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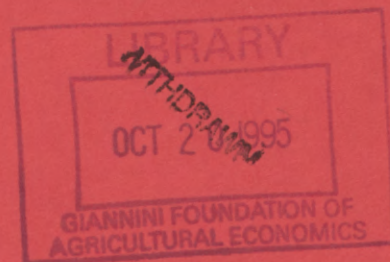
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International Employment Policies

**Regional growth linkages in the era of liberalization:
A critique of the new agrarian optimism**

by

Gillian HART

*Working Papers are preliminary material circulated
to stimulate discussion and critical comments*

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Preface

The 1990s opened up some new perspectives for the welfare of the developing countries. For many of them external events should prove to be more favourable than in the 1980s, although for a considerable number the external sector is unlikely to be a source of dynamism and the foreign exchange constraint will continue to be severe. Some countries are experiencing a radical transformation in economic and social development towards the liberalization of all markets, greater openness to the external sector, a different emphasis in market regulation, and towards greater political pluralism. An apparent novelty of this situation is that political pluralism and economic liberalism were rarely joined in the past. Whether there has been a major cultural shift based on a belief that markets are indeed less likely to fail in delivering the goods than are governments, or whether the identification of political and economic liberalism will be short lived, remains to be seen.

Currently, however, the widespread parameter changes in economic and social policy making appear drastic and it must be expected that they will call the objectives and instrumentalities of government intervention in the economy into question. The perceived nature of the desirable form of regulation of financial markets, goods and, most importantly for the ILO, labour markets will also change, although the process of change is likely to be spasmodic, uncertain and perhaps contradictory. In any event, democracy can, and often does, select a market-based production system as socially desirable but can nonetheless expect the public sector to play a greater role in the social field. This may be a question of regulating private activities, it may be one of the extent of government, social and infrastructural expenditure, all of which is important both for human capital development and employment generation. If the latter, there is then scope for considerable disagreement about trade-offs between the steps necessary to provide the government with the resources it needs and their effects, through generating distortions in production and savings, on the efficiency and sustainability of the productive system and the generation of employment. Furthermore "government failure" may arise in social sector development where programmes may be insufficiently thought through, implemented or followed-up.

Against this background the ILO has initiated a number of studies to pick up, as it were, the themes of old issues in a new setting of liberalization. The issues in question are those of investment in human capital, of rural-urban linkages, of gender inequalities and of labour markets and labour regimes. The present study by Gillian Hart¹ begins by describing a new "agrarian optimism" that contends that with trade and market liberalization urban biases are being removed, or reduced, and agriculture is being promoted. While agricultural growth might pass smaller farmers by, it should help the landless by stimulating non-agricultural activities.

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Gillian Hart's critique of this new optimism shows how even in two alleged success stories of the operation of this "agrarian optimism", namely Malaysia and Taiwan, China, agricultural growth has not led to the diversification of rural output. Instead the interaction between agricultural and non-agricultural growth depends on institutional factors and a positive interaction does not follow from a simple reliance on market forces. Local institutional arrangements and patterns of resource use matter, and they in turn can only be understood within a specific context of macro-economic policies and national political structures. In fact, China seems to best display positive benefits to employment of rural diversification. But rural industrialization in China has depended crucially on mechanisms which have caused local surpluses to be retained and reinvested.

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REGIONAL GROWTH LINKAGES IN THE ERA OF LIBERALIZATION: A CRITIQUE OF THE NEW AGRARIAN OPTIMISM

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Introduction

In the wake of liberalization and structural adjustment of the 1980s, a new agrarian optimism is taking shape. Proponents of this view maintain that, with the demise of import substitution strategies, the market distortions that discriminated against agriculture are being removed. So too are the urban biases associated with import substitution. Accordingly, the way is clear for accelerated agricultural growth. Since urban incomes and living standards are higher than those in rural areas, this spatial and sectoral reorientation of economic growth is not only more efficient, but also more equitable.

Firmly grounded in orthodox economic liberalism, this new agrarian optimism is a far cry from the "basic needs" and "redistribution with growth" of the 1970s; we are talking here of the development of capitalist agriculture (albeit on a smallish scale), rather than any kind of redistributive or welfarist approach. Most proponents concede that employment elasticities are such that the *direct* effects of accelerated agricultural growth on labor markets and poverty alleviation are likely to be quite limited. Rather, agricultural growth will stimulate non-agricultural activities in rural regions which will benefit those with little or no land or other assets.

This chain of reasoning, which runs from removing price distortions against agriculture to non-agricultural employment expansion and poverty alleviation in rural regions, is in fact heavily problematic. In recent years, there has been a mounting critique of the argument that economic reforms aimed at "getting agricultural prices right" will automatically generate sustained agricultural growth (e.g. Streeten 1989; Saith 1991; Rao and Caballero 1991; Singh and Tabatabai 1992). These and other critics have pointed out that even if neoliberal reforms do stimulate export agricultural production, the benefits are likely to be skewed heavily towards better-endowed producers and regions; at the same time, increasing food prices discriminate against the poor in rural and urban areas.

This paper will focus on later links in the chain - namely those concerned with the relationship between agricultural growth and non-agricultural employment generation. The key argument is that agricultural growth generates not only backward and forward production linkages, but also consumption linkages - i.e. the increased income from agricultural growth will generate multiplier effects that stimulate non-agricultural growth in rural regions. Since the goods and services that rural people demand when their incomes increase tend to be relatively labor-intensive, consumption linkages hold out

considerable potential for employment generation and poverty alleviation through a self-sustaining process of decentralized regional development.

Based on the experience of Taiwan in the 1950s and 1960s, the concept of consumption linkages operating in conjunction with production linkages originates from analyses of the role of agriculture and intersectoral resource flows in an endogenously-driven *national* industrialization strategy marked by a close articulation between foodgrains agriculture and industry (Lee 1971; Mellor and Lele 1973; Mellor 1976). More recently, the growth linkage concept has been redefined in *regional* (i.e. sub-national) terms. As discussed in Section 1, this shift from the macro to the regional level of analysis has recast the concept in terms that are quite consistent with neoliberal policy prescriptions. It is this regional-level conceptualization of linkages between agriculture and non-agricultural diversification that is being invoked in the context of economic liberalization and structural adjustment.

Evidence to support the claim that regional growth linkages work according to this neoclassical logic is drawn heavily from Asia. A supposedly classic case is the Muda region of Malaysia, the locus of the most sophisticated quantitative analyses of regional growth linkages (Bell et al. 1982; Hazell and Roell 1983). Growth linkage modellers have also produced estimates and claims on the basis of regional Indian data (e.g. Hazell et al. 1991; Deolalikar 1985). Although Taiwan provided the model for the original national-level analyses, it has now been redefined as the prototypical case of agriculture-industry linkages in rural regions.¹ Regional growth linkage concepts are, in fact, being presented in terms of a composite model of "Asian" success from which neoliberal policy recommendations are derived for other parts of the world (e.g. Haggblade et al. 1989).²

This paper shows how even in two of the putative Asian "successes" - Malaysia and Taiwan - agricultural growth has *not* in fact led directly to a sustained process of diversification in rural regions via production and consumption linkages. The interaction between agricultural and non-agricultural growth in rural regions depends crucially upon the social organization of production, access to resources, and the logic of investment - i.e. who gets the surplus, and what do they do with it. These local institutional arrangements and patterns of resource deployment in turn can only be understood within the specific context of macro economic and political structures and processes. The problem with the regional growth linkage model as a representation of "Asian" experience is that it abstracts from precisely those institutions operating at different levels of economy and society that have shaped what are, in fact, highly differentiated outcomes.

Ironically, the closest approximation to the outcome envisaged by the neoliberal regional growth linkage model is to be found in semi-socialist China during the 1980s, discussed in section 3. Resources were indeed retained within local circuits in ways that dynamized rural regions and sharply reduced poverty. But the mechanisms through which resources were retained and reinvested illustrate precisely the importance of who gets the surplus, and the institutional logic by which it is deployed. Rural industrialization in China since the 1980s is the partly the product of a remarkable set of institutional innovations which combine collective ownership with market discipline - somewhat along the lines of Bardhan and Roemer's (1992) model of market socialism.

The Chinese experience is neither idyllic nor replicable in any simple, direct fashion. When viewed comparatively with other Asian "successes", it does, however, clarify the implications of economic reforms for rural employment and poverty alleviation in two particularly important ways. First, while underscoring the importance of broadly-based agricultural growth for reducing rural poverty, it illuminates the fragility of the assumptions that undergird neoliberal versions of the new agrarian optimism - in particular, the faulty chain of reasoning that leads from the removal of price distortions against agriculture to non-agricultural employment generation in rural regions. Second, more positively, it focuses attention on how institutions - and the social relations of production and power that they embody - can be reconfigured in new ways that are both equitable and capable of coping with an increasingly competitive global economy.

1. THE SHIFT FROM MACRO TO REGIONAL MODELS OF GROWTH LINKAGES

Although growth linkages from agriculture have increasingly come to be defined in regional terms, the concept actually originates from debates over *intersectoral* resource transfers at the level of the national economy and the role of agriculture in macro processes of industrialization. The seminal work that shaped this conceptualization was Lee Teng-Hui's *Intersectoral Capital Flows in the Economic Development of Taiwan, 1895-1960* (1971). Lee demonstrated that Taiwan's agricultural sector had been heavily squeezed in the service of industrialization, but that investment in increasing agricultural productivity was essential to the continuous net outflow of capital from agriculture. He also showed that the per capita consumption of the rural population improved during the post-war period despite the increasing population in agriculture and a decline in the share of labor in total agricultural income; what was happening was that labor's share in rapidly growing nonagricultural income was increasing while food prices remained low.

These findings shed new light on a whole series of macro debates over the role of agriculture in the process of industrialization. For the Preobrazhensky vs. Bukharin debate, they represented a "third way" - neither "letting the kulaks run" a la Bukharin, nor the unmitigated squeezing of the peasantry advocated by Preobrazhensky. For Lewisian (1954) dual sector models, they underscored the limitations of viewing peasant agriculture as a stagnant reservoir of surplus labor. They also revealed the fallacies of Hirschman's assertion that "Agriculture certainly stands convicted on the count of its lack of direct stimulus to the setting up of new activities through linkage effects - the superiority of manufacturing in this respect is crushing" (Hirschman 1958: 109-110).

It was this latter point on which Mellor (1976) focussed in elaborating the concept of growth linkages. While the production linkages from economically backward agriculture may be low, technological innovation and intensification will enhance these linkages. In addition, and more importantly, rising agricultural incomes provide the impetus for consumption linkages: "Agriculture may provide a demand drive for development similar to that often depicted for foreign markets in export-led growth"

(Mellor 1976: 14). The concept of consumption linkages bears some resemblance to Marxist analyses of the development of the home market (e.g. Dobb 1951) and to the concept of social articulation in which wages create the bulk of final demand for all sectors of the economy (Kalecki 1968; see also de Janvry and Sadoulet 1983).

The growth linkages schema was firmly grounded in the Green Revolution in foodgrains technology which in theory provides increases in productivity, rising incomes, and an supply of cheap wages goods to back expanded employment. One of the most heavily debated questions is whether agricultural growth can play a progressive role without prior redistribution along the lines of a Taiwanese-style land reform; particularly if larger farmers have preferential access to yield-increasing technology, consumption linkages can easily turn into import leakages if incremental income from agricultural growth is spent on luxury imports rather than labor-intensive, domestically produced goods and services. Also highly problematic is the question of productive reinvestment in labor-intensive activities - i.e. the mechanisms by which the agricultural surplus is funnelled into productive, labor-intensive investment.

What is clear, however, is that this original conceptualization of consumption and production linkages was cast in terms of the development of the home market in relation to an endogenously-driven national growth strategy marked by a close articulation between agriculture and industry. Technological change in *foodgrains* agriculture forms the cornerstone of this macro model precisely because it provides the wages goods necessary to back expanded employment in non-agricultural sectors. This is by no means a closed economy model - the presumption is that capital-intensive imports will be paid for by labor-intensive manufactured exports. It is, however, a far cry from the export agriculture strategy now being advocated in the context of structural adjustment.³

The macro-economic origins of growth linkage concepts, and their grounding in Taiwanese experience prior to the expansion of export-led growth in the 1960s, are important to bear in mind when considering the *regional* growth linkage models that have become influential over the past decade, and that are now being used to legitimate neoliberal versions of agriculture-first policies.

The logic behind these regional growth linkage models derives from trade theory, and the key assumptions have to do with the supply and demand conditions for tradable and non-tradable goods. Agricultural commodities - either foodgrains or export crops - constitute the main tradable goods produced in the regional economy. Agricultural supply is determined primarily by technology, and prices set outside the regional economy. Diversification of the regional economy comes from regional non-tradables - i.e. non-agricultural goods and services produced and consumed within the regional economy, as well as income-elastic agricultural commodities such as dairy products, meat, vegetables, and fruits. The model then estimates the effect of an increase in the supply of the tradable (i.e. agricultural) commodity on value-added in the regional economy. Two of the key parameters determining the outcome are (a) consumption linkages defined as the marginal budget share spent on regional non-tradables, and (b) producers' demand for non-tradable intermediate inputs as a ratio of gross regional output. A crucial assumption is that the supply of regional non-tradables is perfectly elastic - in other words, the profits

from agriculture flow automatically into regional non-tradables whose demand has increased.

Quantitative estimates of production and consumption linkages at the level of the regional economy were pioneered by Bell, Hazell, and Slade (1982) in their evaluation of the Muda irrigation project in northern Malaysia. Muda is widely regarded as one of the most successful instances of Green Revolution technology. The multi-million dollar irrigation scheme enabled the switch from one rainfed rice crop a year to two high-yielding crops, and was organized in such a way that even small-holding peasants gained access to high-yielding seeds and fertilizer, and experienced significant increases in income. To quantify the direct and indirect effects of the project, Bell et al. used an input-output model derived from a social accounting matrix for the Muda region. They estimated that every \$1 of value added in agriculture generated directly from the project stimulated an additional \$0.83 in the region's non-farm economy. Of these downstream effects, 40% was due to production linkages (backward and forward), and 60% to consumption linkages. Subsequent analysis of consumption linkages by Hazell and Roell (1983) claimed that larger farmers exhibited the most highly multiplicative patterns of demand in the regional economy.

These results have become enshrined as confirmation of the argument that agricultural growth generates beneficial spin-offs in non-agricultural sectors *within* rural regions. The estimation procedure used in Muda has since been replicated in the North Arcot district of Tamil Nadu in India, producing very similar results (Hazell, Ramasamy, and Ramgopalan 1991). Quantitative estimates of high regional growth linkages in other parts of Asia based on somewhat different techniques include Ahammed and Herdt (1984) in the Philippines, and Deolalikar (1985) in the Punjab.

Using a simplified version of the original Muda model on a scattered set of data from different parts of Africa, Haggblade et al. (1989) estimate that African regional growth multipliers are approximately 60% below those in Asia; a \$1 increase in agricultural income in Africa produces only 50 cents of additional rural non-agricultural income, compared with more than 80 cents in Asia. The reasons they give for lower production and consumption linkages include ecology, low population densities, lower levels of commercialization, and urban-biased policies which constrain non-agricultural supply response. These quantitative estimates of regional growth linkages reinforce popularly-held views of generic "Asian" as opposed to "African" conditions and dynamics (or lack thereof).

One of the most controversial aspects of the quantitative regional growth linkage models have been the estimates of consumption linkages - in particular, the contention that larger farmers display more multiplicative consumption patterns because they spend a higher proportion of incremental income on regional nontradables (e.g. Hazell and Roell 1983; Haggblade et al 1989). Accordingly, they should be the main targets of productivity-increasing agricultural projects. This argument, which has been applied both to Asian and to African cases, flies in the face of the widely-held view that an agrarian structure dominated by egalitarian peasant agriculture (such as that in Taiwan) is most conducive to high levels of demand for labor-intensive, locally-produced goods (e.g.

Ranis and Stewart 1987).

In fact, the trade-theoretic logic of regional growth linkage models renders the analysis of consumption linkages highly problematic. "Nontradables" are defined to include all locally produced goods and services that are consumed entirely within "the region". Yet, as Harriss (1987) points out, the definitions of both are in practice highly arbitrary. For example, since Hazell and Roell (1983) defined nontradables to include the wholesaling and retailing of goods produced elsewhere, their conclusion that higher income groups have more multiplicative consumption patterns is simply a reflection of their (arbitrary) definitions of spatial boundaries and commodities.

Apart from these definitional problems, the logic of consumption linkages alters fundamentally with the shift from the national to regional scale of analysis. For example, Hazell and Roell (1983) define rice as a tradable, the consumption of which is by definition undesirable because it represents a leakage of potential "foreign exchange" from the regional economy. Yet in the macro model, expanded consumption of foodgrains by low income groups is an essential element of the endogenously-driven growth dynamic because it maintains agricultural prices and profitability in the context of increasing productivity. Another indication of this shift in logic is that in the regional model it doesn't matter whether "agriculture" refers to foodgrains or export crops, whereas the macro model is predicated on foodgrains agriculture as the chief wages good. The social articulation that characterized the macro model is, therefore, abandoned in the regional model. "Consumption linkages" take on a different meaning in the sense that the spatial location of consumer demand comes to matter more than expanding the consumption base of the working class.

The shift from the national to the regional level of analysis also entails strong assumptions about the relationship between the two levels. The issue (and problem) is that regional growth models not only "presume that regional growth is an end in itself and give no regard to spillover effects that might be induced elsewhere in the economy" (Haggblade et al 1989: 1190): in addition, as Harriss (1987: 275) points out, the direction of causation runs from agriculture to the rest of the economy, rather than the reverse or allowing for full feedbacks. In effect, this means that the macro economy matters at the regional level only to the extent that pro-agriculture policies are pursued. This assumption of course also means that regional growth linkage models can be made readily compatible with neoliberal macro policy prescriptions that are quite different from the original vision of a national growth strategy based on the articulation between foodgrains agriculture and industry.

A third set of assumptions that renders the regional growth linkage model capable of being transplanted into neoliberal policy milieu is that institutions only matter to the extent that the pattern of landholdings determines the strength of consumption linkages. In particular, the assumption of a perfectly elastic supply of regional nontradables means that questions of investment are treated as entirely unproblematic; as pointed out earlier, the surplus from agriculture flows smoothly into regional nontradable sectors. The abstraction from institutions also makes possible the homogenization of different cases; hence the generic "Asian" and "African" models.

In fact, it is precisely their abstraction from the macro context and from institutions that renders these models highly misleading. The central argument developed and illustrated in the following section is (a) that "linkages" need to be understood in terms of the social organization of production, access to resources, and the logic of investment, and (b) that analysis of the relationship between agricultural growth and non-agricultural diversification in rural regions must be situated within an historically specific and informed understanding of macro economic and political structures and processes. When Asian "successes" are repositioned within an institutionally-specific and macro-historical context, we can see quite clearly how these supposedly homogenous cases in fact exemplify multiple and quite divergent paths of sectoral and spatial development.

2. AGRICULTURAL GROWTH AND REGIONAL DIVERSIFICATION: A REINTERPRETATION OF ASIAN "SUCCESSSES"

Both Taiwan and Malaysia are often invoked as basically similar exemplars of regional growth linkages set in motion by agricultural growth. In terms of macro-economic policy, both countries encouraged agricultural growth and avoided the "urban bias" type policies typically associated with import substitution industrialization. According to regional growth linkage logic (and quantitative estimates of growth linkages in the Malaysian case) both countries exemplify agricultural growth leading to a regionally-decentralized non-agricultural growth process. In both Taiwan and Malaysia there have also been significant reductions in rural poverty. Taken together, these elements seem to offer quite compelling support for the regional growth linkage hypothesis.

In fact, there are important dimensions of both Malaysian and Taiwanese experience that are quite at odds with the basic presuppositions of regional growth linkage models. In the case of Malaysia's Muda region, high estimates of regional growth linkages produced by quantitative models have not in fact translated into a sustained regional growth process. As discussed more fully below, capital has flowed out of the region, and the limited diversification of income and employment away from agriculture has come about mainly as a consequence of massive and ongoing levels of national government spending in the region. In the Taiwanese case, rural industrialization and the diversification of rural regions really got going in the late 1960s - considerably later than the surge in agricultural growth which took place in the early 1950s following the land reform. While agricultural growth may well have been a necessary condition for rural industrialization, it is hardly a sufficient explanation.

To explain these patterns, one has to take account of precisely those dimensions that are effectively assumed away in regional growth linkage models - namely, a historically-specific and informed understanding of (a) the organization of production, access to resources, and the logic of investment, and (b) macro economic and political structures and processes. The explicit incorporation of macro-structural and institutional dimensions into the analysis of regional growth processes not only explains those patterns

that are at odds with regional growth linkage models; it also enables us to see the actual dynamics by which predominantly agricultural regions of Taiwan and Malaysia have taken quite different trajectories of non-agricultural diversification.

Malaysia

There are obvious reasons why the Muda region of Malaysia has come to be seen as a prime instance of regional growth linkages. As mentioned earlier, the installation of the massive irrigation scheme in the late 1960s was accompanied by the rapid spread of yield-increasing rice technology to which even the smallest landholders gained access. Accordingly, even though land distribution is more skewed than that in Taiwan following the land reform, Muda does represent a more or less unimodal pattern of agricultural growth. In addition, infrastructural facilities (particularly transport and electrification) are well developed. Indeed, growth linkage concepts formed an explicit element of regional planning in Muda, and planners confidently expected that agricultural growth would set in motion a vibrant process of non-agricultural diversification of the regional economy (e.g. Afifuddin 1974).

The disappointing performance of the regional economy was documented in a study carried out by the FAO and the World Bank in the early 1970s following the construction of the Muda irrigation scheme which noted that, although double-cropping had generated a marked increase in agricultural employment, "there is little evidence from other sectors studied to suggest that employment has materially increased in the region as a consequence of the faster growth in other components" (FAO-IBRD 1975: 41). By the latter part of the 1980s, the limited diversification of the economy had become quite clear. Wong and Anwar (1987) document the modest diversification of GDP and employment in Kedah state (which is coterminous with most of the Muda scheme) and in Kota Setar, the main conurbation in the Muda area (Tables 1 & 2). Although GDP growth was rapid in the early 1970s, it slowed significantly and increasingly lagged behind that of Malaysia as a whole. The increases in non-agricultural activities that did take place were mainly in commerce and services, and were dominated by government services which were the main source of employment growth in the region (Table 2).

The extremely limited diversification of the regional economy was clearly evident at the household level in 1987 when I conducted a restudy of a village in the Muda region that had previously been studied in 1977 just as mechanized rice harvesting was taking hold. My data reveal a substantial increase in non-agricultural income sources at the household level over the 10-year period, along with a decline in agricultural employment brought about by mechanization. For the majority of poor households with small landholdings, what was happening was that men and younger women had migrated to construction and industrial jobs in other regions, while older women took over responsibility for agriculture. At the time of my study, the macro economy was emerging from a severe slump, and many of these men were unemployed. Most of those people who did gain access to non-agricultural jobs in the local economy were the sons of politically influential large landowners who commuted daily between the village and the

city of Alor Setar, about 20km away. In a pattern consistent with the regional-level data, the vast majority of these non-agricultural jobs were in government services.

Far from being squeezed or discriminated against, agriculture and the region more generally have been the recipients of massive largesse from the central government. Part of government spending in the region goes to massive rice production subsidies, including free fertilizer, water, extension services, and strong price supports; according to the Mid-Term Review of the Fifth Malaysia Plan, by the mid-1980s the rice sector (of which Muda represents more than 50%) was receiving 80% of agricultural subsidies amounting to nearly M\$1 billion (at the time the exchange rate was US\$1=M\$2.4). In addition, government spending on other forms of "rural development" in Kedah rose by 168% after an electoral defeat of the ruling coalition in the late 1970s, compared with 16% in Peninsular Malaysia as a whole (Gibbons 1985). Since then, Kedah (the home state of the Prime Minister) has continued to receive a disproportionate share of government spending.

The indifferent performance of the regional economy is extremely difficult to explain within the logic of the regional growth linkage model. One could argue that the definitional problems discussed earlier produced inflated estimates of the multiplier effects. In particular, the definition of "regional nontradables" to include goods purchased within the region meant that items like Japanese colour televisions and imported refrigerators popular among high income groups were included in this category.

By far the most important reason why agricultural growth has not had a greater impact on diversification of the regional economy is that much of the surplus has been channelled out of the region. Since the inception of the Muda scheme, there has been a veritable haemorrhage of capital from the region. Bell et al (1982) estimate that net capital outflow increased from M\$18 million in 1967 to M\$35 million in 1972 to \$74 million in 1974. The latter figure represented 72% of household savings in that year. Although data for subsequent years are not available, there is every reason to suppose that capital has continued to pour out of the region.

Basically what is happening in Muda is that both the agricultural surplus and other resources pumped into the region are systematically channelled out. Regional growth linkage models, with their neglect of investment and the macro political-economic context, can neither capture nor explain this crucially important dynamic. Within the confines of neoclassical logic, all one can say is that the outflow of capital reflects more profitable opportunities elsewhere in the economy, and may therefore be optimal from the viewpoint of the economy as a whole.

The limitations of this type of explanation become evident when one enquires more closely into investment patterns. In the first place, investment in Muda is clearly differentiated along ethnic lines. Chinese households, that comprise the majority of the population in towns in the region, are estimated to have received about a third of the total increase in income arising directly and indirectly from the project (Bell et al. 1982). Circumstantial evidence suggests that a large proportion of these resources moved out of the region through the banking system, as well as through direct investments in real estate in other parts of Malaysia. Malays, who constitute the majority of agriculturalists, divert

resources from the region through different mechanisms. One of these is *Amanah Saham Nasional* (ASN), a national unit trust fund exclusively for Malays that guarantees high and secure returns. ASN was one of the mechanisms set up under the New Economic Policy in 1971 to transfer assets into Malay hands. In the village where I conducted research in the late 1980s, all the wealthier households had made substantial investments in ASN. Another important source of Malay investment (and capital outflow) is the pilgrimage to Mecca: "The Alor Setar branch of the nationally-run pilgrimage board boasts the highest deposits collected in the whole country. The board's investment in the [Muda] region is nil while much of its investments are in oil-palm estates in the east coast states and in shipping and real estate in Kuala Lumpur" (Afifuddin 1978: 348). In addition, most of the wealthier Malay households hold shares in the Farmers' Association, the bulk of whose assets are invested outside the region (MADA 1987).

That wealthy Chinese households in Muda divert resources from the region reflects not only outside opportunities, but also their intense insecurity. In the northern rice-growing regions like Muda dominated by Malay-Muslim interests, property rights of Chinese are heavily restricted by Malay Reservation legislation. Their position is rendered more precarious by the relative strength of PAS, the fundamentalist Islamic party which challenges not only the ruling coalition but also the position of non-Malays. Chinese merchants, millers, and moneylenders have been funnelling money out of the region since at least the turn of the century, and their failure to evolve into an industrial capitalist class derives at least in part from the insecure position in which they find themselves.

The logic of investment by Malays is shaped in an even more direct way by larger political-economic structures, the historical processes which they embody, and the position of the region within these structures and processes. The enormous inflow of government spending, along with programs such as the ASN trust funds and the Farmers' Associations, are part of an effort by the ruling coalition to develop a Malay middle class within the framework of the New Economic Policy instituted in 1971. Northern rice-producing regions like Muda constitute a particularly important base of political support. The enormously lucrative opportunities created by government spending are allocated through a system of political patronage run by rural party bosses. Gaining access to these opportunities requires investment in political connections. In fact, part of what appears as "consumption" expenditures in fact represents investment in ensuring the conditions of access to opportunities along the lines analyzed by Berry (1989); the pilgrimage to Mecca frequently also falls into this category of investment. The logic of investment in Muda mimics rentier forms of accumulation in the larger economy (Lubeck 1992), and goes a long way towards explaining why the agricultural surplus has failed to generate a self-sustaining regional growth process.

The structure of the macro economy - in particular the historical disarticulation between agriculture and industry at a macro-sectoral level - are also important to understanding constraints on diversification in regions like Muda where rice production is concentrated. Until the 1970s the economy was driven by export production of rubber, tin, and palm oil located mainly in the southern and central states of Peninsular Malaysia;

since then, foreign investment in electronics and textiles has assumed growing importance. Both export agriculture and industry are (or have been) dominated by enclave forms of organization marked by weak linkages into the national economy.

Plantations based on cheap indentured Indian labor have been the dominant organizational form in Malaysian export agriculture. Low plantation wages have facilitated high profits and rates of resource transfer from agriculture, but they have militated against a demand-led stimulus from the agricultural sector. Although smallholder production of rubber and palm oil increased relative to plantations in the post-colonial period (after 1958), British corporate interests continued to control much of the surplus from export agriculture until the 1970s when they were taken over by the state.

Export-led industrial growth which increased rapidly in the 1970s displays a similarly weak pattern of linkages. A comparative analysis of direct and indirect inter-industry linkages and import leakages for 11 industrial groups in several Asian countries and the US (UNIDO 1985) estimated that, with only a few exceptions, the multipliers (total and net of leakages) for Malaysia are low relative not only to Japan, Korea, and the US, but also in comparison with other Southeast Asian economies.

On one level, low industrial linkages in Malaysia can be explained in terms of the predominance of foreign investment, particularly in electronics and textiles. More fundamentally, the de-linked pattern of industrial development reflects efforts by the coalition in control of the state to curtail the development of a powerful Chinese industrialist class. Foreign capital was seen as easier to control than Chinese capitalists, many of whom moved into real estate and speculative forms of investment, often in alliance with strategically-placed Malays. Hence the rentier forms of accumulation alluded to earlier, and the ongoing reliance on foreign investment that is largely disconnected from the Malaysian economy.⁴

Taiwan

Lee's (1971) analysis of macro intersectoral resource flows in Taiwan discussed earlier was basically aspatial. Analysis of agriculture-nonagriculture linkages in Taiwan has since come to focus very heavily the decentralized patterns of economic growth and, in particular, on rural industrialization. In a very real sense Taiwan has come to represent an idealized vision of development of rural regions, with rapid growth of small-scale forms of non-agricultural production accompanied by an increasingly egalitarian pattern of inter-household income distribution (Anderson and Leiserson 1980; Ho 1982).

Although quantitative modellers have not been as active in Taiwan as they have in Muda, regional growth linkage logic forms the pre-eminent explanation of Taiwan's success in rural industrialization. According to this interpretation, the causation runs directly from agriculture to rural industry via production and consumption linkages within rural circuits. Thus agricultural growth in Taiwan set in motion a mutually supportive and localized cycle of agricultural and industrial expansion within rural regions (Ranis and Stewart 1987). The strength of consumption and production linkages in Taiwan stems from highly multiplicative consumption patterns brought about by land reform,

from policies that have favored small-scale, labor-intensive techniques, and from infrastructural investment in rural regions.

While this interpretation no doubt captures some key elements of decentralized growth processes in Taiwan, there are important changes in the structure of non-agricultural employment in rural regions which cannot be explained simply in terms of regional growth linkages. In particular, the main surge in rural industrialization only took place in the late 1960s. Between 1956 and 1966, the period in which agriculture was growing rapidly, the chief increases in rural non-agricultural employment were in the services sector; although rural manufacturing employment was growing, the share of manufacturing in total rural employment remained fairly stable (Table 3). After 1966, the growth of employment in rural manufacturing shot up to over 10% a year, and the share of manufacturing in total rural employment grew from 8.9% in 1966 to 26.1% in 1980 (Tables 3 & 4). These patterns are difficult - if not impossible - to explain in terms of agricultural growth leading directly to the industrialization of rural regions via production and consumption linkages.

An alternative explanation is that the rather sudden increase in rural industrialization since the latter part of the 1960s reflected an "urban push" rather than an "agriculture pull" (Shih 1983; Amsden 1991). During the import substitution phase in the 1950s and early 1960s, industrialization was predominantly urban. Shih (1983) shows how, with accelerated industrialization brought about by Taiwan's entry into export markets in the latter part of the 1960s, important industries that were originally urban-based began dispersing into rural areas; these include textiles, leather, chemicals, rubber products, basic metals, metal products, and transport equipment. Increasing costs of production in urban areas were a major driving force behind this urban-rural shift in industrial location: "The increasingly difficult access to city land, residential congestion, and higher wages for workers in urban areas are all conditions favoring decentralized industrialization" (Shih 1983: 20).

Amsden (1991) adduces additional evidence that points in this direction. First, the proportion of industrial employment located in the five largest cities declined from 37% in 1966 to 23% in 1986; the rural share of industrial employment remained constant at 31%, although it increased by a multiple of 4.7 (compared with 2.9 in the five largest cities). The most dramatic increase in industrial employment actually took place in suburban areas where the share of industrial employment rose from 32% to 46% between 1966 and 1986. A second indication that industrial location patterns were increasingly shaped by "urban push" rather than "agricultural pull" factors is the trend towards equalization in plant size in each of the three locations: average plant size in rural locations increased from 13.5 employees in 1966 to 22 in 1986, about the same size as the typical factory in large cities and slightly smaller than the average size plant in the suburbs (25 employees): "Given the smallness of traditional rural industry, an increase in plant size may be interpreted as the entry of industry from the outside" (Amsden 1991: 1132).

An in-depth village study by Hu Tai-Li (1983; 1984) of changing patterns of investment in relation to shifting macro conditions documents these nonlinear processes

and the mechanisms through which they operated in a particular place. Hu shows how, following land reform in the 1950s, reduced rents and improved agricultural technology enabled farmers to save some money; however capital accumulation was limited by low rice prices and high taxation of agriculture. During the period of import substitution industrialization in the larger economy (i.e. the 1950s and part of the 1960s), agricultural work and income diminished, while urban industries began to absorb younger workers. Migration to urban areas turned around abruptly after 1970 when more than twenty small-scale factories were established in the village: "Thirteen of them are machinery-processing plants. The remaining ones are dedicated to wood product manufacturing, electroplating, vacuum-modeling and sealing, electronics assembly, and hat and bag manufacturing. In addition, four families have established similar kinds of small-scale factories outside the village, and some outsiders have rented houses [in the village] as factories" (Hu 1983: 392). Very few of the factories were officially registered or operated with government licences. All were organized on the basis of familial and kinship ties, and all were engaged in subcontracting relationships with export firms.

In short, there is strong evidence to suggest that regional growth linkage concepts misinterpret some of the key dynamics of rural industrialization. Taiwanese rural industrialization is *not* simply a localized process operating directly via production linkages and demand for regional nontradables. Rather, the driving force behind rural industrialization was export production. As in the Malaysian case, the intersectoral and spatial dynamics of agriculture-industry linkages can only be understood within a macro-historical and institutional framework.

Two sets of institutional considerations seem particularly important to the Taiwanese case. The first has to do with the nature of the state and its relations with the peasantry. While the initial capital for industrialization was indeed extracted from agriculture (and was facilitated in important ways by technological improvements during the Japanese colonial period), it was the state which captured the bulk of the agricultural surplus, and channelled it into national infrastructure and industrial projects in urban areas. Much has been written about the developmental state in Taiwan (e.g. Amsden 1985; Gold 1986; Wade 1991). From the perspective of intersectoral linkages, relations between the state and the peasantry are particularly crucial. Land reform in Taiwan not only stimulated consumption linkages via redistribution; very importantly, it *also* eliminated rural elites and gave the state direct access to the agricultural surplus.

The importance of this restructuring of agrarian power relations can best be appreciated in comparative terms. Elsewhere I have shown how, not only in Malaysia but also in Indonesia, Bangladesh, the Philippines, and Thailand, the character of dominant rural groups and their relationship to the state is a key determinant of the particular forms and trajectories of capitalist development (Hart 1988; 1989). In each of these cases, the state's role in the agricultural sector and in rural regions is mediated in crucially important ways by the power that these rural elites are able to wield. Selden (1993) has suggested, in contrast, that there are significant parallels between Taiwan and China in the post-war period; in both cases land reform broke the grip of landlords, facilitated the direct extraction of agricultural resources, and opened the way for state-led

industrialization in the 1950s.

In Taiwan, the state's role in shaping agriculture-industry and rural-urban linkages is also evident in the era of export liberalization, when concerted government policies of industrial decentralization contributed to the "urban push". After 1968, according to Tsai (1984), most officially recorded industrial development took place in industrial zones, the majority of which were located outside the five largest cities in rural and suburban counties. In this interpretation, industrial dispersal reflected tight state control over land use and zoning in rural areas in the face of rapidly increasing land prices in urban areas, combined with heavy investment in infrastructure, and facilitated no doubt by the geographical configuration of the island.

But rural industrialization is not just a matter of government policy and relative land prices; industrial structure and the social organization of production - and, in particular, the system of subcontracting practised in Taiwan - is crucially important to understanding sectoral and spatial linkages.

On the face of it, subcontracting in Taiwan appears very different from that in Japan and Korea; instead of a layer of sub-contractors clustered around one big firm, it is characterized by a plethora of small firms linked through complex, multi-layered chains, and by a more highly developed division of labor (Amsden 1991; Shieh 1991). As Amsden points out, however, big firms may be less visible than in South Korea, but they are centrally involved in the sub-contracting system. They include multi-national corporations that contract from outside the country for Taiwanese goods and services, large Taiwanese firms that act as input suppliers, and foreign investors who (in contrast to those in Malaysia) are subject to strict local content requirements that promote backward linkages which often take the form of sub-contracting (see also Schive and Majumdar 1990).

The other distinctive feature of Taiwanese subcontracting is its organization through familial and kinship ties and networks (Shieh 1991; Greehalgh 1988). One should be careful about invoking "the Chinese family" in a decontextualized, essentialist way. In general, although the rules that govern access to and control over resources and labor by women and men, and elders and juniors, are socially and culturally constituted, they are not given and fixed; rather gender and generational relations are contestible and malleable in relation to changing economic and political conditions (Hart 1992). What is particularly interesting and important in the Taiwanese case is the way gender and kinship relations have interacted with larger macro structures to facilitate both the "flexibility" and the spatial diffusion of the subcontracting system - and, indeed, the accumulative capacity that has made Taiwan into one of the main foreign investors in the Malaysian economy today.

Summing Up

On closer inspection, optimistic claims that agricultural growth generates a sustained process of non-agricultural diversification in rural regions via production and consumption linkages turn out to be heavily problematic. In Muda, regional

diversification through direct investment of the agricultural surplus simply did not happen. In Taiwan, rural industrialization took place through a far more indirect set of mechanisms and through the expansion of export production. Albeit in a sketchy way, I have tried to show how these very different outcomes were mediated by complex institutions operating at multiple, intersecting levels of society and economy.

For all the historical specificity and institutional complexity of the two cases, they illustrate the central importance of resource access and investment that regional growth linkage models take for granted: in a nutshell, the question of who gets the surplus, and what do they do with it? In both cases, we saw how a large chunk of the agricultural surplus was channelled out of rural regions, although the mechanisms through which resources moved out and the uses to which they were put in the larger economy were very different. In both cases, there was also a reverse process by which resources flowed into rural regions - and were again put to very different uses, dictated by the institutional logic of investment and accumulation and by macro political-economic structures and processes.⁵

Chinese experience with agricultural growth and rural industrialization in the 1980s offers a particularly interesting set of contrasts as well as parallels. To a far greater degree than in Malaysia and Taiwan, resources have been retained and reinvested within rural circuits. This superficial resemblance to the regional growth linkage model has, however, been accomplished by a remarkable set of institutional innovations.

3. LOCALIZED LINKAGES IN ACTION: RURAL INDUSTRIALIZATION IN CHINA IN THE 1980s

Following the decollectivization of Chinese agriculture and economic reforms in the late 1970s and early 1980s, rural output and income increased dramatically. In the early stages of reform, agriculture was clearly the leading sector; between 1978 and 1985, agricultural output increased at an annual rate of 6.7%, twice the 3.3 % annual increases of the preceding 20 years (Selden 1993: 201. Grain yields increased by 3.8% per year, and the output of other major crops (cotton, sugar, peanuts, etc.) more than tripled between 1977 and 1984 (Riskin 1987: 293). By the mid-1980s, however, agricultural growth levelled off, while rural industrialization literally exploded.

According to official statistics, the number of rural non-agricultural enterprises grew from 1.5 million in 1978 to approximately 19 million in 1991, and rural non-agricultural employment (including seasonal and part-time workers) expanded from 28 million to about 96 million (Ody 1992; *The Economist* 11/28/92).⁶ The output of rural industries has been growing by about 30% per annum for the last decade, and by the early 1990s they constituted more than 40% of China's industrial employment (*The Economist* 11/28/92; see also Nee 1992 and Selden 1993). Although the precise numbers are problematic, it is clear that the rural industrial sector was by far the most important source of non-agricultural output and employment growth.⁷ Particularly in the southern coastal provinces, rural industrialization is oriented primarily towards export production and comprises nearly 25% of China's exports.

Rural industrialization is not confined to export production, however; rural non-agricultural enterprises are widely (although far from evenly) dispersed, and have been driven to a significant degree by the development of the home market - in other words, by consumption linkages stimulated initially by agricultural reforms. Agricultural expansion also generated backward and forward linkages. But consumption and production linkages do not provide a sufficient explanation of the speed and spatial distribution of rural industrialization. Of crucial importance are the institutional arrangements within and through which investment has taken place. In large part, the initiative for rural industrialization has come from local governments at the township and village level acting in effect like diversified corporations and, at least in formal terms, these so-called Township and Village Enterprises (TVEs) are collectively owned.⁸ These institutions, together with the reorganization of agricultural production, are crucial to understanding the speed and intensity of non-agricultural diversification in rural China over the past decade.

As far as agricultural reforms are concerned, two considerations are particularly important to understanding non-agricultural diversification. First, in much of the mainstream literature, the household responsibility system is often portrayed as the triumph of individualized forms of production, private enterprise, and the market. In fact, if Chinese agrarian reforms are viewed in a comparative context, what is striking is that decollectivization entailed (a) a highly egalitarian distribution of land rights among (although not within) households, and (b) the absence of private property rights in land (Selden 1993). As discussed more fully later, subsistence guarantees in the form of access to land are a key factor in the cost advantages of rural vis-a-vis urban industries in China.

Second, Philip Huang (1990) suggests that the significance of the return of household organization to farming lay not so much in the supposedly superior incentives powering increases in crop yields, but rather in the the capacity to make more efficient use of labor for diversifying the rural economy. In collectivized agriculture, Huang argues, the workpoint system encouraged not only large labor surpluses but also what he terms "loitering labor"; the shift to the household responsibility system was accompanied by a sharp decline in labor use in grain agriculture, combined with diversification into what in China are termed sideline activities, such as poultry, rabbits, silkworms, vegetable production, fishponds and so forth. Hence, he argues, the key difference between collective and family production units is the latter's motivation and "superior ability to diversify into low return and/or high risk sideline production by mobilizing auxiliary or spare-time family labor" (Huang 1990: 221). The lacuna in Huang's interpretation is his emphasis on incentive structures or carrots, and his neglect of the question of sticks - in other words, the intra-familial (i.e. gender and generational) power relations governing the mobilization and control of what he terms "auxiliary and spare-time" labor. His focus on household-level diversification is, nevertheless, useful and important.

One cannot, however, extrapolate from household-level to regional diversification. Particularly after 1984, collectively-owned local government enterprises became the

primary engine of non-agricultural growth. Official data on these township and village enterprises are problematic. In addition to contradictory sets of statistics (Odgaard 1990/1), large private enterprises frequently register as collectives: "An important reason why entrepreneurs register under the 'collective' category is their fear that policies may change. Another is that they are thus subject to lower taxation and eligible for cheaper (subsidized) inputs. Moreover, it is also in the interest of local authorities to encourage the practice, as the enterprises become easier to control and can be squeezed for local levies" (Odgaard 1990/1: 34). Many of the collectively-owned enterprises are run by households (or groups of households) on a contractual basis, although local authorities typically maintain close control.

Despite these and other caveats - including the enormous variations in the nature and extent of collective enterprises and in relations between capitalists and the state at the local level - what has emerged over the past decade is a system in which the bulk of the profits of rural industries are controlled by local governments and disbursed within local circuits. Some of the profits go into local infrastructure, some into reinvestment, and some are paid out to individual households as dividends. Far from soft budget constraints, township and village enterprises (TVEs) confront fierce market competition although many do have preferential access to inputs (Nee 1992). In other words, as noted earlier, TVEs combine collective ownership (even if part of it is nominal) with market discipline. Ironically, it was a study by the World Bank (Byrd & Lin 1990) which first recognized the broader significance of what is, in effect, a remarkable institutional innovation that flies in the face of neoliberal preconceptions about the primordial importance of private property rights in the process of accumulation.

Fiscal reforms that began in the early 1980s provided the major impetus and incentives for rural government enterprises (Byrd and Gelb 1990; Oi 1992; Wong 1992). Through a system of bottom-up revenue-sharing, designed to reduce the fiscal burden of the central state, local authorities were required to submit only a portion of their revenues to the upper levels, and allowed to retain most of the remainder. Although there are variations in the precise formulae for governing revenue sharing, the system creates powerful incentives for local governments to generate income sources over which they can retain discretionary control. Cadres engaged in running collective enterprises are paid entirely from nonbudgetary revenues - in other words, their incomes are linked directly to profits, and are often two to three times higher than township cadres paid through regular budgetary sources (Byrd and Gelb 1990). Although considerable attention has been given to questions of incentives, it seems as though rather little is understood about the pressures and controls to which local government officials are subject, particularly in the disbursement of profits. In other words, the micro-politics of production and distribution in collective enterprises remain something of a mystery (see, however Rozelle [n.d.] for an effort to move in this direction).

Different types of TVEs are tied into the local, national, and global economy in ways that exemplify the multiple and complex linkages between agriculture and industry. A significant proportion engage in subcontracting with either foreign capital, or with state-owned (often urban-based) industries. While linkages with agriculture appear

minimal in these cases, workers' access to land lowers labor costs, particularly relative to urban workers who (at least until recently) have received housing and various other forms of social security through urban work units. In short, access to land in rural areas may be performing much the same function as state-provided housing in Hong Kong and Singapore (Castells et al. 1991) in lowering the reproduction costs of labor.⁹

Although foreign capital and central state-owned industries have provided start-up funding for a number of TVEs, Huang (1992) estimates that about 30% of start-up capital has come from community funds. What is particularly important is that at least a part of peasant savings have been retained in local circuits through Rural Credit Cooperatives. Thus, for example, when the central government was calling for reductions in capital investment in rural industries in the late 1980s, rural coops in fact expanded the scale of their loans to rural industries despite government prohibitions (Zweig 1991: 428).

For all that they are highly innovative in their capacity to combine growth and redistribution within local communities, TVEs are also problematic. One obvious problem is that they create and reinforce local parochialism and regional inequality. Precisely because local economies that are favorably located and well-endowed can retain resources, internal mechanisms of redistribution contribute to increasing inter-regional inequality. Restrictions on spatial mobility in China exacerbate these inter-regional inequalities. In addition, unregulated expansion of rural industries has often contributed to serious environmental degradation.

It is also possible that TVEs and the mechanisms of redistribution that they embody will prove quite ephemeral. For example, during a trip to Szechuan province in late 1992, I was struck by the pace at which nominally collective TVEs were in the process of becoming privately-owned joint stock companies. The impetus for privatization seemed to have come from a far more tolerant attitude toward private enterprise by the central government signalled by an easing of restrictions earlier that year. Apparently what was happening was that enterprises no longer needed the protection of being defined as collectives. The interesting question is what will happen to relations between local governments and capitalists as privatization proceeds - and, in particular, whether and to what degree local governments will continue to capture and redistribute industrial profits.

Chinese experience with rural diversification cannot, of course, be emulated in any direct way. Viewed in conjunction with other Asian cases it does, however, explode widely-held assumptions and open up new possibilities. Accordingly, it has an important bearing on debates over economic reform, employment, and poverty alleviation.

Concluding Observations

This paper has called into question the regional growth linkage argument that there is some optimal degree of agrarian inequality which will maximize consumption linkages, thereby generating non-agricultural expansion within rural regions. I have tried to show both how the assumptions which undergird these arguments are problematic, and that the institutional dynamics at work in two of the key exemplars of regional growth linkages -

Malaysia and Taiwan - are in fact quite at odds with the claims of the model. The analytical framework that unites these two very different cases is the importance of intersecting institutions at different levels of society and economy in shaping agriculture-industry linkages and their socio-spatial outcomes.

This framework also informs the second purpose of the paper, which is to highlight the significance of institutional innovations responsible for rapid diversification of rural regions in China over the past decade. The significance lies not in direct replicability, but in the demonstration that collective forms of ownership (or control over profits) can combine with market discipline not only in theory (Bardhan and Roemer 1992), but also in practice. A potentially very useful line of research would be to pursue a clearer understanding of the institutional logic and dynamics through which these arrangements have operated in practice, together with the nature and sources of variations.

The clear limitations of economic liberalization measures *per se* to address issues of rural poverty and employment underscore the importance not only of macro policies that support broadly-based agricultural growth (e.g. de Janvry and Sadoulet 1989), but also institutional innovations that combine expanded local access to and control over resources with economic efficiency. While institutional change is, of course, the product of multi-layered political struggles, a fuller analytical exploration of existing and potential institutional forms could contribute in important ways to the construction of a progressive agenda.

ENDNOTES

- * I would like to thank Ananya Roy for excellent research assistance, and David Szanton for lengthy discussions and extremely helpful comments.
1. See Ranis and Stewart (1987) for a discussion of the Taiwanese case and additional references. Although this analysis is more nuanced than the narrowly neoclassical version of the regional growth linkage model, it is cast in terms of agricultural growth leading directly to non-agricultural diversification of rural regions via production and consumption linkages.
 2. Both in general discussion and in more rigorous analyses, these Asian successes are often contrasted with essentialized African "failures". For example, Haggblade et al. (1989) estimate that African regional growth multipliers are approximately 60% below those in Asia. The key to moving African agrarian economies closer to the Asian ideal lies in redressing common pro-urban policy biases along the lines advocated by structural adjustment programs (Haggblade et al. 1989: 1191).
 3. For critiques of this strategy, see Streeten (1989), Rao and Caballero (1990), Saith (1991), and Singh and Tabatabai (1992).
 4. Although recent research suggests that changes are underway in certain high-technology sectors, the fact remains that the delinked pattern of industrialization has militated against diversification in rural regions.
 5. Although a discussion of Indian cases lies beyond the scope of this paper, analyses by Harriss (1987) in Tamil Nadu and Tewari (1991) in the Punjab provide comparative evidence that is consistent with some of the key arguments developed in relation to Malaysia and Taiwan.
 6. These data use a broad definition of non-agricultural employment which records nonagricultural employment if it exceeds three months a year. There is a narrower definition which enumerates individuals according to the sector where they work for the longest period of the year (Ody 1992: 3). On the broader definition, ruralindustrial employment grew from 47.6 million to 57.0 million between 1986-8; Ody (1992:5) notes that employment growth in industry was much slower on the narrower definition "for reasons which are not fully apparent".
 7. The industrial sector, according to official statistics, accounted for 70% of the gross value of output of rural nonagricultural enterprises. Ody (1992:3) points out, however, that the use of gross output measures tends to overstate the share of industry due to double-counting of intermediate goods.
 8. According to data supplied by the World Bank, TVEs account for about 70% of the gross value of output even though they constitute only about 10% of rural enterprises (Ody 1992: 3).

9. This social security function of landholding may also conflict with efforts to increase agricultural productivity through land consolidation and the realization of economies of scale.

TABLE 1. MALAYSIA: SECTORAL SHARES OF GDP

<u>Sector</u>	<u>Malaysia</u>			<u>Kedah</u>		
	1971	1980	1985	1971	1980	1985
Agriculture, Forestry, Fishing	30.5	23.4	20.6	58.6	52.9	47.7
Mining	6.6	10.3	10.3	0.7	1.3	1.2
Manufacturing	14.7	20.5	19.3	4.9	8.4	8.3
Construction	4.3	4.7	5.2	3.6	2.7	3.2
Utilities	1.9	1.5	1.7	0.8	1.0	1.2
Transport, Communications	5.0	5.8	6.5	3.5	4.3	4.5
Trade	13.6	12.4	12.9	\ 15.5	5.7	5.8
Finance	8.9	8.5	8.9	/	9.3	9.8
Government Services	11.6	10.5	12.4	\ 12.4	12.1	15.6
Other Services	<u>2.9</u>	<u>2.4</u>	<u>2.1</u>	/	<u>2.3</u>	<u>2.7</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Wong and Anwar (1987), Table 1.2

TABLE 2. MALAYSIA: SECTORAL SHARES OF EMPLOYMENT

Sector	<u>Peninsular Malaysia</u>		<u>Kedah</u>		<u>Kota Setar</u>		
	1970	1980	1970	1980	1970	1980	1987
Agriculture	49.7	36.4	71.7	59.6	58.9	41.5	37.1
Mining	2.0	1.2	0.3	0.3	0.0	0.0	0.0
Manufacturing	9.2	14.5	3.9	7.1	6.0	7.7	8.8
Utilities	0.7	0.2	0.3	0.0	\ 3.6	\ 3.5	3.7
Transport	3.6	3.7	1.7	2.3	/	/	/
Construction	2.2	4.8	1.0	2.4	1.7	3.6	3.3
Trade	\ 10.0	13.1	\ 7.2	9.8	\ 12.1	14.7	17.9
Finance	/	1.9	/	0.6	/	1.3	1.9
Services	17.3	21.8	13.5	16.0	17.7	24.2	27.3
Unknown	<u>5.3</u>	<u>2.4</u>	<u>3.4</u>	<u>1.7</u>	<u>0.0</u>	<u>3.3</u>	<u>0.0</u>
Total	100.0	100.0	103.0	99.8	100.0	99.8	100.0

Source: Wong and Anwar (1987), Tables 1.6, 2.5

TABLE 3. TAIWAN: SECTORAL SHARES OF EMPLOYMENT

Sector	<u>1956</u>			<u>1966</u>			<u>1980</u>		
	Taiwan	Urban	Rural	Taiwan	Urban	Rural	Taiwan	Urban	Rural
Agriculture	55.52	26.82	70.91	38.20	15.12	53.02	20.39	7.11	33.13
Non-agriculture	44.48	73.18	29.09	61.80	84.88	46.98	79.61	92.89	66.87
Mining	1.70	3.74	0.60	1.55	3.15	0.52	0.58	0.75	0.41
Manufacturing	12.11	19.88	7.94	12.67	18.52	8.91	29.23	32.50	26.11
Utilities	0.40	0.65	0.27	0.50	0.75	0.33	0.64	0.76	0.52
Construction	2.31	3.90	1.45	2.33	3.71	1.44	6.74	7.32	6.18
Commerce	7.43	11.53	5.23	9.58	13.58	7.01	12.86	16.91	8.98
Transport, Communications	3.97	7.52	2.06	3.92	6.58	2.21	5.74	7.76	3.79
Services	15.87	24.79	11.10	25.65	34.02	20.27	23.82	26.89	20.88
Not elsewhere classified	<u>0.69</u>	<u>1.17</u>	<u>0.44</u>	<u>5.60</u>	<u>4.57</u>	<u>6.29</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Shih (1983) Table 2.

Note: "Urban" is defined to include 5 big cities (Taipei, Keelung, Taichung, Tainan and Kaohsiung) and 3 metropolitan counties (Taipei, Taoyuan and Hsinchu). The remaining part of Taiwan is defined as rural and includes 13 counties (Yilan, Miaoli, Changhwa, Nantou, Yunlin, Chiayi, Tainan, Pingtung, Taitung, Hualien, and Penghu).

TABLE 4. TAIWAN: ANNUAL GROWTH OF EMPLOYMENT

Sector	1956-1966			1966-1980		
	Taiwan	Urban	Rural	Taiwan	Urban	Rural
Total	4.49	5.68	3.79	3.42	5.09	2.13
Agriculture	0.65	-0.20	0.82	-1.11	-0.42	-1.25
Mining	3.56	3.89	2.38	-3.66	-5.16	0.34
Manufacturing	4.96	4.94	4.99	9.79	9.40	10.28
Utilities	6.63	7.18	5.90	5.32	5.25	5.42
Construction	4.58	5.15	3.71	11.57	10.31	13.32
Commerce	7.19	7.43	6.89	5.62	6.75	3.94
Transport, Communications	4.36	4.29	4.49	6.27	6.34	6.16
Services	9.62	9.09	10.24	2.88	3.34	2.34
Not elsewhere classified	28.83	21.00	35.71	—	—	—

Source: Shih (1983) Table 1.

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