Chapter 6.

Agricultural policy and rural poverty

Introduction

There are several reasons to expect that agricultural policies have an impact on rural poverty in Mexico, and this view is widely held. First, the high incidence of poverty in rural areas and the fact that agriculture is a rural activity means that the two overlap in spatial terms. Consequently, many poor people are involved in agriculture, and a part of total agricultural output is provided by poor land-owners and poor labourers. Second, the historical role of the land tenure system in Mexico to redistribute wealth is closely connected to the agricultural sector for which land is a critical input: the process of dividing land holdings has an impact on agriculture, and the evolution of agriculture affects returns to land. These associations give rise to an expectation that agricultural policies can, should or do alleviate poverty in rural areas. Thus, while the focus of this study is on agricultural policies, and previous chapters have discussed their effects on the agricultural sector and commodity markets, in this chapter the effects of agricultural policies on rural poverty is explored in terms of the incidence of support.

The focus on agricultural policy is maintained, save in those cases where programmes provided outside the confines of sectoral policy provide an important benchmark, so this assessment is strictly relevant to the impacts of agricultural policies on rural poverty. Moreover, the direct effects of income transfers are addressed, not second-round effects; the potential that an agricultural policy would generate greater regional short- or long-run economic growth that helps poorer people indirectly, by raising their wages for example, is not entertained here.

Evidence shows that the reforms to agricultural policies brought about substantial improvements in the distribution of transfers, but this success is relative to a basis that, as of the early 1990s, exhibited a pronounced bias against the rural poor. Judged by the incidence of payments — to whom the initial transfers are made — agricultural policies after the reform are still found to be regressive in an absolute sense and, with the exception of PROCAMPO, are likely regressive relative to income as well. That is to say, the share of expenditures under most agricultural policies that accrues to the wealthy is greater than their share of income. In contrast, programmes that target clearly poverty alleviation, of which PROGRESA/Oportunidades are archetypes, are progressive in an absolute sense; a majority of expenditures made under programmes whose primary aim is poverty alleviation goes to poor people. Recent reductions in the rate of rural poverty were likely caused by these targeted programmes and to broader economic growth, rather than by agricultural policy.
The land tenure system must also be considered as a policy that relates to both agriculture and to rural poverty. The second agrarian reform has not led to profound changes because of the limited scope. Despite important changes to the property rights in the early 1990s and more than a decade of adjustment, there are still limits to the property rights and serious disincentives to fully private ownership of land that perpetuate the existing structure of ejidos.

Land: the ejido reform and agrarian institutions

Following the Mexican Revolution, the Agrarian Reform (1917-1992) redistributed more than 100 million hectares — half of the country’s present land — to 3.8 million producers organised in the ejido or comunidades of the social property system. The antecedent concentration of land is difficult to imagine today. In 1905, when Mexico was 70% rural, of the total population engaged in agriculture, the 8,431 hacendados represented 0.2% of the total population but owned 87% of the land, while the 3.2 million peones accounted for 91% of the population and owned no land. Today, Mexico has the lowest land concentration (Gini coefficient 0.6) in the Latin America and Caribbean region, comparable to the land concentration coefficients reported for East and Southeast Asia. This distribution was achieved by 1940 and sustained through half a century of continued agrarian reform despite rapid rural population growth (Figure 6.1).

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**Figure 6.1. Land concentration curves — the Mexican Revolution and agrarian reform**

![Figure 6.1. Land concentration curves — the Mexican Revolution and agrarian reform](image_url)

*Sources:* Scott (2006b), based on the 1905, 1940 and 1991 Agricultural Censuses and PROCAMPO's Beneficiary Register (the latter as reported in Székely 2003, Table 5). “Population in agriculture” refers to all population engaged in agricultural activities, including all land-owning producers as reported in the Agrarian Census plus all landless rural workers (jornaleros agrícolas) as reported in the Population Census.
Contrary to expectations, land reform in Mexico did not initiate equitable economic development. Several explanatory factors may be at work, of which three are noted here. First, considering the crop conditions of Mexico relating to geology and climate, land equity was achieved at the cost of an excessive atomisation of plots relative to efficient scales of production, with much of the land distributed of limited agricultural quality. This problem was exacerbated over time as land redistribution continued apace with the goal of limiting inequalities in land distribution even as rural population grew, but the total land of Mexico did not. In addition to 1.9 million landless agricultural workers, in 1991 there were 2.2 million farmers with less than 5 hectares, and 1.3 million farmers with less than 2 hectares. Only 32.8% of ejido land today is for individual use (parcelas); of the rest, allocated to “common use”, only 1.6% was cultivated in 2001. The average size of individual farms in the ejido sector is only 5 hectares.

Second, the limited individual property rights of the ejido system, at least prior to the reforms of 1992, severely restricted agricultural land markets, as it was designed to do, and thus the efficient allocation of both land resources and complementary non-labour inputs. These limits lead to less than full property rights: conditionality on sustained use, non-transferability and incapability to use land as collateral to access credit. Compared to similar private lands, ejidos were consequently hampered by low investment rates and high levels of poverty.

Third, the generous agricultural support commitments of post-revolutionary governments, sustained to the 1982 crisis, through expensive price support and input subsidies such as credit, irrigation, energy, fertilizers and technical assistance, were highly distortionary and inequitable. Most of the benefits were concentrated in the larger Northern commercial farmers, fully by-passing subsistence farmers.

The Constitutional Ejido Reform of 1992, Article 27, was designed to strengthen property rights, generating a functional land market and efficient allocation of land resources. It aimed to achieve this through three principal means. First, the Agrarian Reform process came to an end, thus reducing uncertainty on land tenure associated with discretionary powers to expropriate land. Second, restrictions on ejido property rights were relaxed, completely freeing land rental and sales within the ejido. However, sales to outsiders require permission of the ejido assembly, and inherited land cannot be parcelled out to multiple beneficiaries. The possibility of a full privatisation of an ejido was also introduced, although this conversion requires a two-thirds majority vote of its members (dominio pleno). The third means to strengthening property rights in 1992 was a set of independent land titling and judiciary institutions (PROCEDE, Registro Nacional Agrario, Procuraduría Agraria, Tribunales Agrarios) that was established to implement the constitutional reforms to land property rights.

Contrary to both expectations and fears, the ejido reform led neither to a significant rise in agricultural productivity through a more efficient allocation of land resources and complementary inputs, nor to massive outflows of the newly landless into the cities. There is little evidence of a significant impact on the access of ejidatarios to complementary agricultural inputs through better functioning rural factor markets. There are no signs of even a gradual transformation of the social sector into private lands: a decade after the reform, less than 1% of ejidos had chosen to self-privatise, and these few cases have mostly involved peri-urban land intended for housing development.

On the other hand, by allowing the rental of land and freeing up the labour of ejidatarios seeking non-agricultural opportunities, the reform appears to have contributed to the expansion of non-agricultural activities (noted in Chapter 2). There is some
evidence of increasing integration of ejido households to non-agricultural activities performed within the ejido and non-ejido agricultural and non-agricultural activities, which "will ultimately erode differential returns to land, labour and capital across the sectors and reduce rural poverty in Mexico".10

There are several possible explanations for the limited impact of the reform on agricultural land and input markets and productivity. First, as noted, the reform left some important restrictions of ejido property in place, still limiting in particular the use of ejido land as collateral to access credit and the allocation of land to the most productive producers.

Second, many of the market transactions which the ejido reform did sanction and formalise (like rentals), appear to have been widely practiced informally before the reform.

Third, to the extent that the reform was not accompanied by changes in the tax treatment and support programmes benefiting the ejido sector, these incentives to improve performance of ejidos represent disincentives to privatisation. More generally, the ejido organisation represents a valuable asset not only for the internal organization of producer units, but also for the political representation of producer interests (Box 6.1).

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**Box 6.1. Why leave an ejido?**

Many observers have been surprised at the small numbers of ejidatarios who chose to privatise fully their land and leave the ejido since that right was established in 1992. In retrospect, however, it is possible to evaluate their incentives and disincentives. First, social incentives encourage the ejidatarios to stay in a group so that they can apply greater political power, and for a reliable support network in the absence of a credible public safety net. Second, financial incentives to stay in the ejido are strong: members have access to 42 social programmes that operate with little co-ordination, thus providing overlapping benefits, and that tend to favour ejido members even if technically available for everyone; ejidatarios are largely exempt from commercial land taxes and only pay a tax on their parcel, whereas they would pay taxes on income and land if they privatise; and the opportunities to earn income outside the ejido may be limited, particularly for older ejidatarios with less than average education. Third, they would face a difficult process to privatise land — a two-thirds majority of the ejido assembly — that would be costly to overcome. Fourth, if successful, they may end up with the non-contiguous parcels of land to which they have certified a claim and would lose access to the ejido’s communal land. Fifth, and most obviously, the benefits of leaving the ejido are uncertain, which, in the absence of social safety nets, means that leaving may be seen as risking self-preservation. The unsurprising retrospective: there have been very few sales of land and these sales are mostly explained by a few ejidos that have privatised as a group to take advantage of local land market booms attributable to nearby urban expansion.

*Source:* Interviews with PROCEDE officials.

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Fourth, the design and allocation of most agricultural output and input subsidies do not provide adequate incentives to increase productivity and shift from traditional to more profitable crops. On the one hand, these resources fail to reach those who would most depend on them to be able to risk venturing out of traditional crops, namely the smaller, poorer and most vulnerable producers. On the other hand, most of these instruments fail to give their beneficiaries (poor or non-poor) incentives to produce alternative crops, and they often actually support traditional crops. For example, more than 40% of Target Income resources have been allocated to maize producers on average over the last decade (1997-2005), excluding PROCAMPO.11 The general point being that only a small number of traditionally produced crops are eligible for output-linked payments under the dominant Target Income programme. More indirectly, this is also the case of the one main programme reaching poorer farmers, PROCAMPO, which is less directly tied to
current planting decisions – yet is not designed to induce these farmers to convert – but, by transferring a valuable payment on the basis of land, may be a disincentive for these farmers to sell to better equipped and more competitive producers who would be better able to achieve this conversion (Box 6.2).

Box 6.2. Capitalisation of PROCAMPO payments into land values

The OECD is currently conducting research on the effect of agricultural support, including payments like PROCAMPO, on asset prices. Although in a preliminary stage, this research leads to the expectation that while payments granted on the basis of land do not determine land prices by themselves, their values tend to be capitalised quickly into land values. Thus, benefits tend to accrue to land owners: the price of land will increase by up to the present value of the expected future payments and, if the payment was given to renters, the rental prices would increase by up to the amount of the payment.

Anecdotal evidence of capitalisation is present in Mexico: producer group representatives refer to a ‘tax’ on their members who find themselves paying more to rent land as a consequence of this programme. This increase in rent is expected to equal roughly the annual PROCAMPO payment associated with the land – and the payment is to the land owner, not to the government – but this nevertheless suggests that the payment is being reflected in rents and, consequently, should also be apparent in land prices.

Capitalisation of payments to land depends on the efficiency of the land market. The rules governing communal land in Mexico impair the operations of a land market and, in the absence of meaningful prices or rental rates, there may be no asset price into which these payments are capitalised. More generally, there is probably even less scope for market returns or transfers associated with other programmes to be capitalised as ejido members stereotypically do not participate in the market and, consequently, any rental rates of plots traded formally or informally within the community probably only very indirectly reflected commercially-oriented policies and prices, if at all. Thus, although it is premature to judge the degree of capitalisation of PROCAMPO payments and other policy transfers into ejido land values, the historical absence of any meaningful value associated with that land likely precludes capitalisation.

Finally, there is a fifth factor which is often noted in passing, but rarely analyzed at any depth in terms of its policy implications. This is the role of subsistence agriculture as a safety net for poor households in the absence of formal social security. Less than 5% of the elderly (65 and older) in the rural sector are currently covered by any of the public social security institutions in Mexico (Figure 6.2). The country compares unfavourably to others in Latin America and the Caribbean in this indicator, just below Bolivia and Ecuador and well below the 92% covered in Brazil. It is not surprising in these circumstances that ejidatarios cling to their land as they grow old instead of passing it on to younger, more productive generations: the average age of right holders in certified ejidos is 54 years, with 60% over 50 years, and a 29% over 65 years in a country where the latter age group still represents only 5% of the population.

Land reform, social insecurity and migration are interdependent to a certain extent. Some young people respond to the limited access to ejido land by seeking opportunities elsewhere. Migration from rural areas erodes informal support networks that provided care in the absence of any credible public social security services that provide some protection for the rural poor. As older people become increasingly dependent on themselves, without recourse to public services or younger workers, they cling more tightly to land holdings and rely even more on subsistence farming. Thus, the constraints on land transactions and the absence of any social security lead to a three-stage cycle that reinforces rural poverty: limited land opportunities for young people leads to migration, migration erodes informal support networks, eroded informal support networks leads older people to cling that much more tightly to land, and so on. However, there are other
factors at play, such as remittances from migrated workers. Moreover, this cycle exists within a wider context; there are other reasons that young people may leave rural areas – such as pursuing perceived higher wages in other areas – and other reasons older people may choose not to sell their land.

But minifundio subsistence farming is not only functional as a safety net. Perhaps surprisingly, it also still appears to have an important poverty-escaping potential. Finan, Sadoulet and de Janvry (2002) find that for households with little land (less than one hectare of rain fed maize equivalence), “an additional hectare of land increases welfare on average by 1.3 times the earnings of an agricultural worker” (p. 1). The realisation of this potential is, however, strongly sensitive to access to complementary assets like education and roads, in addition to household ethnic characteristics: “For non-indigenous small farmers with at least primary education and access to a road, the welfare benefit of additional land is on average seven times higher than for those without these attributes” (p. 1). These high returns to marginal increases in land at low levels of land ownership are partly explained by associated gains in the returns of other assets in the multi-sectoral economy of subsistence farming units.16

![Figure 6.2. Social security coverage in old-aged population (65+) in rural areas](image)


Agricultural support and rural development

The evolution of agricultural support has already been described in the first two chapters. The policies before the reform period included state intervention to the extent of guaranteeing high producer prices, subsidising inputs and assisting consumers. As noted earlier, the reform is not complete: while the transitional PROCAMPO payments are more neutral relative to markets, there remain substantial amounts of payments tied to inputs, such as energy, and output that are not market-oriented.

The net incidence of pre-reform policies was to the benefit of urban consumers up to the 1980s, implying a net tax on agriculture in the context of an overvalued exchange rate.17 This situation was reversed by the early 1990s, when the internal price of maize was 70% above international prices,18 and the tortilla subsidy — which had been cut after the 1983 crisis — was insufficient to compensate urban consumers for this differential. The broad consumer subsidy was gradually replaced by tortilla and milk subsidies intended to go to the poorest consumers, but these were costly to operate and not well
targeted in actual practice. The general tortilla subsidy, and with it CONASUPO, was finally eliminated in 1998, and food subsidies have since then been reallocated to rural areas with the creation and expansion of PROGRESA (as discussed below).

The policies in place before the reform period were antithetical to the needs of subsistence farmers and landless rural workers in two ways: first, the rural poor are net buyers of maize and thus paid higher food costs due to the pricing policies that extended even into the reform period; and, second, the consumption subsidies did not extend to rural areas, so rural poor had to buy at the higher government price without recourse to the subsidies available to urban consumers. Maize and coffee pricing policies in the 1980s and early 1990s have been estimated to have imposed implicit taxes on small agricultural producers in the poorest regions of 15-30%, redistributing the proceeds to large farmers in richer regions. Against this historical background, the rural poor had little to lose and potentially much to gain from the opening up of agricultural markets in the early 1990s. The liberalisation of basic crops markets (maize and beans) would negatively affect commercial producers of these crops to the extent that prices fall, but lower staple prices would benefit subsistence producers — two-thirds of all maize producers in Mexico — who are net consumers of these products. On the other hand, it could also have regressive effects through agricultural wages and land prices, although these have been limited by seasonal migration and the noted restrictions on land markets. Moreover, as discussed before, the liberalisation is not complete as transitional and other payments continue.

PROCAMPO is a producer compensation mechanism tied to land rather than to commercial sales with few limits on current practices, as discussed before. Initiated in 1994 and scheduled to be phased out by 2008, the programme covered around 2.7 million agricultural producers and 13.3 million hectares in 2005. By paying a uniform amount per hectare per season (between MXN 963 and MXN 1160 in 2005) independently of production or marketed output, in contrast to earlier price support policies, as well as to other current support instruments, PROCAMPO is both less distortionary and accessible to subsistence farmers, as noted in previous chapters. Almost half of all beneficiary producers have less than 2 hectares, although they obtain only 13% of transfers, while 3.8% of producers with more than 18 hectares obtain 33% of benefits (Figure 6.3). In terms of population deciles ordered by income per capita, large-scale producers in the top rural decile obtain a disproportionate share of the programme’s transfers (35%), but the distribution is flat for the other 90% (Figure 6.4). This might not appear especially progressive, but PROCAMPO is seen here to be more equally distributed than income or land. Moreover, it will be shown later to be by far the least regressive among the principal agricultural support programmes operating in Mexico. PROCAMPO may in fact be the first policy in the post-revolutionary agrarian history of the country of which subsistence farmers have obtained a large share of transfers.
Despite its comparative pro-poor incidence among agricultural support programmes, PROCAMPO excludes important segments of the population that are poor, namely landless agricultural workers, and includes other segments that are not poor, principally large commercial producers. Considering the distribution nationally, rather than within the rural sector, not only do a third of PROCAMPO payments go to the richest rural decile, but in fact 23% of PROCAMPO transfers are concentrated in only 2.6% of producers who are in the top national income decile, revealing that the producers with the largest scale are among the richest households in the country (Figure 6.5). Indeed, evidence presented for other programmes later indicates that this small group at the top of
the national income distribution absorbs the majority of all agricultural support transfers in Mexico.

**Figure 6.5. Distribution of PROCAMPO transfers and beneficiaries by national population, in 2002**

![Distribution of PROCAMPO transfers and beneficiaries by national population, in 2002](image)


PROCAMPO represents a significant addition to the finances of poor farmers – setting aside its role as a transitory payment to compensate commercial producers as tariff reductions take hold. While appropriately market-oriented and neutral with respect to output, save that land must be used for agriculture or kept in an environmentally approved conditions, few producers have diversified from the traditional list of activities. A recent evaluation of PROCAMPO finds that more than a decade after the initiation of the programme almost half of all beneficiaries, small-scale and large-scale producers alike, state that they are unaware that they are permitted to plant any crop without losing the benefits, and only 5.8% report having switched crops.23

**Alianza** and **Apoyos a la Comercialización (ASERCA)** have gained in importance, and since 2001 together absorb a budget roughly equivalent to PROCAMPO’s (MXN 15 billion in 2005). 24 **Alianza**, as described earlier, serves as an umbrella over three principal groups of programs, the **Programa de Desarrollo Rural** (PDR), the **Programa de Fomento Agrícola**, and the **Programa de Fomento Ganadero**, financed by federal government and through matching grants by lower-level governments. In contrast to the other two programmes which have no equity objectives, the sub-programmes grouped under the PDR are formally intended to benefit low-income and other vulnerable groups and include explicit, though imperfectly enforced, targeting criteria.

The evidence suggests that PDR fails to achieve its distributive priorities. For example, the programme is required to allocate at least 70% of its resources to Very High or High marginality localities (as defined by CONAPO’s marginality index), but in 2004 only 32% of the expenditures associated with PDR were spent in these localities, and less than 2% in Very High marginality localities (Figure 6.6). In the context of a recent evaluation of the programme, FAO (2005) used a survey and typology of beneficiaries based on socioeconomic and productive variables to evaluate the distribution of PDR benefits (Figure 6.7).25 The FAO finds that 36% of PDR beneficiaries are in the poorest
group (Type 1) and 43% in the second poorest (Type 2), whereas just over half of recipients of total Alianza beneficiaries are one of these two groups, and concludes that the PDR “is targeted to low income producers” (p. 3). However, “low income” is a relative measure defined here within the set of beneficiaries only, not in the rural population at large. World Bank (2006) uses a rural population survey (ENHRUM) to place these types within the wider population, obtaining very different results: almost 75% of PDR funds are received by the richest 20% of the rural population (Figure 6.8).

**Figure 6.6. Distribution of PDR funds by marginality of localities in 2004**

![Figure 6.6](image1)


**Figure 6.7. Distribution of PDR funds by marginality of producer socioeconomic “type” in 2004**

![Figure 6.7](image2)

To evaluate the distribution of benefits provided by these programmes, they must be examined in the appropriately broad context; concentration curves for the PDR, PROCAMPO and Oportunidades must be compared to one another, and to concentration curves representing the distribution of income and land (Figure 6.8). This comparison assumes that the ordering criteria for PDR (based on the socioeconomic characteristics and assets of the FAO typology) are reasonably correlated with the criteria used in the case of the other two programmes (income per capita). Another limitation is that the FAO typology is biased towards the top of the rural income distribution, and does not provide information on PDR shares below the eighth decile. But the distance between the curves seems large enough to draw broad inferences despite these uncertainties in the data.

Oportunidades and PROCAMPO are progressive programmes relative to the distribution of income, according to these data. Oportunidades, in particular, is progressive in an absolute sense: the poorest half of the rural population receives two-thirds of the total benefits, whereas the richest 10% of the rural population receives less than 4% of the benefits. Although regressive in absolute terms, in contrast to Oportunidades, the distribution of PROCAMPO transfers is progressive relative to the distribution of income, and therefore redistributive. In other words, while it is true that the poorest half and the richest 10% of the rural population receive the same share of PROCAMPO transfers — a third in either case — these payments still tend to redistribute
income, which is even more concentrated in that the richest 10% account for more than 40% of rural income whereas the poorest half of the rural population have less than a fifth of rural income. In contrast, the PDR curve lies clearly below the rural income curve, is therefore regressive even in relative terms, contributing actually to increase income inequality in the rural sector.

The curve representing the distribution of the PDR benefits follows the agricultural land distribution curve remarkably closely. Given that the rest of Alianza is not targeted towards poorer recipients, and is thus even more reggressively distributed than the PDR, the latter distribution may be reasonably interpreted as a lower bound for the (absolute) degree of regressivity of other agricultural policies that target objectives unrelated to development, more generally. That is to say, the other two sub-programmes of Alianza are regressive relative to income, and almost certainly regressive relative to land. Given the focus of these elements of Alianza that target investment and commercial development, this result is unsurprising: a large part of the rural population — at least the poorest 50% — is excluded simply because they are landless or have plots which are too small to be reached by such programmes, except for PROCAMPO, and in the upper half of the land distribution there are probably strong economies of scale in the capacity to attract agricultural support resources, unless some explicit targeting is applied as in the case of the PDR. Moreover, although many elements of Alianza are targeted to include ejidatarios, only around 10% were able to take advantage of these programmes, possibly because poorer producers tend to lack resources to provide matching funds.

In addition to Alianza as a whole, the latter hypothesis would certainly apply to the Target Income and other programmes that are oriented towards commercial producers operated by ASERCA. Target Income, in particular, provides a subsidy that equals the difference between a guaranteed and local price for certain crops, albeit with certain limits on the amount paid to an individual producer. It has been shown to have direct effects on the types and amounts of crops produced. The programme has also been shown to generate transfers that do not accrue to subsistence farmers nor, to any great extent, to hired labour. Moreover, unlike PROCAMPO and the PDR, but like the rest of Alianza, this programme has no equity objectives; by design, benefits are concentrated on larger commercial farmers and the richest agricultural states. For example, in 2002, there were 67 000 beneficiaries with an average support per producer of USD 5 200. Such programmes are regressive relative to the rural income distribution.

Considering the distribution of the three programmes at the state level, the level of benefits per rural capita varies dramatically, with a broadly regressive distribution of benefits (Figure 6.9). The richer agricultural states of Sonora, Sinaloa and Tamaulipas obtain benefits per rural capita some seven to eight times higher than the poorest seven states (Chiapas, Guerrero, Oaxaca, Veracruz, Hidalgo, San Luis Potosí and Puebla). None of these seven states with the worst marginality receives a per capita level equivalent to the national average, and several of them receive well below half the national average.
Effectively targeted rural anti-poverty programmes

Complementing the reforms in land and agricultural support policies analyzed above, social policy in the rural sector underwent a similarly radical transformation since 1990. Although somewhat tangential to the focus of this report, the impacts of these programmes must be considered to provide the appropriate context for assessing rural development objectives of agricultural policies.

After deep budgetary cuts following the 1982 crisis, social spending only regained pre-crisis levels (as a proportion of GDP as well as in real per capita terms) by the end of the 1990s, but in contrast to the former peak, this was financed through a reallocation of public spending from administrative and economic functions (including agricultural support) to social programmes, doubling the share of social spending in programmable public spending, from 30% to 60% in the 1990s. As reported above, this tendency can also be observed in rural spending, where “social” programmes have commanded a large share of resources, as compared to “productive” programmes, in the last decade.

The most important reform in anti-poverty policy in this period was the creation of PROGRESA, offering direct monetary transfers to poor rural households conditional on basic school attendance and use of public health services. Beyond the innovation of using transfers to induce human capital investment decisions by households with the aim of reducing intergenerational poverty traps, in addition to immediate poverty reduction, this was the first programme in the history of Mexico to apply effective and transparent targeting mechanisms at the household level. The programme was rapidly expanded and covers 5 million households with a budget of MXN 35 billion in 2006. In 2001, it was
extended to urban areas and upper secondary education, and renamed *Oportunidades*, while retaining its original design and mainly rural coverage.

A second important innovation was the creation in 1996 of the *Fondo de Aportaciones para Infraestructura Social (FAIS)*, a large (MXN 27.6 billion in 2006) decentralized fund for basic infrastructural investment transferred to state and municipal governments through transparent targeting criteria at both levels, using explicit and public formulas based on poverty and infrastructural and development shortfalls. This replaced and absorbed most of the budgetary resources of the *Programa Nacional de Solidaridad* (PRONASOL), the anti-poverty and rural development programme in place at the start of the 1990s that was designed to by-pass local governments and respond to the organised demands of local communities directly. Reform had a notable effect on the distribution of resources of these programmes both among states, and within them: the budget share obtained by the six poorest states (Veracruz, Chiapas, Estado de México, Puebla, Oaxaca and Guerrero) expanded from 29% to 36% between 1988 and 1994, but increased to 54% by 2000.31 On the other hand, the community-level participatory element of PRONASOL was lost without compensatory gains in transparency and equity in the final allocation of resources within municipalities, as this last allocative decision is barely regulated and monitored.

This last point is illustrative of a broader history of failures of local, participatory and inter-agency development initiatives in rural Mexico. An ambitious new programme of this kind, *Microregiones*, failed to attract the necessary public and private resources to take off, given the complex vertical and horizontal co-ordination challenges involving three levels of government, multiple government agencies and programmes, and local economic initiatives and communitarian demands, often competitively rather than co-operatively motivated.

Finally, a rural temporary employment programme, the *Programa de Empleo Temporal* (PET), was introduced in 1995, with the joint participation of four Ministries (SCT, SEDESOL, SAGARPA, and SEMARNAT). It was designed as a self-targeted programme by offering a very low wage, 90% of the official minimum wage, calculated to attract temporarily unemployed workers in the season of low agricultural activity. Originally intended as a transitional programme following the 1995 crisis, it was one of the principal anti-poverty programmes in the Zedillo administration (1995-2000), though its budget has been sharply reduced since then. Thanks to the self-selection mechanism, the programme is as effectively targeted as Oportunidades, without incurring administrative targeting costs. However, in actual practice the programme has failed to deliver its resources counter-cyclically, reducing its net benefits by as much as 50% of the wage paid due to the high opportunity cost of participating in periods of high agricultural activity.32

**Pro-rural allocation**

Against a general context of urban bias in most social programmes during previous decades, social expenditures were redirected in part towards rural areas in the reform period. This shift in targeting was most effectively achieved in the case of food subsidies: elimination of the general tortilla subsidy that benefited urban areas in 1999; reduction of the targeted tortilla (Tortibono) and milk (LICONSA) urban subsidies; and creation and expansion of PROGRESA/Oportunidades, whose food component represents at present the principal food aid instrument in Mexico.33 The effect of these reforms was an increase in the rural share of food subsidies from 31% to 76% by official estimates34 (1994-2000),
or from 40% to 55% using ENIGH data (Figure 6.10). Before these changes, 70% of food subsidies were concentrated in Mexico City where only 7% of undernourished children live, while only 7% reached the Southern states with 50% of the undernourished children (Figure 6.11). By 1999, this regional distribution of food subsidies was in line with the regional distribution of undernourished children in the country. In terms of the national distribution of households, as a result of these reforms in the allocation of food subsidies, the poorest decile increased their share of food subsidies from 8% in 1994 to 33% in 2000, and the share of the poorest fifth of the population rose from less than 20% to over one-half (Figure 6.12).

Important pro-rural shifts in access to public social resources were also achieved in the case of health services for the uninsured. The share of health service expenditures going to rural areas increased from 20% to 28% between 1996 and 2002, and lower secondary education services, where the rural share increased from 16% to 26% between 1992 and 2002. This may be explained in part by expansions in the physical coverage of these services and the demographics and natural inertia in the coverage of educational services (coverage rates in primary education had already approached 100% by the early 1990s), but it also reflects the impact of PROGRESA, as its transfers are conditioned precisely on the use of these services.

Figure 6.10. Rural share in public expenditures in education, health and social security, 1990s and 2002

The critical failure in this pro-rural trend, as illustrated above, has been the absence of social insurance. Even in the case of currently active workers, the rural share in the principal formal sector pension system (IMSS) is small and declining from 9.5% in the middle 1990s to 8% in 2002 (Figure 6.13). In the case of health insurance, an ambitious initiative, Seguro Popular (Sistema de Protección Social en Salud) was launched in 2004, aiming to achieve full coverage of the currently uninsured by 2010. The scheme offers a basic health package, including free provision of selected medicines. Financing is to be provided by the federal and state governments, although at present it is mostly federally financed, and by the beneficiaries themselves through a progressive contributory schedule from which the poor are fully exempted. The programme faces formidable financial and
logistical challenges — the capacity of the health system to absorb the new resources and deliver the expected benefits to half of the Mexican population by 2010 — but the rural poor may gain substantially.

Figure 6.13. Distribution of selected targeted "social" and "productive" programmes within the rural population

In contrast to the case of public health services, non-contributive old aged pension programmes for the poor have appeared on the policy agenda in Mexico only recently. A modest rural programme, Atención a los Adultos Mayores en Zonas Rurales, was introduced in 2003 as part of the Acuerdo Nacional para el Campo. Also, a new old age pension has been incorporated as part of Oportunidades in 2006, and is expected to benefit up to a million elderly participants in Oportunidades. These programmes offer very modest pensions: half a dollar a day in the former case, and 75 cents in the latter, equivalent to 37% and 25% of the food poverty line, and equivalent to between 1% and 2% of the subsidies currently paid to support the state worker pension systems.

As a result of the above reforms, the rural share in total public social expenditures in Mexico is at present close to 30%, and 65% in the case of targeted programmes. Considering the latter, the most pro-rural are Crédito/Apoyos a la Palabra, a rural credit programme which originated as part of the discontinued PRONASOL and is presently classified as part of Oportunidades Productivas, PET, Piso Firme, a recent programme pouring concrete floors in rural houses with earth floors to reduce health risks, and Oportunidades, which concentrate between 80% and 88% of their resources in the rural sector.

The relative targeting of the social programmes as compared to agricultural policy programmes is apparent when studying the distribution among recipients of the two types of programmes. Oportunidades and PET provide 57% of their benefits to the poorest 40% in rural areas, in one extreme, and Alianza, concentrating 80% of benefits on the richest 40%, represents the opposite extreme (Figure 6.13). PROCAMPO tends in the direction of Alianza, with some 60% to the richest 40%, and 27% – less than half that share – to the poorest 40%. Jointly, the targeted monetary and quasi-monetary transfers represent more than 80% of income of the poorest rural decile before taxes and transfers (Table 6.1). Together, the components of Oportunidades amount to nearly 50% of income of the poorest rural decile before taxes and transfers, and PROCAMPO is equivalent to 15% and PET to 13%. The size of all these programmes relative to income before taxes and
transfers declines as recipients become less poor, falling nearly to zero for all of them except for PROCAMPO. In total, the contribution of these transfers to the average income of the extreme ("food") poor is significantly higher in rural areas than in the urban areas – equal to an increase of 45% over autonomous income of the extreme poor in rural areas as opposed to 9% in urban areas – but falls short of what would be required to close the gap as rural income of the extreme poor remains more than 20% less than their urban counterparts (Figure 6.14).

Table 6.1. Average incidence of targeted transfers in rural population

<table>
<thead>
<tr>
<th>Decile</th>
<th>Scholarship opportunities</th>
<th>Food transfer opportunities</th>
<th>PROCAMPO</th>
<th>PET Opportunities</th>
<th>Health Opportunities</th>
<th>Other scholarships</th>
<th>School breakfast (DIF)</th>
<th>Crédito Palabra/ Oportunidades Product.</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>23.9%</td>
<td>17.5%</td>
<td>14.6%</td>
<td>13.4%</td>
<td>6.6%</td>
<td>3.8%</td>
<td>2.7%</td>
<td>0.8%</td>
<td>83.3%</td>
</tr>
<tr>
<td>2</td>
<td>10.8%</td>
<td>8.3%</td>
<td>8.5%</td>
<td>10.3%</td>
<td>3.1%</td>
<td>0.4%</td>
<td>1.8%</td>
<td>0.7%</td>
<td>44.0%</td>
</tr>
<tr>
<td>3</td>
<td>8.4%</td>
<td>6.7%</td>
<td>6.0%</td>
<td>2.7%</td>
<td>2.5%</td>
<td>0.4%</td>
<td>1.1%</td>
<td>0.5%</td>
<td>28.3%</td>
</tr>
<tr>
<td>4</td>
<td>5.9%</td>
<td>4.2%</td>
<td>5.7%</td>
<td>1.6%</td>
<td>1.6%</td>
<td>0.4%</td>
<td>0.9%</td>
<td>0.4%</td>
<td>20.8%</td>
</tr>
<tr>
<td>5</td>
<td>4.3%</td>
<td>3.4%</td>
<td>3.5%</td>
<td>2.5%</td>
<td>1.3%</td>
<td>0.2%</td>
<td>0.6%</td>
<td>0.2%</td>
<td>15.9%</td>
</tr>
<tr>
<td>6</td>
<td>2.9%</td>
<td>2.1%</td>
<td>3.4%</td>
<td>1.5%</td>
<td>0.8%</td>
<td>0.3%</td>
<td>0.6%</td>
<td>0.2%</td>
<td>11.8%</td>
</tr>
<tr>
<td>7</td>
<td>2.3%</td>
<td>1.7%</td>
<td>3.3%</td>
<td>1.4%</td>
<td>0.7%</td>
<td>0.3%</td>
<td>0.4%</td>
<td>0.4%</td>
<td>10.4%</td>
</tr>
<tr>
<td>8</td>
<td>1.6%</td>
<td>1.2%</td>
<td>2.2%</td>
<td>0.4%</td>
<td>0.5%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>6.5%</td>
</tr>
<tr>
<td>9</td>
<td>0.6%</td>
<td>0.5%</td>
<td>2.2%</td>
<td>0.5%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>4.3%</td>
</tr>
<tr>
<td>10</td>
<td>0.1%</td>
<td>0.0%</td>
<td>2.7%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>


Figure 6.14. Public social transfers in income of extreme poor, urban and rural, 2002, real (08/2004) MXN/month

Source: Calculations based on ENIGH (Módula Social), 2002.
Box 6.3 Why the reduction in poverty between 2000 and 2004?

Chapter 2 reported a decrease in poverty between 2000 and 2004. There has been debate on the causes of this recent reduction in rural poverty in Mexico, which offers insight into the potential contributions of various factors, in particular the role of public transfers and private transfers. Public transfers are comprised mostly of PROGRESA/Oportunidades and PROCAMPO, described below, but also pensions, and their contributions to poverty reduction should be duly noted.

Transfers represent a large share of income for the poor, and the amount of transfers rose by about 22% for people at the edge of extreme poverty in 2002 relative to 2000 (see figure below). Thus, the expansion of Oportunidades probably played an important role in the fall in poverty between 2000 and 2002.1 On the other hand, the reduction in poverty in 2004 relative to 2002 is mostly explained by the increase in rural labour incomes – by 30% for those at the food poverty line – whereas transfers rose very little during this period. Setting aside estimates of the relative roles of transfers, such as Oportunidades, as compared to opportunities brought about by economic growth or by changes in rules or infrastructure that permit more easily rural poor to participate in labour markets, this evidence highlights the positive effects both factors have in the direction of poverty alleviation.

Principal sources of rural income per capita at the food poverty line, real (08/2004) MXN/month

Source: Cortés et al. (2005). Property income and non-monetary income are excluded.

Conclusion

Contrary to expectations, the ejido reform and associated institutions created to regulate agrarian property rights have led neither to a significant rise in agricultural productivity through a more efficient allocation of land resources, nor to massive flows of landless migrants into the cities. There is no evidence that ejidatarios have gained better access to private credit as a result of the reform, and less than 1% of ejidos have opted out of the social property regime — a direct consequence of perpetuated disincentives against privatising land. On the other hand, by freeing up the labour of ejidatarios with limited agricultural comparative advantages through the land rental market, the reform has probably contributed to the notable expansion of rural non-agricultural activities that now represent the greatest portion of income in rural areas (as reported in Chapter 2).

Reforms of the last decade have re-oriented public expenditure on human capital and basic infrastructure towards the rural poor, reversing the strong urban bias in the allocation of public resources for education, health and food programmes prevalent up to the mid-1990s. Nevertheless, the large share of public spending associated with agricultural policy is allocated towards “productive” programmes does not contribute to
poverty alleviation. The principal agricultural output and input support programmes, namely PROCAMPO, Alianza, Target Income and water and energy subsidies, like the older price support mechanisms, do not target directly poverty alleviation, although there is sometimes a broad rural development element. Many of these programmes have contributed to the entrenchment of traditional crops. Moreover, with the exception of PROCAMPO, the benefits of these programmes are overwhelmingly concentrated on the wealthiest part of the population, and even PROCAMPO is not progressive as compared to non-sectoral policies that target poverty alleviation.

Rural poverty has fallen by a half between 1998 and 2004, but this apparent success must be qualified in several respects. First, most of this fall represents a recuperation from the dramatic increase in poverty following the 1995 currency crisis; the 1992-2002 decade has been called a “lost” in terms of rural poverty-reduction. Second, rural areas still account for a disproportional share of the extreme poor and, more generally, large gaps remain between rural and urban localities, north and south, and indigenous and non-indigenous communities within rural areas. Third, the reduction in poverty may reflect progress of households close to the poverty line, rather than at the lower end of the income distribution. Fourth, most of those who have escaped rural poverty in this period have done so through rural non-agricultural activities and migration, rather than agriculture.

The broader conclusion must be to question the primacy of agricultural policy in alleviating rural poverty. The benefits of even the new programmes tend not to improve subsistence farm welfare very much, as shown in the second chapter, and the distribution of the initial transfers are found in this chapter to be highly regressive. Suggestions that agricultural policies foster growth in the sector that indirectly reduces poverty raise rather than resolve questions. Noting the small impacts of agricultural policies on the welfare of hired labour estimated in Chapter 3, the likelihood that benefits accruing to commercial farmers will lead them to expand labour-intensive techniques is uncertain. How much further investments in agriculture leads to higher wages for unskilled workers, as opposed to the potential for investments in other sectors to lead to higher wages, is also uncertain. But three facts, namely that agricultural sector wages are the lowest, that the role of non-agricultural activities in rural income is greater than that of agriculture and that earned income plays a large role in poverty alleviation, suggest an answer. The net contribution to poverty alleviation brought about by continuing to regulate land use under the land tenure system is also questionable: the redistribution increased the endowments of the poorest, but these beneficiaries are disallowed from trading these endowments to capitalise on them or to rationalise production practices. In addition, the effect of the land tenure system on access to education must be considered in the modern age in which middle classes of OECD members are built on human capital, rather than on equally distributed land holdings that cannot be traded. Whereas the scope for agricultural policies to alleviate poverty is uncertain, PROGRESA/Oportunidades has proven successful at providing poverty relief with compliance requirements that seek to improve human capital in the form of greater education and better health. These uncertainties about the role of agricultural policy in poverty alleviation are best considered in a broader context that enables explicit comparisons among policies, but the analysis of the preceding pages leads to the conclusion that agriculture does not have primacy in poverty alleviation and a tentative conclusion would be to question its role as compared to other, more targeted programmes.
NOTES

1. Discussions more specific to rural development are available in a forthcoming report by the OECD, the Rural Policy Review relating to Mexico, and the Interamerican Development Bank.

2. Yet, taking this example farther, any effects on hired labour would probably be small, as the analysis Chapter 3 found small consequences of the agricultural policies that account for the largest part of expenditures on hired labour.

3. According to the 2001 Ejido Census, there were 2.9 million ejido communities and 1 million comuneros.


6. Censo Ejidal 2001, INEGI.

7. Censo Ejidal 2001, INEGI.

8. For example, Levy (2004), chapters V-VII.


12. Hertel and Reimer note in their survey that some analytical studies found self-employment in rural areas adjusts quickly to changes in opportunities in the formal economy.

13. The World Bank includes expanded social security for the old, and for the unemployed, among the list of policy initiatives that would help to overcome poverty and inequality in Mexico (2001a).


15. The historical persistence of subsistence agriculture in Mexico, despite better economic opportunities, has also been explained by cultural factors and limits to the scale of production feasible in rain-fed land worked by a single farmer using traditional methods – conditions typical of the Southeast.

16. For a broader analysis of transport infrastructure as a critical bottleneck for the development of Southern rural regions, see Dávila et al. (2004).


18. Levy (2004), chapters V-VII.


20. Levy (2004), chapters V to VII.

21. The number of eligible hectares per producer is only caped by the constitutional limit on land holdings, which is 100 hectare of irrigated land equivalent. At the lower end, the minimum payment to PROCAMPO is now set to one hectare, even if the individual owns less than one hectare of land.
22. Cord and Wodon (1999), using the 1994 and 1997 *Ejido* Surveys, have estimated PROCAMPO transfers to represent up to 40% of the income of ejidatarios in the poorest decile.

23. GEA, 2005. Ashraf, McMillan and Zwane also reference data showing that most farmers grow corn still, so there is little diversification in production or, for that matter, in consumption, from 1992 to at least 2000 (p 29-30).

24. Although PROCAMPO is formally under ASERCA, all references to ASERCA’s budget here relate to *Apoyos a la Comercialización*, and exclude PROCAMPO.

25. Data of the table below represents average values of some of the principal variables in the FAO typology based on a survey of PDR beneficiaries.

<table>
<thead>
<tr>
<th>Selected variables</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education (Years)</td>
<td>4.8</td>
<td>6.3</td>
<td>8.9</td>
<td>14.3</td>
<td>19.0</td>
</tr>
<tr>
<td>Value of Assets (MXN)</td>
<td>1,799</td>
<td>56,557</td>
<td>208,853</td>
<td>662,765</td>
<td>512,000</td>
</tr>
<tr>
<td>Number of Equivalent Cattle Units</td>
<td>5.6</td>
<td>8.3</td>
<td>13.8</td>
<td>28.6</td>
<td>71.0</td>
</tr>
<tr>
<td>Irrigated land Equivalent (hectare)</td>
<td>0.8</td>
<td>3.0</td>
<td>11.1</td>
<td>33.1</td>
<td>10.0</td>
</tr>
</tbody>
</table>

*Source: FAO (2005).*

26. These estimates only consider the direct (partial equilibrium) effect of these benefits. In a general equilibrium setting, agricultural workers may share some of the benefits from the agricultural support transfers obtained by large commercial producers, through higher wages and land prices. On the other hand, however, by lowering the production costs of large producers, these transfers undermine the competitiveness and income of smaller commercial producers.


29. Programmable public spending is net of debt payments and fiscal transfers to the states.


33. Davis *et al* find that more targeted transfers of PROGRESA have a stronger positive impact on school expenditure than PROCAMPO, and that whereas PROCAMPO payments tend to increase more investment in agriculture PROGRESA has a broader investment effect.

34. *Secretaría de Hacienda y Crédito Público, 2000.*

35. Scott, 2004b.

36. Distribution by households differs systematically from distribution by average income per person because poorer households tend to have more people so, for example, the poorest decile of households includes more than the poorest decile of individuals.

37. There are two principal health systems serving the rural uninsured: the Health Ministry (SSA), and the IMSS-Oportunidades program (before IMSS-Solidaridad, and originally IMSS-Coplamar), covering mostly poor rural localities (around half of Oportunidades beneficiaries). As noted below, a separate initiative, Seguro Popular, eventually to provide health services to the uncovered poor was launched in 2004.

38. See Scott (2004b) for material in this paragraph, or for more details on targeting and rural areas.
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