at large. Are there reasons to explicitly reject such strategies, even at early stages of development? Some analysts who do so point to increased growth opportunities of rural nonfarm diversification (Bryceson, 2002; Byres, 2004). Ellis (2005) has misgivings about the econometric evidence on agricultural growth linkages, and rejects the idea that East Asia’s experience can be extrapolated to Africa where weak state capabilities constrain effective public support to agriculture. And still others are

pessimistic about small farm growth opportunities in today's globalizing world (Maxwell, 2003).⁹ We reconsider these arguments in turn.

Is East Asia's experience of agricultural development irrelevant for Africa? Ellis argues that the types of policy arrangements used to promote the Green Revolution in East Asia – fixed prices, floor prices, buffer stocks, fertilizer subsidies, credit subsidies, public irrigation schemes, trade protection – “are largely unavailable in the current lexicon of acceptable public sector interventions” (Ellis, 2005). We actually agree (see section 5 below), but infer from it that these biases against extensive state assistance to African agriculture should be redressed – not that policies implemented in Asia will not work in Africa.

Is the statistical evidence of high returns to public expenditure and large agricultural growth multipliers suspicious, inasmuch as research activities and agricultural growth have had “so little visible effect in Africa” (Ellis, 2005)? Of course not. The studies Ellis cites estimate marginal impacts of R&D expenditures and agricultural growth rather than total impacts, and in the case of R&D the international variation in public expenditures is precisely driven by large differences between East Asia and Africa. More generally, the large international differences in agricultural expenditures, price regimes, macroeconomic policies, political stability, health, education and infrastructure, all largely account for why African agriculture has stagnated and East Asian agriculture has flourished (Lipton, Michael, 1987; Wiggins, 2000; Mosley, 2002; DFID, 2005b; Diao, *et al.*, 2006; Zoomers, 2006).¹⁰

Is government involvement more often than not harmful to agricultural development? Wherever governments are involved in the economy there are dangers of rent seeking and corruption, and state interference has indeed often hindered rather than helped agricultural development. But it is equally clear that no agricultural transformation has ever occurred without extensive and effective state support programs. It is an error of logic to conclude that, because many state support programs have turned awry, agriculture-led growth can (or even should) proceed without constructive state involvement. Doing away with state assistance to agriculture in order to avoid rent seeking and corruption amounts to throwing away the baby with the bath water.

Are nonfarm sectors now more promising than agriculture as a source of aggregate growth and poverty reduction? Rural people in developing countries receive considerable income from non-farm activities. Survey evidence suggests that rural households in Africa often derive up to 45 % of their income from non-agricultural sources; in developing Asia this is about 30 %, in Latin America 40 % (Barrett *et al.*, 2001:2; Deininger and Olinde, 2001:455). There is also some evidence that these shares have been increasing over the

last decades (Ferreira and Lanjouw, 2001: 30; Start, 2001; Haggblade *et al*, 2002: 6). This diversification of rural incomes is increasingly seen as a way to alleviate income inequality and poverty problems (Lanjouw and Lanjouw, 2002; Maxwell, 1996), or as an essential part of a mature stage of economic development, after urban areas have become congested and industry reaches back into the countryside again (Start, 2001).

But it is another argument altogether to propose nonfarm growth as a primary source of growth and poverty alleviation at early stages of development. Bryceson (2002), for example, correctly notes that “[t]he future of African rural dwellers lies increasingly in labor force participation outside rural agriculture”, but ignores the possibility that agricultural development strategies are a plausible precondition for achieving such a structural transformation. Without agricultural growth, nonfarm activity for the poor usually takes place in a casualised labor market with low returns, high vulnerability, and little scope for accumulation (Maxwell, 2003; Hazell & Diao, 2005). As Maxwell (2003) notes of ‘distress-push’ rural diversification, “[t]his kind of diversification may be essential for survival, but it does little for poverty reduction.” The evidence confirms these different potentialities. While many studies of local economies (often in rural areas) indeed find rising income diversity as total income levels rise and as poverty decreases (e.g. Barrett *et al*, 2001), others do not (e.g. Deininger and Olinde, 2001; Haggblade *et al*, 2002). Ellis (2005) and Bryceson’s (2002) own surveys shows that the highest income groups in rural Africa also experience the highest farm yields. It is plausible that, typically, larger land ownership and higher yields have provided the asset base to permit nonfarm diversification.¹¹ The balanced conclusion on the role of the non-farm sector, as articulated by Foster and Rosenzweig (2004:541), seems to be that the “removal of barriers to nonfarm capital and product mobility ... is an important complement to investment in agricultural productivity that target those areas well suited to cultivation.”

In contrast, there are clear dangers in treating nonfarm development as a substitute rather than a complement to agricultural productivity growth. This is especially true of strategies emphasizing rural-urban migration in the absence of agricultural growth (or ‘push urbanization’). Ellis (2005) argues that “[t]owns and cities become teeming hives of small-scale activity” when peasants are “freed from the shackles of unremitting toil on the land”. But Latin American and African experience, and simple arithmetic, suggest that nonagricultural sectors in most LDCs (especially in Africa) are at present far too small and insufficiently labor-intensive to come anywhere close to fully absorbing ‘surplus’ agricultural labor.¹² For most of the poorest countries, faster and broader

agricultural growth still provides the most viable path out of poverty. This is why urban bias, which diverts resources away from agriculture, should be a source of concern and merits detailed analysis.

4. WHY DOMESTIC URBAN BIASES EMERGE AND PERSIST

In this section we discuss the origins of urban bias within LDCs, and why urban bias persists to this very day. We also provide quantitative analysis of these sources of urban bias, and empirically document the contemporary persistence of this bias.

As we noted in Section 2, much of agriculture's benefits are external to the sector itself and instead accrue to non-agricultural investors, who gain from low food prices and an ample supply of cheap rural labor (among other things). Unfortunately both low food prices and cheap rural labor can also be obtained – in the short run, at least - from urban-biased policies¹³ so that investments in agriculture are not always perceived as necessary, despite pervasive market failure in this sector (Binswanger & Deininger, 1997). Such failures also explain why LDC agriculture will typically attract very few resources in a low-income laissez-faire economy.

These structural biases have historically been compounded by feudal or semi-feudal institutions inconducive to agricultural transformation, as well as colonial regimes seeking extractive profits from natural resources and cash crops. These regime types typically excluded indigenous populations and smallholders from significant access to land and public resources (Lewis, 1954; Myrdal, 1958; Lipton, 1977; Binswanger & Townsend, 2000). In Latin America and large parts of sub-Saharan Africa (e.g. Kenya, Uganda, Zimbabwe, South Africa), colonial regimes left behind high levels of land inequality and landlessness which persist to this day, with adverse influences on productivity, human capital accumulation, the distribution and effectiveness of public expenditures, and ethnic tensions and political unrest (Carter, 2000; Sokoloff & Engerman, 2000; Frankema, 2005; Allcott, *et al.*, 2006). In the post-colonial era, colonialism also indirectly fostered nationalist industrialization policies, the prime purpose of which was to move the economy out of export dependence on colonial cash crops and into the modern industries which colonial rulers had often suppressed.

Relative to Latin America and Africa, the colonial influences on Asian and Middle Eastern agriculture were less adverse, and in some cases actually beneficial. While indigenous Asian populations were often excluded from cash crop agriculture and land was heavily taxed (e.g. the *lagaan* tax in British India), some Asian colonial regimes – such

as the Japanese in Korea and Taiwan - modernized agriculture, replaced traditional rural elites and favored staple crops over cash crops (Wade, 1990; Kang & Ramachandran, 1999). Because of this variation in colonial outcomes across colonizers but also across different regions with common colonizers (e.g. British colonies in East Asia and sub-Saharan Africa), colonial factors are unlikely to fully account for urban biases in contemporary LDC governments. Residual explanations instead focus on the theory of political groups (Olson, 1971) and the influence of ideologies and the economic theories they support.

In terms of the former, poor rural populations are typically the most disenfranchised of political groups. In much of Africa and Latin America, rural populations are physically isolated from centers of power, and often isolated from each other, especially in population-sparse regions of South America and sub-Saharan Africa. The costs associated with forming rural pressure groups are typically prohibitive and their effectiveness greatly constrained (Bates, 1981; Binswanger & Deininger, 1997). In contrast, Asia's high rural population density meant that smallholders could form reasonably effective rural pressure groups (in fact, smallholder rice growers are the single largest constituency in many Asian countries). In addition, the immediate threat of rurally based Communist insurgency in many East Asian countries (South Korea, Taiwan, Malaysia, Indonesia) made autocracies in this region unusually conscious of the needs of smallholders (Wade, 1990; The World Bank, 1993; Eastwood & Lipton, 2004). Nevertheless, better democracies seem to be another route to mitigating urban biases. Lipton (1977) and Varshney (1993), for example, argue that the greater strength of democratic institutions in much of South Asia (especially India and Sri Lanka) have played an important part in constraining urban biases in this region.¹⁴

Is there empirical evidence for the influence of colonial heritage and contemporary political economy factors on continued urban biased policy outcomes in LDCs? To answer this question we use what we believe to be the best policy-influenced measure of urban bias available for a broad spectrum of countries: the difference between the percentages of urban and rural populations which have access to safe water, as measured in 2002. The mean difference for urban and rural areas in this variable is a high 25 percentage points, but this urban bias is as high as 60 to 70 percentage points in a few countries. We note that the World Bank's *Rural Poverty Report* (2003) also provides a range of other measures which indicate large differences in rural and urban populations in access to education, health and access to other services, although these cover

significantly fewer countries. Other more direct measures of urban biased policies are discussed below.

Turning to the econometric analysis, we use this measure for domestic urban bias as a dependent in the regressions presented in Table 2, where we report coefficients as well as elasticities. In regression 2.1 the first independent variable is GDP per capita measured in 1970, which is used here to control for generic improvements in infrastructure related to the level of development. The relationship between GDP per capita and urban bias is typically negative but not robust in terms of either size or significance. The next two variables – the strength of postcolonial democratic institutions and population density – were above hypothesized to bear a negative relationship to urban bias since they make the formation of rural pressure groups less costly, and their efforts more effective. Consistent with that theory, coefficients on both variables are negative and highly significant.¹⁵

[insert Table 2 about here]

The remaining two regressions test the robustness of these effects to historical theories relating to land inequality (regression 2.2) and colonial penetration, measured by the number of years as a colony and Acemoglu et al.'s (2001) measure of settler mortality in 1800 (regression 2.3). The results suggest that land inequality is only associated with greater urban bias when the Gini coefficient exceeds 0.63, which largely amounts to a Latin American explanation of urban bias. Adding the two colonial history variables (regression 2.3) requires dropping the democracy variable, since this is one of the channels through which settler mortality is supposed to have influenced contemporary institutions (Acemoglu, *et al.*, 2001). The results in regression 2.3 suggest that greater 'penetration' of the European colonies – that is, longer settlement periods and lower settler mortality rates – is associated with smaller urban bias and hence less extractive colonial systems, as hypothesized. This empirical exercise therefore provides some evidence for the historical roots of urban bias as well as the political economy arguments discussed above.

Finally, we also examine the contemporary persistence of urban bias by collecting a broad range of data on capital stocks, public expenditure, price and taxation policies, and differences in public service outcomes. The key data from that exercise are collated in

Table A1 in the appendix. Here we summarize the main conclusions to be drawn from this data (see Table 3).

The most prominently identified biases in the neoclassical development literature are price distortions against agriculture in the form of trade and industrial policies, including price controls, export taxes, tariffs on agricultural imports, and overvalued exchange rates (Krueger, *et al.* 1991).¹⁶ In fact, Krueger, *et al.* (1991) found this last implicit tax to be the major source of price discrimination against agriculture. We therefore examined the ratio of purchasing power parities (PPPs) to the nominal exchange rate, which is a measure for exchange rate-based taxation of agriculture. The data in question are derived by Easterly (2006) using the method developed by Dollar (1992). As in the original Krueger *et al.* (1991) study, these data strongly suggest that effective taxation of agriculture has decreased markedly in the last twenty years. Exchange rates overvaluations, so defined, declined in 52 out of 67 developing countries between 1970-85 and 1986-2003 (Table 4). A recent update of the Krueger *et al.* (1991) study by Anderson (forthcoming) provides a similar picture of events for a more limited range of countries (Appendix Table A1).

[insert Table 3 about here]

However, every other relevant policy indicator we examined suggests increasingly urban biased policies and persistently large welfare differentials between urban and rural populations. For example, data collated by researchers at The World Bank (Crego, *et al.*, 1997) indicate that agricultural capital stocks declined from 1967 to 1992 in 13 of 33 developing countries for which data were available, while another 8 experienced growth of less than 1% per annum (Table 3). In contrast, only 3 reporting LDCs recorded declines in manufacturing capital. It also seems unlikely that agricultural investment since the early 1990s has made up for this shortfall. Data on public expenditure on agriculture as a share of agricultural GDP from Fan and Rao (2004) suggest that 24 of the 47 reporting countries recorded declines in the 1990s. In sub-Saharan Africa, 11 of the 13 reporting countries recorded declines, mostly from levels that were already the lowest in the world. And The World Bank (2003) reports that rural areas continue to suffer from much less access to basic education, health, infrastructure and other key services than urban areas (see also Appendix Table A1).

There are, of course, a few exceptions to this generally grim picture. Ethiopia's Agricultural-Demand-Led-Industrialization (ADLI) strategy and Uganda's Plan to Modern Agriculture (PMA) are recent efforts to put agricultural development at the top of the development agenda in very poor countries. But the broader picture which our findings paint is that unless we measure urban bias exclusively in terms of price distortions, domestic policy discrimination against LDC agriculture has persisted. If public investment in agriculture is viewed as pivotal to agricultural growth and rural welfare, the data even suggest that domestic urban biases have worsened.¹⁷

5. INTERNATIONAL URBAN BIASES

Urban bias also has international dimensions. In this section we review international trade and subsidy biases against LDC agriculture, before looking at trends in OECD aid to the agricultural sector and in resources allocated to research on agricultural issues by the international financial institutions and the international development profession.

A widely discussed international dimension of the urban bias against LDC agriculture – the international trade bias - is ironically the result of a bias in favour of agriculture in OECD countries. Agricultural sectors in most OECD countries receive high levels of protection, of up to six to ten thousand US dollars per agricultural worker per year. OECD subsidies to agriculture have actually doubled in real terms since the Uruguay round in the early 1990s, totalling about 270 billion US dollars in 2003, which is roughly five times global foreign aid flows for that year (OECD, 2006). In contrast, the typical African country spends less than ten dollars per worker per year on agriculture, to the general detriment of LDC agricultural exports.

The counterpart to these subsidies is persistently high tariffs on agricultural goods. While tariffs on industrial goods were brought down to just 4.7% on average already during the Tokyo round (1973-79), special concessions to developing countries continue to mostly exclude agricultural imports. An especially important problem for LDCs is that tariffs on processed agricultural goods are often higher than on commodities,¹⁸ which perpetuates the lack of trade and production diversification in LDCs and erodes their incentives to develop technological infrastructure.

Estimates of the costs of these policies depend on who liberalizes trade (i.e. OECD countries or all countries), the size of the reductions in agriculture and the size of reduction in manufacturing and services tariffs. Anderson et al. (2006), for example, estimate the costs of OECD tariffs for LDCs at about 11 billion per year (in 1995 US

dollars), or 0.4 percentage points of agricultural growth per year. ABARE (2001) estimates that a 50% reduction in agricultural tariffs would lead to a static US\$ 40 billion increase in LDC GDP in 2010, although the gains would accrue rather unevenly. Thus, conventional trade biases within OECD countries are still a formidable source of underdevelopment in LDC agriculture.¹⁹

Another important aspect of the international economic system is the allocation of foreign aid. The real global volume of assistance to agriculture decreased by nearly two-thirds from 1980 (US\$6.2 billion) to 2002 (US\$2.3), while agriculture's share of total aid has fallen from a peak of 17.0% in 1982 to just 3.7% in 2002 (The World Bank, 2003; DFID, 2005c). In Sub-Saharan Africa, where it is needed most, agricultural aid more than halved in 1980-2002. Moreover, this fall is not related to declining agricultural populations: agricultural aid per agricultural inhabitant declined from a peak of around US \$20 per capita in the mid 1980s to just \$7 per capita in 2001.²⁰ These trends went hand in hand with strongly declined efforts in agricultural R&D, most seriously in Sub-Saharan Africa (Pardey et al, 2006; Beintema and Stads, 2006)

Figure 1 compares the development of different aid components. We find that the decline in agriculture's share of total aid was roughly similar to that of aid to other productive sectors (multisector and program assistance also declined marginally). In contrast, nearly all the components of social sector assistance registered a dramatic increase, with aid volumes towards governance, health, 'other social sectors' and the environment rising most steeply. To our surprise, aid to education rose only modestly.

[insert Figure 1 about here]

This remarkable shift in aid allocation from production to social sectors is reflective of a significant 15-year shift in donor's development strategies, albeit one which has rarely been explicitly commented on. It is beyond the scope of this essay to consider whether more aid to social sectors is warranted (the spread of AIDS/HIV clearly warrants greater health care expenditure, for example). The usual justification for more social sector spending is today's focus on poverty reduction in the framework of the eight Millennium Development Goals, which essentially focus on social indicators. But the evidence reviewed so far strongly suggests that the decline in aid to agriculture (and in LDC public agricultural expenditures) has been anything but 'pro-poor', hindering

rather than helping to achieve the first Millennium Development Goals of halving extreme poverty.

At first sight, this combination of increasingly pro-poor rhetorics and declining pro-poor spending patterns is puzzling. On reflection, two trends in donor behavior may help us to understand the shift in aid policies. The first is a now widespread perception that rural development projects (including the Green Revolution) have been much less successful than other uses of aid. However, this is a misperception. The available evidence suggests that rural projects, if properly appraised, show rates of return similar to other projects (Lipton 1987), while rates of return in rural research and extension projects are typically very high (Rola-Rubzen, *et al.*, 2001). But more significant returns to rural projects are not observed because of their greater susceptibility to exogenous shocks (especially weather shocks and political instability),²¹ macroeconomic policy discrimination (The World Bank, 1991:82), and insufficient public investment in complementary inputs (Wiggins, 2000; Murgai, 2001; Mosley, 2002; Dorward, *et al.*, 2004; DFID, 2005a; DFID, 2005c; Zoomers, 2006).

Another reason for strongly diminished aid to agriculture is donor fatigue with sectoral interventions in general, and with agricultural ministries in particular. The theoretical underpinning of this fatigue was the neoclassical revolution in development theory starting in the 1980s, which argued that free markets do a better job of allocating resources than urban-biased public agricultural institutions – especially agricultural ministries and marketing boards – which plundered agriculture for the sake of grandiose industrialization plans. This view developed a significant following among the large donors, including The World Bank and the IMF. The coinciding of the neoclassical era in development economics with the period of declining aid to agriculture depicted in Figure 1 suggests that a shift in the intellectual climate may have been a key factor in declining aid to agriculture.

To test this hypothesis, we examined trends in intellectual resource allocation over the last 25 years. Specifically, we study efforts in research on agriculture by development economists, including those working for major donor institutions.²² We conducted systematic word searches of both World Bank documents (the Bank being an institution largely dominated by the neoclassical paradigm in recent decades) as well as four major academic journals on development.

We first analyse World Bank Working Papers using the World Bank's *e-Library*, which covers the period 1994 to 2005.²³ We derive two measures of the importance of

agriculture: the proportion of papers with words containing the letters “agricultur” in the abstract; and the proportion of papers classified by the World Bank as “agriculture and rural development” papers (Figure 2). In the period 1994-98, around 15% of World Bank working papers dealt with the agricultural sector, but in the period 2003-2005, this declined to less than half that, or 7%.²⁴ Thus, the relative research interest on the economics of agriculture in the World Bank declined by about the same proportion as World Bank IDA aid flows to agriculture over the 1990s, which decreased from 19.7% of total aid in the mid 1990s to 8.4% in 2000 (DFID, 2005b).

[insert Figure 2 about here]

Another important source of World Bank research output is the annual *World Development Reports* (WDRs), which review “major development issues”. Figure 3 lists the titles of all WDRs from 1978 to 2006 along with average counts of “agricultur*” words per page, which we adopt as a proxy for the importance of agriculture in these reports. The significant correlation between the title of the report and the word counts suggests this is not a bad measure. Looking at the trends in *WDRs*, there are several facts of note. Firstly, the importance of agriculture varies tremendously from report to report, indicating the degree to which the reports focus on topics of contemporary appeal. Secondly, many of the topics one would expect to have been more closely connected to agricultural development actually score very low: health (0.04), infrastructure (0.06), investment (0.04), the State (0.09) and even the topic of the most recent 2006 report, *Equity and Development* (0.16). But thirdly and most importantly, we once again observe a strongly declining trend in the importance of agriculture over this period. From the heyday of agriculture in development (1978-1986, with 0.51 words per page) the Bank’s interest in agriculture declined markedly thereafter (1987-2006, with 0.18 words per page).²⁵ To be fair, this trend is reversing in the immediate future with the upcoming 2008 *WDR* to be titled *Agriculture for Development*. Whether this resurgence will be followed by substantial policy shifts - such as increased aid flows to agriculture, more research and improved data collection - remains to be seen, of course.

[insert Figure 3 about here]

We have suggested that the declining interest in agriculture was part of a specific view on development embraced by the Washington institutions (known as the ‘Washington Consensus’). Alternatively, it may be part of a much broader intellectual trend. In order to investigate this possibility, we repeated our search test (using ECONLIT) on book entries and articles by the wider development profession which appeared in four prominent development journals over the last quarter century. We counted those which had “agricultur*” or “rural” in their abstracts, and we again calculated percentages of agriculture and rural-development related items in the totals. Figures A1 and A2 in the appendix document our results. The findings are interesting primarily for how different they are to those of Figure 5, with interest in agriculture and rural development increasing rather than declining in independent academic circles.²⁶ This confirms that there may well be a specific ‘Washington Consensus’ influence on the neglect of agriculture.

This influence should be regarded as especially surprising given that the ‘Washington Consensus’ institutions were among the leading critics of the plundering of agriculture for the sake of industry (Krueger, *et al.*, 1991). Indeed in the 1970s and early 1980s, agriculture was very much on the development research agenda after the surmised failure of urban biased industrialization strategies (Little, *et al.*, 1970) and the early successes of the Green Revolution. But a more comprehensive intellectual consensus on the importance of agriculture in development was obstructed by several factors.

Firstly, critiques of the urban bias inherent in import-substitution industrialization strategies were intimately tied to the neoclassical, public choice-theoretic critique of government intervention in general; for example, Krueger’s work embodies both (Krueger, 1974; Krueger, 1978; Krueger, 1983; Krueger, *et al.*, 1991). This dual critique meant that although the Washington Consensus called for the reduction of effective taxes on agriculture, it also played an indirect hand in reducing general government support for agriculture, and failed to replace ineffective public institutions in the agricultural sector with anything better (Kherallah, *et al.*, 2002; Eastwood & Lipton, 2004; Diao, *et al.*, 2006). As noted above, this was throwing away the baby with the bath water. In doing so, the Washington Consensus strategy ignored the Theory of Second Best: removing state distortions did not typically improve outcomes because of the presence of other, market-induced distortions.²⁷

The Washington Consensus may have influenced agricultural outcomes in other ways too. Given the domestic political economy of LDCs, Washington’s calls for LDC

governments to cut public expenditures seem frequently to have led to disproportionate cuts for the politically weakest group(s), namely the rural poor. Thus, the neoclassical revolution may have inadvertently given freer reign to domestic urban biases in public expenditures (Lipton, Michael, 1987; Lipton, Michael & Ahmed, 1997; Fan & Rao, 2004). And while the Washington Consensus paradigm evolved in the late 1990s by incorporating a renewed emphasis on poverty reduction and some refinements in the structure and sequencing of reforms (Rodrik, 2005), to sceptics these amendments look more like a familiar Kuhnian process of adding ‘protective belts’ to ‘normal science’ without changing many of the core tenets of a paradigm. In any case, it is difficult to see how the Washington Consensus paradigm can really be rectified if the fundamental critiques outlined above are valid.

6. CONCLUDING REMARKS

In this essay we have argued that agriculture still has a vital role to play in igniting growth and poverty reduction at early stages of development. As such, any bias against LDC agriculture is likely to be very costly, especially given the pervasive nature of market failure in this sector and the consequently critical role of state assistance to agriculture. But although urban biases were widely acknowledged in the late 1970s and early 1980s, and urban biased price regimes significantly dismantled in the late 1980s and 1990s, other very important forms of urban bias have persisted (i.e. the international trade regime), and even intensified (i.e. government expenditure and foreign aid). The persistence of these biases is explained by a combination of domestic historical and structural factors, political economy dynamics both domestically and in the OECD donor countries, and anti-state development theories adhered to in the development profession and, especially, the international financial institutions. Since those theories constitute the one domain which we might hope to directly influence, we devote some concluding remarks to the role of agriculture in contemporary development strategies.

We noted above that the emergence of the Washington Consensus development paradigm culminated in very mixed outcomes for LDC agriculture: the dismantling of urban biased price regimes on the one hand and declining agricultural expenditure, economic research and foreign aid, on the other. As a number of other more general criticisms of the neoclassical revolution have come to light since the early 1990s, development economics has arguably proceeded into a post-Washington Consensus era. The most distinct development paradigm to emerge (or re-emerge) in this era is one

which pays greater attention to the Theory of Second Best, to market failures more generally, to the importance of institutions, and to the necessity of interventions in production sectors as well as social sectors. Important readings in this ‘institutionalist’ School include the East Asian revisionists (Amsden, 1989; Wade, 1990), Krugman (1993), and Stiglitz (1998), whilst Rodrik and collaborators probably represent the vanguard of this school in recent times (Rodrik, 2000; Birdsall, *et al.*, 2005; Rodrik, 2005; Rodrik, *et al.*, 2005; Hausman, *et al.*, 2006).

While this ‘new’ paradigm is generally to be welcomed, there are potentially significant weaknesses in it. Foremost is the risk that that this school will place too much emphasis on government policies to support industry (i.e. non-agriculture) as the main engine of growth. In reinventing a ‘neo-industrialization’ paradigm this school threatens to repeat the mistakes of early industrialization strategists who substantially underestimated agriculture’s multiplier effects on the broader economy (e.g. Hirschman, 1958) and largely ignored the importance of agricultural growth for poverty reduction (see Fields, 2004). Certainly if absolute poverty is the yardstick, then by far the most pressing developmental problems lie in the predominantly agricultural regions and countries still at quite early stages of development (i.e.. sub-Saharan Africa, and the poorer regions of South and South East Asia). Moreover, historical experience suggests that most of the initial solutions to those problems also have to be found within agriculture, not outside it. Targeted investments in agriculture and active opposition to urban bias in its many forms both remain critical to growth and poverty reduction in our time.

TABLES AND FIGURES

Table 1. The persistence of domestic and international urban biases: causes and manifestations

	Domestic urban biases (Section III)	International urban biases (Section IV)
Causes	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><u>Private Sector</u></p> <ul style="list-style-type: none"> • Colonial inheritance of dualistic economy. • Externalities to agriculture not internalized. • Severe market failures in agriculture. </div> <div style="width: 45%;"> <p><u>Public Sector</u></p> <ul style="list-style-type: none"> • Relatively weak political voice of rural poor relative to rural rich, urban rich, and even urban poor. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><u>Trade</u></p> <ul style="list-style-type: none"> • Relatively strong political voice of rural OECD constituencies (OECD's rural bias). </div> <div style="width: 45%;"> <p><u>Aid</u></p> <ul style="list-style-type: none"> • Washington Consensus scepticism of government intervention in general, and sectoral intervention in particular. • Perception that rural projects and Green Revolution have largely failed. </div> </div>
Manifestations and costs	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <ul style="list-style-type: none"> • Persistent rural poverty, urbanization of rural poverty, premature and thwarted attempts at industrialization. • High land inequality in Latin America; high rural-urban inequality in Africa and other LDCs. </div> <div style="width: 45%;"> <ul style="list-style-type: none"> • High direct and indirect taxation of agriculture. • African economies typically spend less than US\$ 10 per rural inhabitant on agriculture. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <ul style="list-style-type: none"> • Large levels of trade protection against LDC agricultural exports. • High and rapidly increasing levels of subsidization of OECD agriculture. </div> <div style="width: 45%;"> <ul style="list-style-type: none"> • Sharply declining aid flows to agriculture sector. • Declining World Bank research on agriculture relative to other fields. </div> </div>

Table 2. Explaining an urban bias proxy for the year 2002.

Regression No.	3.1		3.2		3.3	
Sample	Developing countries [§]		Developing countries [§]		Developing countries [§]	
No. of countries	51		46		35	
Variable	Coefficient	Elasticity	Coefficient	Elasticity	Coefficient	Elasticity
GDP per capita, 1970	-0.20 [#]	-0.28	0.20*	-0.25	-0.04	-0.13
Population density, 1970	-3.09***	-0.52	-3.14***	-0.58	-1.89*	-0.34
Average strength of democracy, 1970-01	-1.56**	-0.14	-1.65***	-0.20		
Land inequality (circa 1960-2000)			-1.95***	n.a.		
Land inequality, squared			0.01***	n.a.		
Settler mortality, log					4.01**	0.24
Years as a colony, log					-5.65**	0.07
R-squared	0.37		0.60		0.48	
Adjusted R-squared	0.33		0.55		0.41	

Notes: The regression technique used was standard OLS. The dependent variable is an urban bias proxy, which is the proportion of the urban population with access to safe water less the equivalent rural proportion, as measured circa 2002. The source of both variables is the WDI (2005). Agricultural labor productivity data is from Alauddin, Rao and Headey (2005). Land inequality Gini coefficients are from Frankema (2005), and is measured circa 1985. Democracy data is from the POLITYIV (2004) database. Effective population density is from the Harvard CID website. The quadratic specification on land inequality indicates a turning point of around 0.63 above which many Latin American countries lie. (*) (**) and (***) indicate significance at the 10%, 5% and 1% levels, respectively, based on heteroskedastic consistent White t-statistics. (#) indicates marginal insignificance at the 10% level.

Table 3. Trends in the policy environment for LDC agriculture.

	Exchange rate distortions: 1970-1985 to 1986-2003	Growth in the manufacturing capital stock: 1967-1992	Growth in the agricultural capital stock: 1967-1992	Public agricultural expenditure, % AGDP: 1990-2000
Number of LDCs showing regression	15	3	13	24
Number of observations	67	27	33	47

Notes: See Appendix Table A1 for full definitions and sources. 'Regression' is defined as a trend assumed to be less favorable to agriculture, such as higher distortions or lower investment/expenditure.

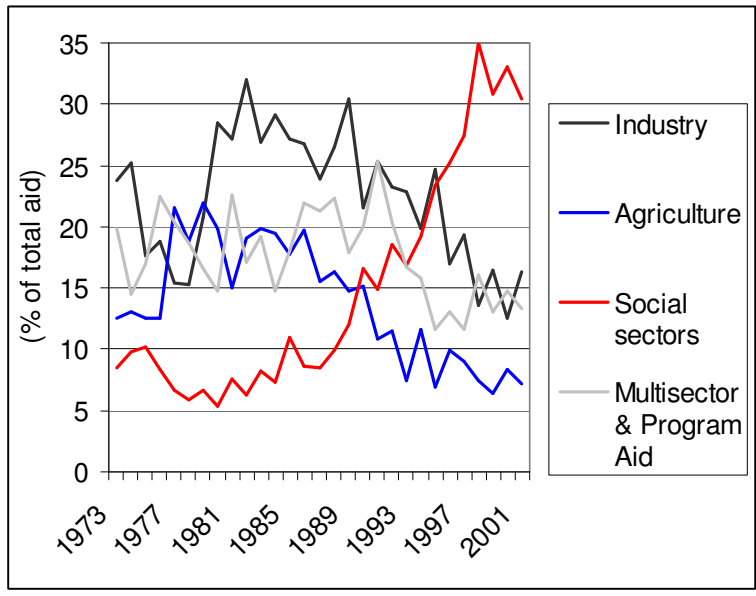


Figure 1. The changing composition of foreign aid: all countries, 1973-2001. Source: Aid data is from the OECD DAC data base. Industry refers to all nonagricultural sectors except transport and communications, since these could effectively be agricultural expenditures. Social sectors refers to expenditures on education, health, population, women, the environment, governance and NGOs.

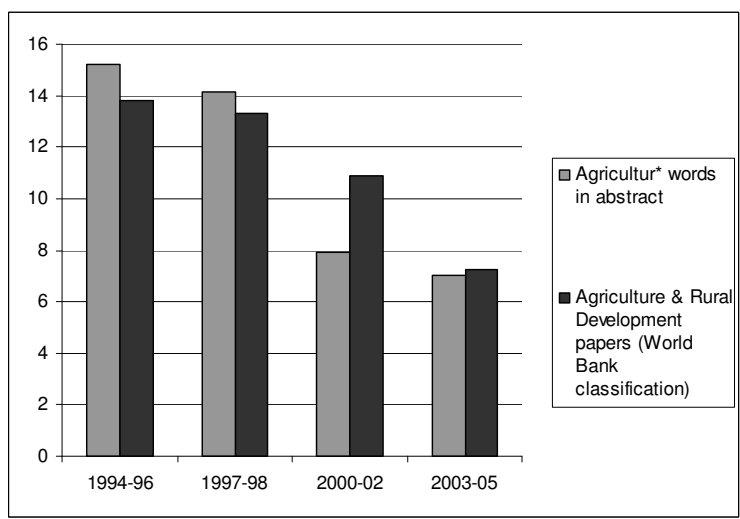


Figure 2. The Percentage of World Bank Working Papers Discussing Agriculture. Source: Authors' calculations using *The World Bank e-Library*.

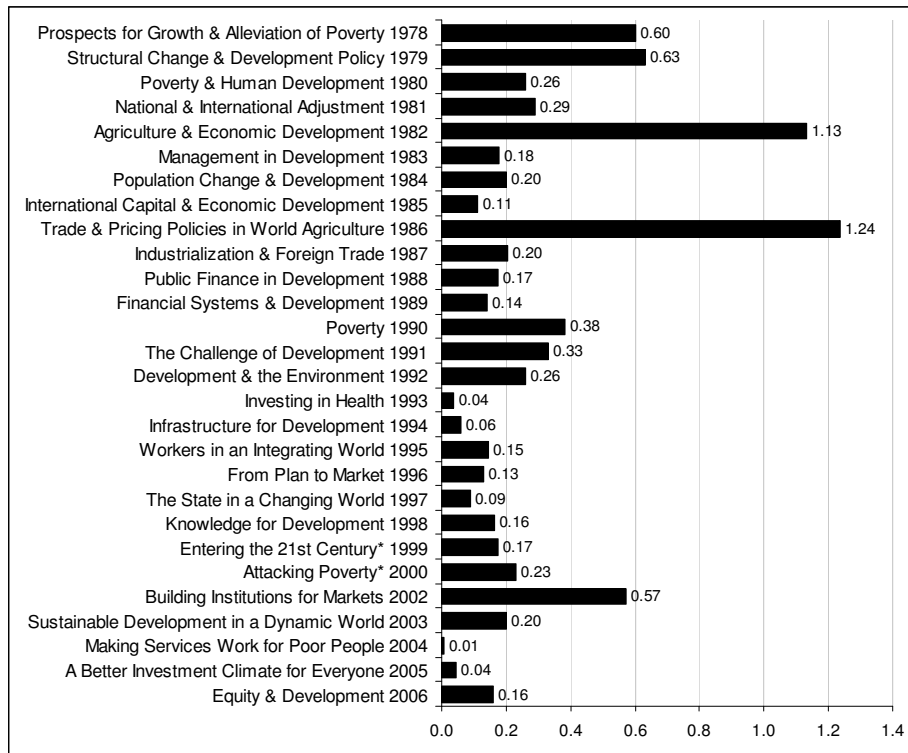


Figure 3. World Development Reports and the Frequency of Agricultur* Words/Page. Sources: World Development Reports, various issues, and authors'; calculations. * These reports actually cover 1999/2000 and 2000/2001 respectively.

APPENDIX

Table A1. A summary of urban biased policy outcomes.

Category	<u>Average annual growth in capital stock</u>		<u>Central government expenditure (% of agricultural GDP)</u>		<u>Nominal assistance to agriculture</u>		<u>Exchange rate distortion index (0=neutral; >0=appreciated)</u>		<u>Difference in population with access to safe water.</u>
	1. Agric. 1967-92	2. Manuf. 1967-92	3. Agric. 1990	4. Agric. 2000	5. Agric. 1980-84	6. Agric. 2000-04	7. National 1970-1984	8. National 1986-2003	9. Urban less rural 2002
Algeria							81.2	4.7	12
Angola									30
Argentina	-0.30		4.81	7.22	Taxed	Taxed	19.0	24.7	8
Bangladesh							-21.4	-46.0	18
Benin									19
Bolivia			2.35	2.86			68.4	13.9	27
Botswana			47.79	45.15			33.4	-1.3	10
Brazil			5.00	8	Taxed	Taxed	-3.0	13.4	38
Burkina Faso			2.79	1.52			56.1	11.7	38
Burundi			3.00	0.8					12
Cambodia									29
Cameroon			3.58	1.16	Taxed	Neutral	79.1	82.4	43
C. African Rep.							56.0	11.5	32
Chad							42.0	34.1	8
Chile	1.45	-2.49	4.97	8.37	Subsidized	Subsidized	38.1	-35.7	41
China			6.14	7.91	Taxed	Taxed			24
Colombia	-1.09	2.93	3.32	1.53	Neutral	Subsidized	-22.9	-48.0	28
Congo, D.R.							69.6	-36.8	54
Congo, Rep.							90.1	90.0	55
Costa Rica	1.23	8.96	6.60	4.49			1.7	-32.5	8
Cote d'Ivoire			2.24	1.19	Taxed	Taxed	71.0	57.7	24
Dom. Rep.	4.13		12.55	12.92			23.8	-22.7	13
Ecuador		20.87	4.36	8.07	Neutral	Subsidized	4.4	90.2	15

Sector Time frame	<u>Capital stocks</u>		<u>Public expenditure</u>		<u>Nominal assistance</u>		<u>Exchange rate distortions</u>		<u>Access to safe water</u>
	1. Agric. 1967-92	2. Manuf. 1967-92	3. Agric. 1990	4. Agric. 2000	5. Agric. 1980-84	6. Agric. 2000-04	7. National 1970-1984	8. National 1986-2003	9. Urban less rural 2002
Egypt	2.05	6.37	4.13	10.38	Taxed	Taxed	74.5	58.0	3
El Salvador	-1.14	2.59	3.45	1.95			17.5	86.5	23
Ethiopia			4.05	6.96	Taxed	Taxed	-12.0	-35.5	70
Gabon							55.8	24.9	48
Ghana			1.21	6.07	Taxed	Neutral	73.9	-63.9	25
Guatemala	-0.09	8.36	1.64	1.38					7
Haiti							7.7	25.8	32
Honduras	-1.82						53.5	18.1	17
India	0.63	4.79	11.94	7.81	Neutral	Neutral	1.6	-43.0	14
Indonesia	9.05	47.69	7.85	6.55	Neutral	Subsidized	-7.2	-58.3	20
Iran	47.22	39.80	4.60	2.9			-11.5	56.5	15
Jamaica	-0.60	-0.91					39.7	-5.2	11
Kenya	0.07	7.35	6.64	4.94	Taxed	Neutral	27.0	4.0	43
Lao PDR									28
Madagascar	-1.59	-2.44	8.10	6.4			17.7	-39.9	41
Malawi	2.15	5.65	7.30	4.7			16.0	-10.2	34
Malaysia			10.81	5.56	Subsidized	Subsidized	-11.5	-38.7	2
Mali									41
Mauritius	4.10	25.41	13.70	16.7			25.0	-0.4	0
Mexico			7.59	16.29	Neutral	Subsidized	-26.3	-30.9	25
Morocco	-0.27		8.11	6.02			24.9	-8.9	43
Mozambique									52
Myanmar									21
Nepal			2.99	2.82			-19.6	-54.8	11
Nicaragua							-7.3	144.0	28
Niger							91.4	8.4	44
Nigeria			2.20	0.79	Subsidized	Taxed	126.8	20.8	23
Pakistan	0.33	6.65			Taxed	Neutral	-18.9	-56.7	8

Sector Time frame	<u>Capital stocks</u>		<u>Public expenditure</u>		<u>Nominal assistance</u>		<u>Exchange rate distortions</u>		<u>Access to safe water</u>
	1. Agric. 1967-92	2. Manuf. 1967-92	3. Agric. 1990	4. Agric. 2000	5. Agric. 1980-84	6. Agric. 2000-04	7. National 1970-1984	8. National 1986-2003	9. Urban less rural 2002
Paraguay			0.44	3.67			29.0	-21.4	38
Peru	0.41	1.16					-8.3	93.5	21
Philippines	-1.90	4.03	6.07	6.96	Neutral	Subsidized	-10.8	-26.9	13
PNG							4.0	-20.3	56
Rwanda							46.1	42.4	23
Senegal							43.0	10.3	36
Sierra Leone							89.8	53.4	29
South Africa	0.36	8.67			Subsidized	Neutral	-26.0	-43.8	25
South Korea	66.10	144.93	18.05	33.59			7.2	2.0	26
Sri Lanka	-2.35	0.66	6.87	6.33	Neutral	Neutral	-24.0	-59.2	27
Sudan					Taxed		52.8	46.2	14
Syria	18.93	22.59	8.40	7.4			-28.0	43.0	30
Taiwan	12.81	81.46					9.7	35.9	
Tanzania	0.36				Taxed	Neutral	93.8	-9.1	30
Thailand			11.77	12.38	Taxed	Subsidized	-26.2	-41.2	15
Togo							36.4	-3.5	44
Tunisia	5.88	18.10	17.60	19.7			4.0	0.4	34
Turkey	0.96	10.08	1.90	4.8			1.3	-25.8	9
Uganda			0.38	0.23	Taxed	Neutral	55.0	-61.8	35
Uruguay	-1.33		3.50	4.83			-10.4	-8.1	5
Venezuela	-1.70	3.20	11.60	12.01			7.4	-25.2	15
Vietnam					Neutral	Subsidized			26
Zambia	-0.90	4.74	20.60	4.13	Taxed	Taxed	106.0	142.6	54
Zimbabwe			4.36	1.42	Taxed	Taxed	70.3	1.5	26

Notes: Capital stock data are from Crego et al. (1997). Central government agricultural expenditure data are from Fan and Rao (2004) and *Government Finance Statistics* (various issues). Nominal assistance to agriculture is based on Anderson (forthcoming). The exchange rate distortion index is based on Dollar (1992), and updated by Easterly (2006), and high (low) values indicate overvaluation (undervaluation). The population with access to safe water is from the World bank's *World Development Indicators* (WDI, 2004).

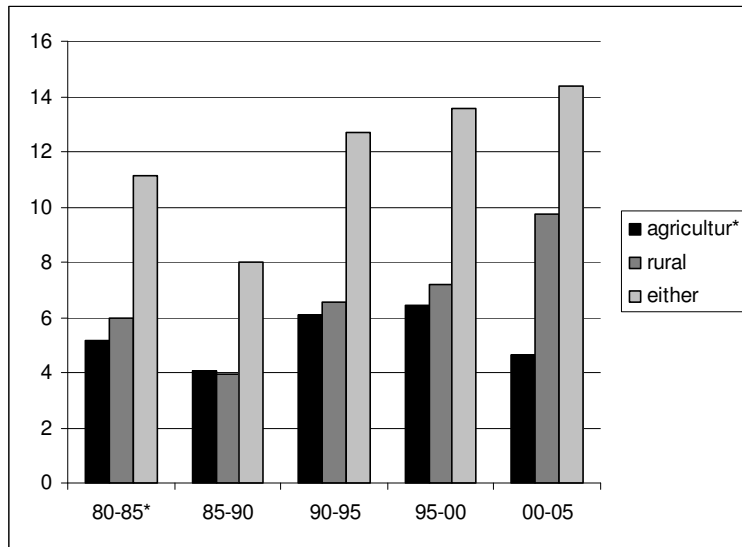


Figure A1. Percentages of all book entries and articles on agriculture and rural development for four development journals: 1980-2005. Notes: * The 1980-85 data are for keywords in the title since the search in abstracts does not work for this period. Source: ECONLIT

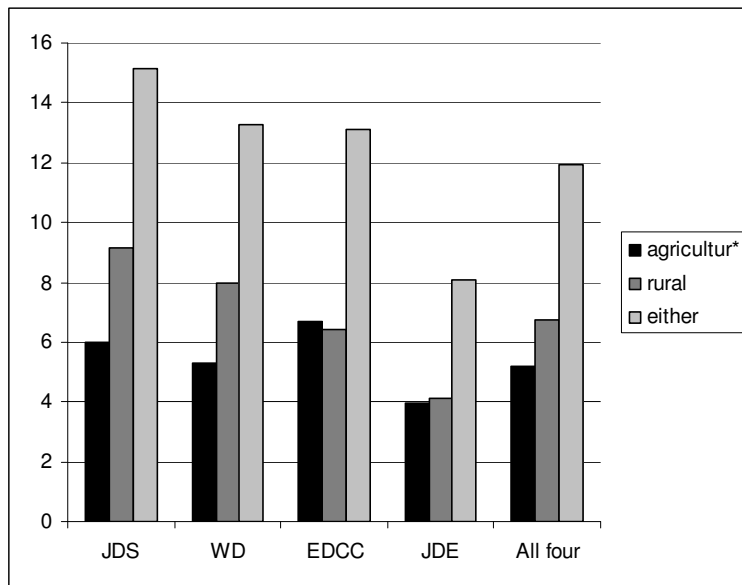


Figure A2. Percentages of all book entries and articles on agriculture and rural development for four development journals: 1980-2005. *Source:* ECONLIT and authors' calculations. *Notes:* JDS is The Journal of Development Studies; WD is World Development; EDCC is Economic Development and Cultural Change; JDE is The Journal of Development Economics.

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ENDNOTES

¹ We use the term ‘urban bias’ somewhat loosely. Unlike Lipton, we place rather more emphasis on discrimination against the agricultural sector more so than the entire rural sector, although the heavy dependency of the non-farm sector on the agricultural sector renders these distinctions fairly superfluous. See pages 60-61 in Lipton (1989) for some discussion. We therefore somewhat haphazardly switch between discussing the rural sector and the agricultural sector. We also note that, like Lipton (1977), urban bias largely refers to discrimination against smallholders much more so than large scale farms.

² Note, however, that there are important tradeoffs in this context. Agriculture provides cheap rural labor if food prices stay low, but if food prices stay low then this limits disposable rural income and rural demand for nonagricultural goods.

³ Adelman and Morris (1988) report that (p. 133-146): “Great Britain, France, Germany, the United States, Canada, Japan, and Sweden . . . For these countries, a substantial period of rising labour productivity in agriculture preceded the first sustained surge of modern industrial expansion. Then, as industrialization progressed, the agricultural sector played an important role in providing labour, raw materials, and/or capital to the industrial sector and in providing a market for both industrial and agricultural products Belgium, Denmark, the Netherlands, and Switzerland . . . whose agricultural sectors were radically transformed during the last quarter of the 19th century from extensive cultivation to the production of human capital-intensive crops for export. Export markets became even more important to agriculture than domestic markets.”

⁴ Although Bravo-Ortega and Lederman (2005) find that agriculture has had a much less beneficial impact in Latin America and in developed countries.

⁵ The one exception is a longitudinal study on India 1970-2000 by Foster and Rosenzweig (2004) who fail to find that agricultural growth spurred broader growth. Also, given that policies will influence multiplier estimates, we should be cautious about attaching undue significance to multiplier studies. Price distortions, for example, could inflate or deflate agricultural growth multipliers, depending on the circumstances. Also, growth multipliers work in reverse: negative shocks to agriculture (which are common in many parts of the globe) can lead to major costs in the rest of the economy (Block, 1999).

⁶ Many studies also conclude that consumption linkages between agriculture and other sectors are more important than production linkages. Another common finding is that agricultural multipliers are higher in Asia than in Africa (Delgado, *et al.*, 1998), although recent findings do not indicate an obvious cleavage in this regard.

⁷ South Korea and Taiwan are peculiar in that land distribution was influenced by both Japanese colonization and American support in the postcolonial era. See page 76 in Wade (1990), pages 160-161 in The World Bank (1993) and Kay (2002).

⁸ Successful land reforms can be good for overall growth in several ways. First, smaller farms may increase labour productivity by lowering the costs of monitoring hired labour. Second, land can be used as collateral to obtain loans. Third, land reform may preclude civil unrest associated with excessive urbanization and general income disparities.

⁹ A more moderate school of thought is that nonagricultural growth is underemphasized by 'agricultural fundamentalists'. Maxwell (2005) and Hasan and Quibriam (2004). Our objective is not to promote agricultural fundamentalism, but merely to argue that agriculture generally receives insufficient resources from domestic and foreign policymakers. Hasan and Quibrium, for example, argue that agriculture is now less a source of growth in East Asia and Latin America than it is Africa. That seems quite plausible given their highly urbanized economies, and that they have already reached reasonably high levels of agricultural development.

¹⁰ This is not to say that there are not other more fundamental biophysical differences which constrain African agriculture, although biophysical pessimism should also not be overstated. Indeed, a humbling precedent for the agricultural pessimism school is that prior to the Green Revolution the same kind of pessimism was largely directed at Asia, not Africa. Terms of trade pessimism is also warranted to some degree, although this too is not a fixed constraint. In the right institutional environment poor farmers have the opportunity to diversify their outputs in response to changing demand conditions in both the domestic and international economy. And whilst it is true that prices for some commodities have declined in recent decades, increased demand from China and India potentially warrant some price optimism, whilst a reduction of trade barriers in OECD countries could still mean a substantial boost to LDC agriculture.

¹¹ This positive association between farm yields and nonfarm income shares for high income groups could also be explained by: a. diminishing returns to agricultural investments which eventually increase the marginal attractiveness of nonfarm investments; b. the larger asset base of the rural rich (including land) which provides collateral to facilitate debt-financed nonfarm ventures; c. income-elastic demand for less physical labor; and d. better education and health, which explains both higher yields and access to productive nonfarm opportunities. In a study on India 1970-2000, Foster and Rosenzweig (2004) fail to find that agricultural growth spurred broader growth. They suggest that agriculture-driven growth may not work in areas poorly endowed with agricultural assets, or for poor landless people. But even then, doubling agricultural yields raised general incomes by 8 % and agricultural incomes by 20 % (Foster and Rosenzweig, 2005:540)

¹² Hazell and Diao (2005), under reasonable assumption, calculate that nonagriculture output in a typical African country would have to grow by 24 percent per year in order to achieve 3 percent growth in total employment, and even that would only just keep up with growth in the labor force. Moreover, high rates of urban unemployment invariably lead to increases in crime rates and social instability.

¹³ For example, discrimination against agriculture can push unskilled workers off the land and into the cities where they will be willing to work for low wages. Food prices can be kept low implicit and explicit taxes on agriculture, and via food imports. And in countries with high rural inequality, a sufficient food supply at low prices can be obtained from the land-abundant rural elite in exchange for targeted subsidies.

¹⁴ See pages 7-10 in Lipton (1988) for a review of his earlier arguments concerning democracy and urban bias.

¹⁵ One caveat here, however, is that the large marginal effect of population density could partly reflect the lower costs of creating rural infrastructure in population dense economies (Simon, 1992).

¹⁶ Krueger et al. (1991) measured nominal rates of taxation of agriculture for 18 countries for 1960 to 1984. The various authors in that study were asked to first compare actual agricultural prices to benchmark international prices for both producer prices and input prices and thereby gauge the extent to which producer prices fell short of or exceeded the world price ('Direct intervention'). They also estimated what each country's exchange rate would have been under a free trade regime with a sustainable current account deficit. The extent of 'indirect intervention' was then gauged by estimating the hypothetical decline in prices of goods purchased by agricultural producers if there had been no trade interventions. The effects of these two interventions are then added to give the total extent of taxation or subsidization of agriculture in each country. One of the main findings in that study was that price distortions constituted a larger form of agricultural taxation than explicit taxes.

¹⁷ For example, whilst extreme price distortions are sufficient to destroy economic growth, their removal may not be enough to create economic growth (Rodriguez & Rodrik, 2001; Easterly, William R., 2005), especially in a sector which is highly dependent upon public investment, R&D, extension and infrastructure activities (Lipton & Ahmed, 1997; Kherallah, *et al.*, 2002; Thirtle, *et al.*, 2003; Fan & Rao, 2004). Yet another view argues for a strategy in which governments set artificially low agricultural prices at early stages of development, but counterbalance this taxation with high rates of public investment in agriculture, thereby simultaneously ensuring agricultural productivity growth, low food prices, low industrial wages and industrial growth (Wade, 1990).

¹⁸ In Japan and the EU tariffs on fully processed food are twice as high as those placed on first-stage processed food; in Canada they are 12 times as high.

¹⁹ The implications of OECD subsidies to agriculture are difficult to quantify, and partly depend on the nature of the support, especially whether support is linked to production. The developing countries which suffer most are producers of cotton (West Africa), sugar, tobacco and vegetable oils.

²⁰ Data are available on request. Comparisons over time are somewhat complicated since agricultural aid has been redefined slightly (DFID, 2005c), increasing amounts of aid have been delivered as program or multi-sector aid, and some agricultural aid redirected towards rural people may not be registered as agricultural sector aid.

²¹ The historical context of rural development projects should not be underemphasized nor viewed as apologist. The heyday of rural projects was the late 1960s, 1970s and early 1980s. Unfortunately, this meant that major rural development strategies were operationalized in a period of severe oil price shocks and a global slowdown in growth rates, especially among OECD countries which constitute the final market for many LDC agricultural goods. In addition, the 1970s was a period of severe political instability in both Latin America and Sub-Saharan Africa (democratization has increased markedly in both continents since, especially Latin America). Thus the broader economic and political background against which the rural development drive took place was exceptionally poor.

²² Note that we analyse research on agriculture within the economics profession, not efforts in agricultural R&D (which actually strongly declined; see Pardey et al, 2006; Beintema and Stads, 2006)

²³ Data prior to 1994 are available, but the total number of publications is well under 100 for all these years and could therefore be misleading for a number of reasons. The period 1994-2005 excludes data for 1999, in which about 7 times the normal number of working papers were published, for reasons not yet established. Inclusion of 1999 data did not radically change the trend in the data, but did mean that 1999 data were constituted a large outlier for the “agriculture and rural development” category, since this proportion was only 7.0%, a much lower value than 1998 (14.7%) or 2000 (15.4%). It was therefore excluded on this basis.

²⁴ Although we note that in absolute terms the number of papers on the agricultural sector in 2005 was quite high relative to previous years. However, the total numbers of working papers had obviously risen proportionately.

²⁵ The one exception in this trend being the 2002 *Building Institutions for Markets* report (The World Bank, 2001), directed by Nicholas Stern, an erstwhile critic of the neglect of agriculture and dualism.

²⁶ Perhaps one caveat to the conclusion that The World Bank has been especially neglectful of agriculture, however, is that the emphasis on agricultural development in academic journals is now no larger than it was in World Bank working papers in the mid-1990s (around 14%). In other words, general researchers have essentially been catching up to World Bank researchers, if one assumes that the two measures can be compared in absolute terms.

²⁷ Marketing boards a case in point. There is little doubt that many of these institutions were severely urban biased despite reasonable theoretical grounds for their existence (e.g. economies of scale in R&D, extension, service delivery, and their price stabilization role). But rather than improve these institutions, they were typically dismantled, especially in Africa. Their departure has tended to reveal severe weaknesses in agricultural markets, especially information asymmetries, price instability and power imbalances between wholesalers and small farmers.