

**Small farms in Latin America: Quo vadis?
Position paper for a (dis)passionate discussion¹**

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Version: 19 September 2006
Words: 6500 including references

“Few symbols of economic inefficiency are as potent or enduring as the small farm”,
Hazell (2004, p. 7).

However:

“...there are refreshing exceptions throughout the developing world which indicate that advances in productivity and income levels can be achieved.” (Nagayets (2005, p. 365)

Introduction

The question of the viability of small farms² is again the subject of academic and political debate, among others because many developing countries and donors have expressed a renewed commitment to the role of agricultural development for growth and poverty reduction. Because agricultural and food markets have changed dramatically over the past 20 years, becoming more integrated, globalized and consumer driven, there is a renewed need to understand the underlying economic, social and cultural reasons behind small farmers' decision-making and the prospects for their increased welfare under the changing context. Indeed, small farms face particular challenges in this new and continuously changing environment.

In Latin America, the evidences over the last decade and a half are not promising. Indeed, most small farms have had: falling incomes –dramatically so in some countries- (see graph 1), slow increases in productivity, slow improvement of poverty and indigence levels, little participation in value-chains oriented to growing markets, be they processed products, local supermarkets or exports (ECLAC, 2005).

The questions at the core of this position paper are:

¹ Written on the basis of a literature review by Carl Niss-Fahlander, intern at ECLAC from Stockholm University and analysis of data by Mônica Rodrigues, Mônica Kjöllnerström and Soledad Parada, staff or ex-staff members of the Agricultural Development Unit, ECLAC. The author is thankful for the useful comments from Steve Wiggins, Research Fellow at the Overseas Development Institute, U.K., Fabrizio Bresciani, consultant at FAO/Headquarters and José Graziano da Silva, Director of FAO's Regional Office for Latin America and the Caribbean. Its purpose is serve as an introduction to a serious discussion on the future of small-scale farming in Latin America.

² Small-scale agriculture is often used interchangeably with smallholder, family, subsistence, resource-poor, low-income, low-input or low-technology farming (Heidhues and Brüntrup, 2003, cited in Nagayets, 2005). The World Bank's Rural Strategy (2003) defines small farms as having less than 2 hectares of cropland and a low asset-base. The background papers for the IFPRI/ODI/Imperial College Research Workshop (2005) use the 2 hectare farm as a cut-off line for most of their evidence. In turn, Acosta en Rodríguez (2005) from FAO's Regional Office for Latin America and the Caribbean suggest a four criteria table to distinguish family farms from subsistence farms and, in turn, from commercial farms (living on the farm, no permanent labour, sufficient/insufficient land to cover basic needs, sales or not to the market). Because of available evidence, in this position paper we will mostly use “own-account farmers” as equivalent to small-scale farms and, sometimes, size or size combined with a set of criteria such as low levels of formal schooling, use of traditional technologies and lack of access to credit and extension.

- 1) How special is agriculture in relation to other sectors. In particular, whether there are intrinsic economies of scale in agriculture (per crop or activity, per farm, in relation to topography) or whether there are observed economies, diseconomies or optimal scale(s) due to imperfect or non-existent markets.
- 2) How different is Latin America from other regions, in other words, why theoretical developments and evidences from other regions do not seem to fully apply to evidences in the region?
- 3) In how far some of these differences and special conditions compromise the ability of small farms to compete in today's markets?
- 4) What are the policy implications of the foregoing.
- 5) What are the additional policy issues regarding the future of small farms in less favoured areas, either because of remoteness, low potential in natural resources, or both?

1) **How special is agriculture in relation to other sectors?**

Agricultural productivity is an important topic in developing countries, as a large share of the poor population lives in rural areas and is directly or indirectly employed in the agricultural sector. It is also important because arable land in most countries is limited due to physical lack of suitable land and/or because of environmental policies and priorities (Zepada, 2004). Since land available for expanding the agricultural frontier is scarce, the way of increasing food production and other agro-based products (textiles, bioenergy, pulp and paper, etc.) is through raising productivity, either through further advances in technology or through closing the substantial gap between actual and technically feasible yields.

A topic that goes hand in hand with agricultural productivity is economies of scale in agriculture. In principle, both should be calculated through total factor productivity functions or estimates. Unfortunately, getting to a correct estimate of the value and use of land, capital and labour is extremely complex in agriculture, and so is assigning specific inputs to specific outputs.³ On the other hand, partial measures such as yield or labour productivity are exactly that: partial measures. The following discussion has to be interpreted against that background.

a) **The arguments in favour of diseconomies of scale in agriculture**

It is usually argued that in agriculture the production function generally works under constant returns with respect to scale or that there is an inverse relationship between productivity and farm size (a.o. Johnson and Ruttan, 1994; Peterson and Kislev, 1991). The "smaller is better" argument does put agriculture at odds with other industries or sectors of the economy, where the contrary is generally true. This has important consequences for development and rural policies. The diseconomies of scale that are said to exist in agriculture are explained by the special nature of agricultural production. The most common explanations are that:

- i) **Smaller farms obtain a higher total value of output for a given area of land.** There are frictions in the land, credit, labour or insurance markets that prevent the efficient allocation of land. These frictions lead to, it is argued, that small farms are more efficient because they use labor resources more intensively than larger farms and often practice multi-cropping, which increases land utilization and raises the total value of output for a given area of land. It is also argued that large farms underutilize the total land area at their disposal by using more of their land to land-extensive enterprises, such as breeding cattle or other livestock (Van Zyl, Binswanger and Thirtle, 1995; Van Zyl, Miller and Parker, 1996). Feder (1985), Binswanger, Deininger and Feder (1993) and others find that the highest output per unit of area is often achieved not by the smallest farm size category but by the second smallest farm size class.

³ For estimating land values, see a.o. Soto (2005)

In turn, Van Zyl, Binswanger and Thirtle (1995) found that the productivity differential favouring small farms over large farms increases with the differences in size, implying that it is largest where inequalities in landholdings are the greatest, in the relatively land-abundant countries of Latin America and Africa.

Our own findings based on Latin American data do not seem to support these views. Indeed, evidence based on agricultural census microdata for Brazil, Ecuador and Chile shows rather a continuous increase in yields until the one before last largest strata and yields on small farms tend to be substantially lower than on larger farms. It is true that product yield is a partial measure, not equivalent to output per area and therefore evidence on yields may tell one story and output per area a different one and the inverse ratio refers to farm size and output per unit area. Additionally, small farmers usually sell at lower prices, not only because of lack of volume and therefore bargaining power, but also because transaction costs incurred by the buyer are passed-on.⁴

- ii) **Because of high supervision costs on farms, family labour tends to be more productive.** Farms suffer from high supervision costs because of the special nature of agricultural production, where both labour and machines are mobile (Johnson and Ruttan, 1994). Moreover, agricultural tasks must be done sequentially because of the annual cycle of production, limiting the opportunity gains from specialization and division of labour. Therefore there are few advantages to increase the farm size beyond the owner–operator. Hence it is the management unit or family that is the constraint on farm size growth (Johnson and Ruttan, 1994). Family farms can also avoid moral hazard because family members often work besides hired labour and thus can monitor their effort (Van Zyl, Miller and Parker, 1996).

In theory thus, all other factors being equal, family labour is more productive and costs less than hired labour. In practice however, this is not necessarily true due to the difficulty or impossibility to “dismiss” badly performing (or even misbehaving) family labour.

Another factor against labour productivity on family farms is that they often use “secondary labour” (that is, children and older people) with a near to zero opportunity cost, but with a low *per se* productivity. Indeed, in agriculture in general and on the small farm in particular, the tails of the age distribution (under 15, over 65 years of age) are much more represented than the middle, supposedly more productive age-group (in terms of experience, physical strength, attitude towards innovation and change and, for the younger among them, education). This fact is due both to push and pull factors. “Push” because due to longer livelihoods, inheritance laws and customs, lack of pension schemes, insufficient production value, as well as idiosyncracies among farmers, there is usually no space on the small family farm for adult children who wish to earn an income, make their own production and market decisions or just be “independent”. “Pull” because, on average, all other occupations earn a higher income than farming (Dirven, 2002 and Köbrich and Dirven, 2006).

Without controlling for other factors, graph 2 shows for Brazil, that the increase in labour productivity clearly goes hand in hand with the increase in farm size.

- iii) **Family farms have lower wage costs.** Because family farms do not have to incur in transaction costs to hire labour and do not pay social security, extra hours, etc., they have lower labour costs. It has also been argued that family farm members will supply

⁴ For an explanation of autarchy due to prohibitive transaction costs, see Key, Sadoulet and de Janvry (2000).

more labour at a lower marginal value and with an implicit lower wage rate, than would be the case if the marginal value of labour were equated to the market wage. This does not apply to the commercial farm sector where the marginal value will be at least equal to the market wage rate (Schejtman, 1980).⁵ Additionally, as already mentioned, secondary labour can be used on the family farm at very low or zero opportunity cost.

However, due to non-existent, special or ineffective labour laws with respect to agricultural labour in general and specially for temporary labour, many of the theoretically higher costs on commercial farms may not exist in practice in developing countries. Moreover, different widely used hiring practices (hiring mostly people recommended by or family members of labourers, outsourcing, etc.) reduce hiring and supervision costs.

- iv) **There are diminishing returns to land.** This is true at a large scale level, where increases in land use tend to expand toward lesser quality land. This seems to be happening e.g. in the expansion of areas with soybeans, which in turn is pushing cattle breeding and different crops (such as groundnuts in Argentina) into more marginal land in Argentina, Bolivia, Brasil and Paraguay. There is no reason however for this to happen on the farm level, if sustainable agricultural practices are in use.

On the contrary, pressure on scarce land leading to over-use is common among small farmers and may well lead to land degradation. Living from marginal and scarce land leads to undercapitalized farming, which in turn does not permit to make the necessary investments in order to preserve its productivity.⁶

- v) **Small farmers are more efficient producers in labour-surplus countries.** In general, small farms are considered more efficient producers in labour-surplus economies because small farmers are more likely to use labour-intensive rather than capital-intensive technologies and because they ensure a degree of food security in rural areas where high transport and marketing costs drive up food prices and drive down the price received for their produce (Hazell, 2004).

The use of secondary labour however goes against some of the arguments about primary labour absorption advantages of small farms in labour surplus economies.

b) The arguments in favour of scale economies

First of all, even large farms and plantations are small enterprises in comparison with other economic sectors (Johnson and Ruttan, 1994). This has several consequences, one of which is its negotiating position in the value-chain. Another, is that many of the findings and conclusions of contract theory have to be adapted, as no single farm is the sole seller to several processors, but processors always buy from several farms. (See Dirven, 1996 for an elaboration on the subject)

⁵ For counterarguments pointing to a wrong reading of several cultural traits of peasants, see Durston (1996).

⁶ For evidence on over-use by small, poor farmers, see ECLAC/GTZ (2005). For evidence on the overlap between small-scale farms and marginal land, see Wood et al. (2004). Wiggins in his comment to this paper adds that there is also plenty of evidence that suggests that extensive land uses produce more degradation than intensive uses (he refers to the work by Tiffen, Mortmore and Gichuki on Machakos, Kenya or the debates on land use in the Amazon basin) and that the point is not only academically controversial, also but politically charged (her refers to Ravnborg for some thought provoking insights into this issue; Ravnborg, Helle Munk, 2003, 'Poverty and environmental degradation in the Nicaraguan hillsides', World Development N° 31, Vol. 11, pages 1933–1946)

i) The increase of farm size in developed countries. A major argument in favour of the existence of economies of scale in agriculture is the growth of farm size in developed countries. If there were no economies of scale, why then would farms grow? Others argue that if there are differences in farm size between developed and developing countries, the differences should be attributed to the totally different economic environments and not to economies of scale.

There is also evidence that the inverse relationship between productivity and farm size is only true for developing countries, while Kawagoe, Hayami and Ruttan (1985) show that the production function for some less developed countries was constant between 1960 and 1980 whereas the production function for developed countries was characterized by significant scale economies. Trueblood and Coggins (2003) conclude that the total factor productivity of most developing countries has lagged behind that of the developed ones.⁷ In terms of partial land and labour productivities, this is certainly the case in the region as can be seen in graph 4. As already mentioned, it has also been the case within most Latin American countries, where there is an increasing productivity gap between large- and small-scale farms.

ii) Correlation between farm size and development. Eastwood, Lipton and Newell (2004) find a positive relationship between average farm size and the level of economic development, as represented by GDP per capita. Thus, historical trends from developed countries show that the size of farms increased during the 2nd half of the 20th century, while the number of small farms decreased.

In the developing world, average size has tended to decrease (with farm size averages below 2 hectares both in Asia and Africa and around 67 hectares in Latin America (Nagayets, 2005), although in Latin America around half of the farms are less than 5 hectares, with an average size of 2 hectares, which is not that far from the Asian or African average.

iii) The natural transition toward larger farms and exodus of small-scale farmers. Many of the advantages ascribed to small farms disappear as countries develop and labour becomes scarcer relative to land and capital. This leads to a natural transition toward larger farms and an exodus of small farm workers to rural non-farm or urban jobs. This transition does not normally begin until countries have grown out of low-income status and it typically takes several generations to unfold (Hazell, 2004). The question that ensues is: if this statement is correct, could Latin America be in the stage of “unfolding”?

The “pull” effect of higher non-farm wages is augmented by the “push” effect of lower machine costs, due to the development of larger, more versatile, sophisticated and cheaper machines that can work larger areas of land. If the pull effect of higher non-farm wages and the resulting off-farm migration is strong enough, that is, leads to a decrease in the number of farms, then the land available to each remaining farmer increases. The terms of exchange between agriculture and other sectors may also have gone down, in the sense that in order to maintain a (subjective) equal standard of living, a larger amount of land/production is required. Thus, in order to keep income in parity with alternative occupations, the remaining full-time farmers are forced to increase the amount of relatively cheap resources, which in this case would be land and machines (Peterson and Kislev, 1991).

⁷ Ludeña (2006) however shows that as from the 90s total factor productivity in agriculture has grown faster in Latin America –spearheaded by Argentina- and several other developing regions than in the developed world.

iv) **“Lumpy” inputs and economies of scale.** Economies of scale in agriculture are said to exist for some “lumpy” (indivisible) inputs, such as agricultural machines or the managerial or entrepreneurial ability of the farmer, while fertilizers, seeds, etc., are divisible inputs. It is argued that these “lumpy” inputs can only be efficiently used on farms above a certain size. Other potential sources of (observed) scale economies are that large farmers could have advantages in the access to credit, insurance, marketing, distribution and storage facilities due to their larger holdings (Johnson and Ruttan, 1994). They may also benefit from greater political influence and lobbying capacity, that can be used to increase productivity and income (favourable laws, prices, programmes, investment in infrastructure and public services, etc.)⁸

The lumpy nature of management is a somewhat strange concept, but it is certainly true that a better manager will be able to efficiently manage a larger farm than a lesser able one. Several studies (see a.o. Bardhan, 1984, Assunção and Ghatak, 2003) have shown that skilled peasants are more likely to become farmers than unskilled peasants. The opportunity cost for a skilled peasant of becoming a waged worker is higher and therefore skilled peasants are more likely to work on their own farm. Small farms however (subsistence or commercial) are the result of subdivision due to inheritance laws, customs and practices but also strongly of “natural selection” over the years or even centuries. This in turn has led to an accumulated management capacity bias and probably also land quality bias imbedded in the present land size (see graph 5 for an illustration of intergenerational accumulation processes). In Latin America, large farms are the result of all the foregoing plus of -law abiding or not- purchases and appropriations.

Conclusion

With both arguments in favour and against economies of scale in agriculture, albeit differentiated between types of economies (developed versus developing) and taking into account the relative prices of factors and inputs, the generally accepted conclusion is that any observed economies of scale in agriculture are the result of market imperfections and that if the markets for the factors of production were properly developed, economies of scale would diminish and eventually disappear (Van Zyl, Miller and Parker, 1996).⁹

This does somehow contradict the fact that in developed countries, where markets are generally better functioning, economies of scale are apparently more visible than in developing countries –albeit, based on our partial measures, economies of scale seem to be quite present in Latin America too-.

2) **How different is Latin America from other regions, in other words, why theoretical developments and evidence from other regions do not seem to fully apply to evidence from the region?**

One of the important differences between Latin America and most of the developing world is that it belongs to the middle-income countries category.¹⁰ Another characteristic of the region is its highly unequal distribution of income and even worse distribution of land.

⁸ Latin America’s history has seen several movements (and policies) in favour of small farms, from Zapata in Mexico to the Movimento Sem Terra (MST) in Brazil. Put into a balance however, the ones favouring large farms have been stronger or at least sorted out larger and more enduring effects.

⁹ Under constant returns to scale different combinations of market failures may yield different relationships between farm size and productivity. The point is important as the configuration and/or relevance of market failures might change substantially across the rural landscape for geographical and/or historical reasons.

¹⁰ Seven of the 20 countries of the region are classified as upper middle-income countries by the World Bank and another 11 as lower middle-income countries. In turn, they represent somewhat over a fifth of

Whether Latin America - especially its rural areas- falls into the low income category when the higher income brackets are not taken into account or, even then, belongs to the middle-income range is a question of debate that has risen to the floor, among others with the methodological discussions around the Millennium Development Goals. The fact is that the 10th decile absorbs some 35 to 40% of the incomes, rural and urban. When the 10th decile is removed, the Gini coefficient improves substantially, from 0.5-0.6 to around 0.4 (ECLAC, 2006).

In how far the differences in the performance of small farms in the region in comparison with expectations in the going theories –mainly developed on the basis of evidence from Asia- are due to the highly skewed income and land distribution, is an open question. What is clear, is that the socio-economic, productive and cultural differences add challenges –and great difficulties- in designing policies and in deciding where to put priorities. These differences also cause additional difficulties in establishing farmers associations, networks and linkages to value-chains, especially of the “bridging” kind.¹¹ On the other hand, resource-poor farmers that produce in the immediacies of larger farmers are probably at a greater disadvantage than in areas where all are resource-poor, because the downstream buyers may prefer to buy from the larger farmers, when in the second case they have little choice (except not to be present at all).

Because of its medium income status combined with a relatively unskilled labour force, many of the expected positive outcomes of the trade liberalization process –a.o. the increased use of the comparatively abundant factor, namely unskilled labour and, as a consequence, the slow convergence of wages between unskilled and skilled workers due to the demand pressure on the latter- are not taking place in the region. Indeed, although presently, primary school enrolment is near 100%, the region lags behind on basic skills such as reading and arithmetic. The medium income *cum* low quality education equation acts like a squeeze on the creation of non-agricultural jobs, as the region is neither equipped for skill-intensive development nor for low-cost labour-intensive development. Therefore, contrary to what happened in the developed world or is happening in some parts of Asia, ex-farmers or farmers’ offspring are not being absorbed at a sufficient rate in productive jobs and, as a consequence, are engrossing the group of marginally employed and marginal city dwellers. In fact, in Latin America, as in the developed world, the wage-gap between unskilled and skilled workers has been widening.

3) In how far some of these differences and special conditions compromise the ability of small farms to compete in today’s markets?

For most low-income countries, the problem is not that most small farms are inherently unviable in today’s marketplace, but that they face an increasingly tilted playing field that, if left unchecked, could lead to their premature demise. (Hazell, 2004)

Indeed, there is an increasingly wide conviction that the direct impacts of several policies and trends have direct negative impacts of some kind on small farmers. Among those, is the transition from agricultural commodities to specialized goods, including staples; the increasing concentration of agents down-stream of the farmer (mainly agro-industries and supermarkets) and the impact this concentration has on the agents upstream; as well as the increasingly stringent norms and standards -especially private ones-, the compliance of which requires high fixed investment and transaction costs, which make their adoption prohibitive for small-scale agents (Reardon and Timmer, 2005) and freer trade.¹²

the countries in each of these categories. Haiti and Nicaragua are classified among the low-income countries. (World Development Report 2006, World Bank, p. 291)

¹¹ Used as in the social capital lexicon.

¹² The World Bank is recognizing the potentially negative impacts of the myriad of recently negotiated free trade agreements on small, resource-poor, farmers in some of its recent documents (see a.o. World Bank 2004 and 2006). Several other studies clearly point the same way. Parada and Morales (2006) e.g.

Due to the shift toward consumer-driven markets, liberalization and globalization, all farmers are now increasingly being asked to compete in markets that demand much more of them in terms of food safety and a broad range of quality attributes (going from spotless, homogeneous produce to timely delivery), as well as a capacity to receive delayed payments. Smaller farmers are especially ill-equipped, asset-wise, to face these new challenges.

Hazell (2004) also points to the fact that in middle- and higher-income countries, food-staple markets offer fewer opportunities due to changes in staple-crop demand linked to growth in livestock feed or export markets rather than growth in domestic staple food consumption. As a consequence, small farmers need to diversify into higher-value products such as livestock, fruits and vegetables, oils, fish, and niche markets. Evidence in Latin America shows that this is happening on a reduced scale, in those areas well-connected to markets, with the help of external agents, be they public or private.

On the advantages side, as already mentioned, theory predicts that family farm members will supply more labour at a lower marginal cost than the going market wage rate. This does not apply to the commercial farm sector. Therefore there are advantages to buy from small-scale farmers, especially intensive labour and care type of products, like vegetables, fruits, flowers, coffee and small animal husbandry. Unfortunately, these theoretical advantages are often offset by high transaction costs and lack of assets. But, as has been demonstrated in several studies, contractual arrangements along the value-chain can help to by-pass imperfect markets and the lack of assets that small-scale farmers face, when striving for a win-win type of situation (see a.o. Schejtman, 1998).

Recent evidence indicates that, even for fruits and vegetables, outlets for small-scale farmers seem to be shrinking, at par with the rise of supermarkets and convenience stores and the changes this implies on other sales channels. Indeed, large buyers (supermarkets, agro-industries, exporters) prefer to buy from medium to large farms because of productivity, quality and reliance reasons, but also strongly because of transaction costs due to size, location, weak infrastructure and cultural differences. This has been found to be true even for intermediaries that sell on the wholesale markets (Dirven and Faiguenbaum, 2004). Because of the fast rise of supermarket importance in total market share, the portion of market to which small farmers can sell is shrinking, and apparently quite fast. Much faster than countervailing actions seem to have been able to develop for Latin American small farmers, such as the development of niche markets and the strengthening of clusters, associations, networks, contract farming incentives, plus all the activities to bring productivity, quality, good practices, traceability, etc. up to par to ever changing and more demanding requirements. (ECLAC, 2005)

A related question is how land tenure systems affect small-scale farming efficiency, not only in terms of legal tenure, but also in terms of geographic location, land quality, topography, vicinity with other small- or large-scale farms and surrounding infrastructure (roads, irrigation, markets) and services, private and public. Efficiency considerations and also the yielding to political pressure seems to have tilted the public R&D¹³ and infrastructure toward serving the larger farms.

4) What are the policy implications of the foregoing?

show that, in the case of the free trade agreement between Ecuador and the U.S.A., the small-scale, asset poor Andean farmers could be the most affected, and because of their specific characteristics, even more so the female land holders and labourers (see map 1 in the annex).

¹³ A lot could however do a lot be done to improve the productivity of many farms without requiring additional R&D, because they are presently producing way below their technical potential (see a.o. Wood, You and Zhang, 2004, Cap and Gonzalez, 2004)

Historical trends suggest that small farmers will continue to dominate the agricultural landscape in the developing world, independently of their efficiency or ability to improve the conditions – income, employment, food access, etc.- of the rural poor. Notwithstanding the foregoing, unless policymakers adopt a new agenda toward small farm agriculture, there is a growing risk that rural poverty could soon increase dramatically (see again graph 1), sending waves of migrants to urban areas. It is not clear at all how the eventual rapid decrease in numbers of small farmers could be absorbed in the rest of the economy. Infrastructure, the job market and support services could well be overwhelmed. (Hazell, 2004) The other possibility is that the relatively better equipped (with education and some basic financial and migration capital)¹⁴ will increase the ranks of illegal migrants.

There are several questions and issues here. A first set is related to public goods, transfers and investments. What critical goods are needed for smallholder farming to flourish or at least not slide backwards? Should more public investments be targeted to the specific problems of small farms or should they be more neutral with respect to growth opportunities in the agricultural sector or rural areas? And related to this, should public resources be directly passed on to small farmers or should they be provided in the form of public goods? Should public goods be oriented towards growth opportunities or towards investments in human capital for the next generations (e.g. Bolsa Escolar in Brazil and Oportunidades in Mexico)?

An additional question is what drives a small farmer to remain a full- versus becoming a part-time farmer?¹⁵ How do full- versus part-time farmers differ in terms of technology adoption, product diversification and marketing strategies? How should public policy address the two different types of farmers?

The FAO/Regional Office for Latin America and the Caribbean has developed a data base on public expenditure toward agriculture and rural areas (www.rlc.fao.org). Over the 1985-2001 15 year period, most countries have decreased their support to agriculture and rural areas both in absolute real US\$ terms and in per agricultural GDP or rural dwellers terms. The same trend can be observed in the large International Organizations (a.o. IDB and World Bank).

López (2006) with the aim of evaluating the trade-offs between the provision of public goods vis-à-vis other types of government expenditures on economic efficiency and social equity concludes that a substantial amount of public expenditures in agriculture and rural areas has gone to finance or subsidize private goods. He also concludes that while, according to many studies investments in public goods for agriculture (R&D, infrastructure, education, protection of the environment) have high rates of return, returns to public financing of private goods are low or even negative. He also finds that the biased structure of public expenditure allocation may have important social equity implications, because government expenditures in non-social subsidies tend to be directed toward the wealthier segments of society, which is likely to affect the patterns of growth of agriculture (more land extensive) and, at the same time, have little effect in promoting employment.

A second set of issues refers to increasing the scale of small farmers for purchasing, selling and the provision of services purposes (technical assistance and other) and the role the intermediary institutions such as producer organizations and contract farming arrangements can play. That

¹⁴ See Yúnez-Naude and Tayler (2001) on the human capital aspect and de Janvry and Sadoulet (2003) on the financial and migration capital aspect.

¹⁵ A recent analysis of ECLAC's Agricultural Development Unit on the basis of agricultural census micro-data of 8 Latin American countries (Argentina, Brasil, Chile, Ecuador, Mexico, Nicaragua, Peru and Uruguay) shows that approximately 50-60% of own-account farmers (fluctuating between 45% in Uruguay and 70% in Ecuador) have also incomes from occupations outside the farm and thus could be considered part-time farmers of some sort.

is: how can intermediary institutions be developed or strengthened in a way that allows them to preserve the small-holder's cost advantages (if any) whilst providing the scale needed to market their produce effectively. The answer should include issues of human and social capital (Dirven, 2003) as well as the absorption of transaction costs. Many present programmes oriented at small-scale farmers stress the need to associate, but many evaluations show that the adduced benefits do not necessarily awaken the enthusiasm of most farmers and that good leadership is often scarce and that the rotation of good leadership is even more difficult to come by.

Costs, especially transaction costs, depend on the type of product and the traditional trade channel (traditional in the sense of most commonly used by the majority of farmers). When comparing the costs and benefits of trading through other channels (sales at farm-gate, farmers' market, through a cooperative, etc.) while taking into account price and quantity effects as well as costs of production, trade and transaction costs. Verhaegen and Van Huylenbroeck (2001¹⁶; mentioned in Kjöllnerström, 2004) conclude that the principal benefits associated to a non-traditional trade channel are an increase in volume and a reduction in uncertainty as to prices and sales volume. In the case of sales' cooperatives, total costs tend to diminish because the necessary investment in order to market is assumed by the organization and this, usually, compensates the costs of belonging to the cooperative. Naturally, the lower the estimated net benefits, the lower the propensity to participate in alternative trade channels.

If there is a serious intention of a Government to improve the future of small farms and bridle the rural-urban migration, then –notwithstanding the conclusions by López- it may have to consider –in addition to all the other actions to redress the playing field as to education, infrastructure, R&D and other policies- to directly subsidize some of the transaction costs. This can be channelled, either through farmers or their organizations in order to reduce the costs of participation or through the agents downstream in the value-chain, in order to entice them to include large numbers of small farmers as their regular suppliers and compensate them for the additional transaction and other costs. (Schejtman, 1998)

At the same time, there is a need to start a serious discussion on the Social Responsibility of Enterprises that goes further than the advances made already. Indeed, the distribution of benefits along the value chain has to be given a hard look, especially the apparent continuous squeeze on the prices of the farm sector, while prices to consumers have not necessarily evolved in the same direction. This is necessary because the world in general, but Latin America specifically, is facing a Governance problem strongly related to unequal income distribution and different views on the direction of “development”¹⁷ that, if not tackled properly, could well lead to very serious upheaval.

5) What are the additional factors compromising the prospects for small farms in less favoured areas, either because of remoteness, low potential in natural resources, or both?

The income of the poor is extremely dependent on their ability to enhance their human capital and to protect the natural assets, both of which are important public or semi-public goods. (López, 2006). At the same time, a disproportionate share of Latin America's rural poor continues to be constrained by low-productivity agriculture. (Wood et al, 2004) Worse, as was

¹⁶ Verhaegen, I. and Van Huylenbroeck, G. (2001), “Costs and benefits for farmers participating in innovative marketing channels for quality food products”, *Journal of Rural Studies*, N° 17, pp.443-456.

¹⁷ The closing session of the International Seminar on “Territorios en Movimiento – Movimientos sociales, actores e instituciones del desarrollo territorial rural”, organized by RIMISP and IDRC, clearly illustrated these different, apparently non-converging, views (April, 2006, Santiago, Chile).

already mentioned, vicious circles seem often to exist between decreasing returns due to land degradation and its intensified use and therefore further degradation. (ECLAC/GTZ, 2005) On the other hand, small farmers also often subutilize or misuse the land (e.g. slash and burn practices).

A central challenge to the research and development community is to make agricultural production more profitable and competitive by providing technology that can reduce unit production costs in a sustainable way in less favored (non-irrigated) areas. As it appears, in Latin America as in the rest of the world, agricultural research has been biased against generating technologies applicable to less-favored production environments. National and international agricultural research institutes alike should redress that imbalance and orient their research to the development of rain-fed minor crops. A complementary important research objective is improving the water use efficiency of crops.

There is also a significant potential for large payoffs in the strengthening of regional and national capacities to promote the spillover of old and new knowledge and technologies and to make them more accessible to all farmers throughout the region. However, in addition to research and extension capacity, adopting new crop varieties requires a well-functioning sector to produce and market new technical inputs for the modern varieties and a literate labor force to use the new knowledge and technology effectively (Wood et al., 2004; see also Lipton, 2005).

Finally, many hopes have been put into the development of a non-agricultural economy. Indeed, a process in which the demise of the small farm sector is taking place in the context of languishing post-harvest activities should be distinguished from one where these activities expand. The two processes most probably also coincide with different patterns of urbanization depending on whether post-harvest activities are predominantly concentrated in smaller urban or quasi-rural areas. In synthesis, the important question is what type of agricultural transformation is consistent with a substantial out-flow of small farmers and yet with improved indicators of viability of rural areas (e.g. employment and income).

In resource-poor areas for agriculture, the hopes for non-agricultural employment have been put into different types of tourism (agro-tourism, eco-tourism) as well as into the development of income for environmental preservation schemes. Although in some areas these proposals may have the potential to open new venues for the resident populations, especially if accompanied by the mobilization of a strong local civil society and leadership working toward the development of clusters around the newly found dynamism, in most areas there seems to exist a vicious circle of low economic development potentiality, both for agriculture and non-agricultural activities, weak human and social capital and deficient infrastructure and public services.

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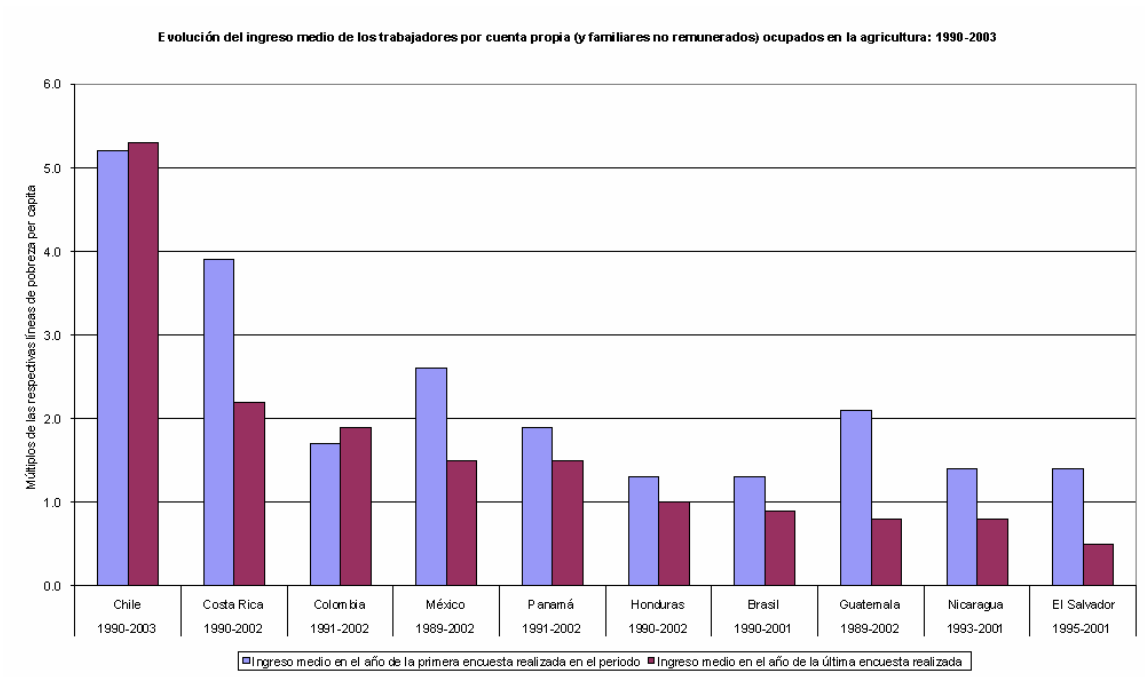
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Annex

Graph 1

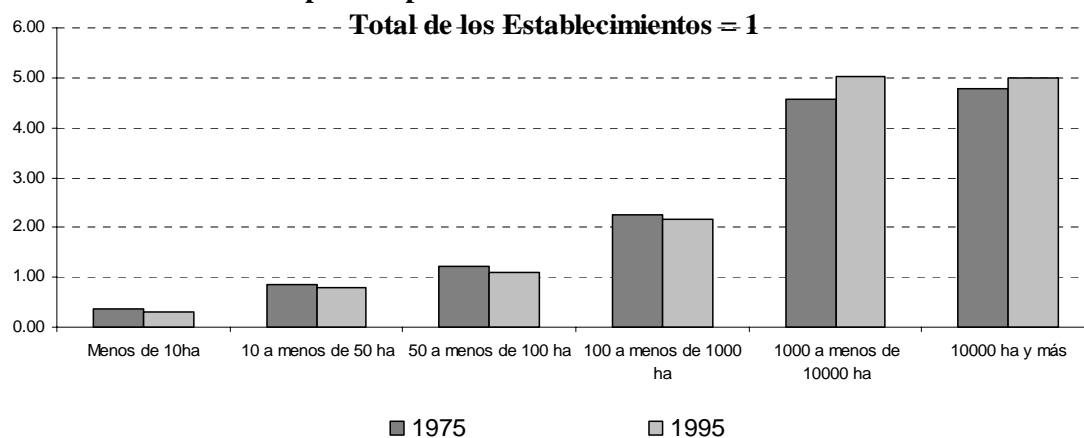
Latin América (10 countries), 1989-2003: Agricultural incomes of own-account farmers
(Poverty line = 1)



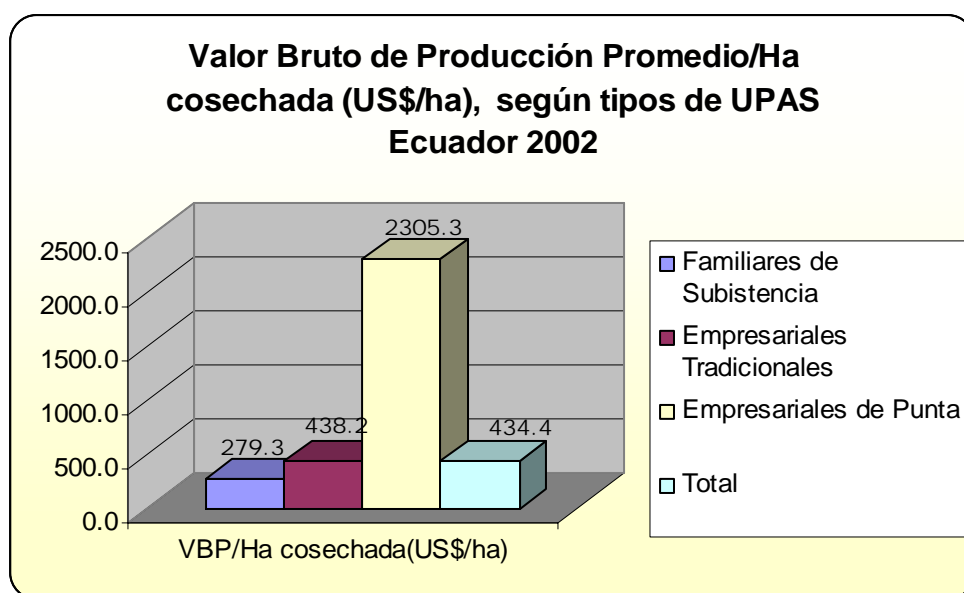
Source: ECLAC, Social Panorama

Graph 2

**Productividad Laboral (Valor de la Producción / Personal Ocupado)
por Grupos de Área del Establecimiento**

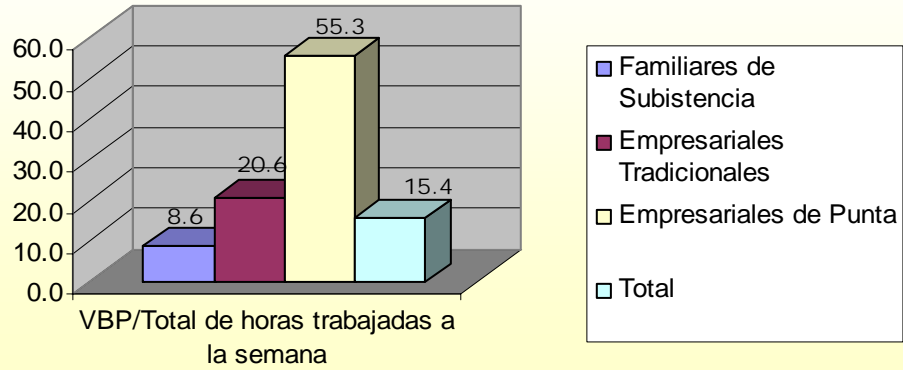


Source: Agricultural Census Brasil, 1975 and 1995/96.



Fuente: CEPAL en base al 3er Censo Nacional Agropecuario

Valor Bruto de Producción Promedio / Total horas trabajadas a la semana, según tipos de UPAS. Ecuador 2002

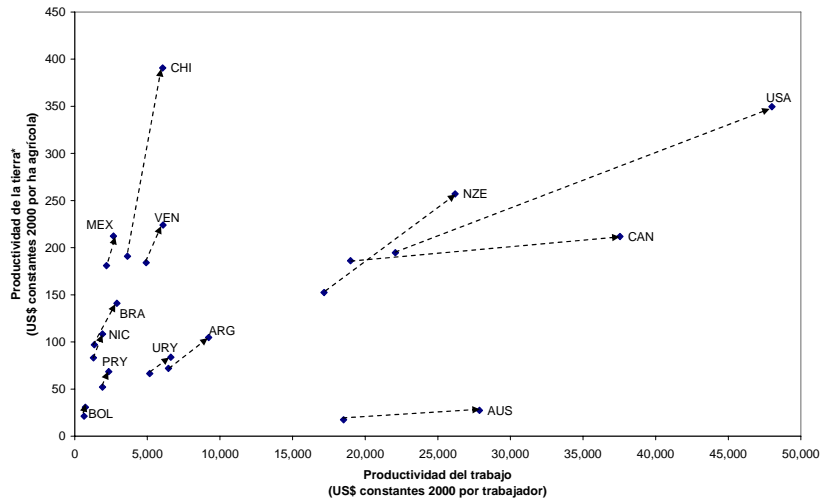


Fuente: CEPAL en base al 3er Censo Nacional Agropecuario

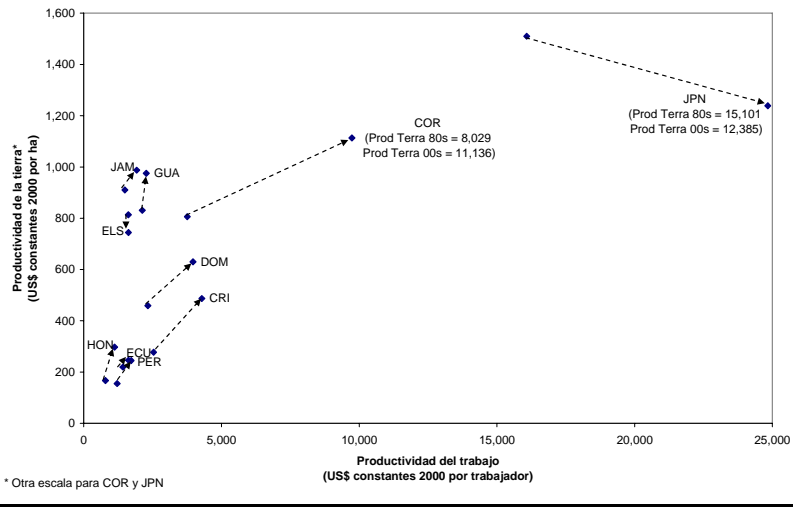
Graph 3
VBP in Brazil (Mónica)

Graph 4

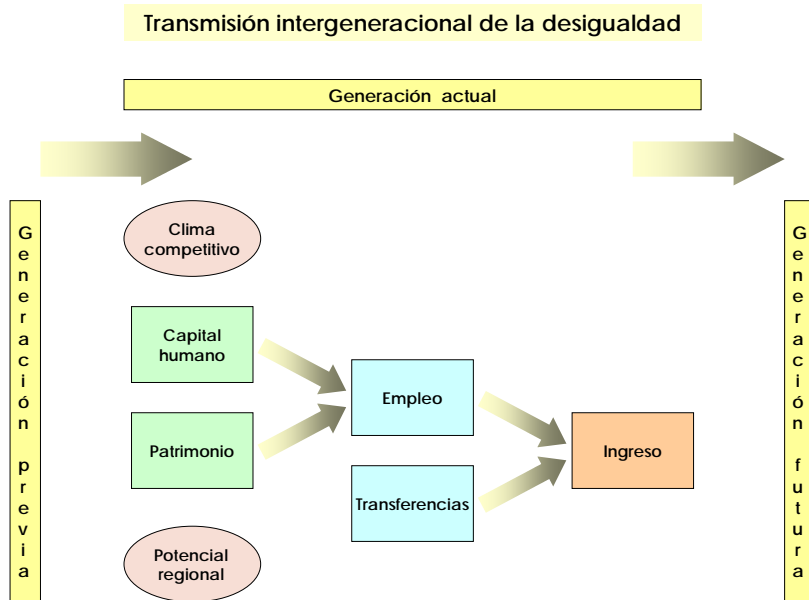
Evolución de la Productividad del Trabajo y de la Tierra en la Agricultura 1980s/2000s



Evolución de la Productividad del Trabajo y de la Tierra en la Agricultura 1980s/2000s

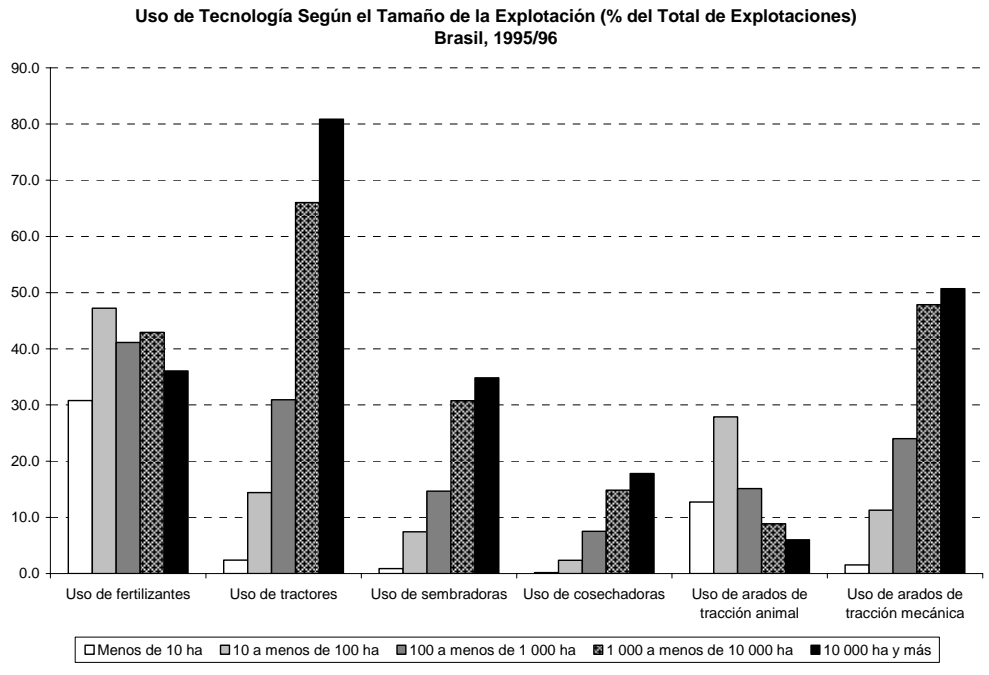


Graph 5



Fuente: M. Driven sobre la base del "Diagrama de los principales factores y vínculos de la transmisión intergeneracional de las desigualdades" elaborado por A. León y P. González (1999)

Graph 6



Map 1

