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**GENDER AND AGRICULTURAL COMMERCIALIZATION  
IN ECUADOR AND GUATEMALA**

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**Abstract: This article presents quantitative and qualitative case study results concerning indigenous women's control of land and other productive resources in household commercial agriculture. Despite the male bias of many agricultural development institutions, women have much greater control over land and other productive resources than expected. Relatively gender-egalitarian resource control patterns are attributed to particularities of local political economic histories and, in the case of Ecuador, to traditional Andean gender ideology.**

**[Ecuador, Guatemala, women, agriculture, export]**

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## **Gender and Agricultural Commercialization in Ecuador and Guatemala**

by

Sarah Hamilton, Linda Asturias, and Brenda Tevalán

It has become an article of faith among gender-and-development analysts that agricultural development agendas focusing on commercialization among small-scale producers in Latin America are likely to result in the unintended economic marginalization of women. While this expectation is well-founded, given the male bias of development initiatives described below and micro-level results reported in earlier studies of Andean and Guatemalan populations, new data suggest that institutional male bias is mediated by several factors, including ethnicity, mutuality of interests among women and men at the household level, and households' growing experience over time of particular markets. Rather than merely serving as unpaid labor in market-oriented household agriculture, women emerge as integral partners in commercial production.

The productive contributions and constraints of Latin American women farmers were largely ignored in the development policies, programs, and projects that effectively restructured small-scale commercial agriculture during the open-market or planned-economy modernization drives of the 1950s, 1960s, and 1970s. Women were largely excluded from public land reform programs that enabled small-scale producers to own or use lands formerly held by less-productive large estates (Arizpe and Botey 1987, Deere 1986). State- and donor-funded programs designed to increase commercial output in the smallholding sector channeled technology, credit, and marketing assistance to men, while women's programs focused on home-making and supplemental income-earning activities (Chaney and Schmink 1976, Flora and Santos 1986). This pattern was intensified during the 1980s and 1990s, as structural adjustment policies resulted in decreasing public investment in small-scale agriculture. Initiatives to privatize land ownership among holders of redistributed lands and to restructure formerly public technical extension and credit services (often through contracting between farmers and buyers who offer technology-credit-marketing packages) perpetuated the institutionalizing of gender-differentiated access to the means of commercial production (Hamilton 2002, Stephen 1994).

Case studies of both indigenous and mestizo populations in the Andes and in highland Guatemala reported women's decreasing control of land, labor, products, or income in households that increasingly orient production to the market (Bossen 1984, Bourque and Warren 1981, Deere and León 1982). Such cases informed the repeated generalization that men tend to control household production of cash crops in Latin America (Nash 1986; Alberti 1988; IDB 1995: 64-69), especially operations on relatively larger, wealthier holdings in the small-scale sector where women's field labor is not required (Deere and León 1987), those involving higher-level technologies (Warren and Bourque 1991), and those producing high-value

nontraditional export crops through male-oriented production and marketing entities (Katz 1995; von Braun, Hotchkiss, and Immink 1989). On such farms, where more of a household's economic resources are invested in commercial production, women are expected to be marginalized from control of productive land, labor, higher-level technologies, and incomes.

The research reported here calls into question the inevitability of women's decreasing control of the means, processes, and fruits of agricultural production in commodity-producing Latin American households. Indigenous women in highland Ecuador and Guatemala have retained or achieved relatively egalitarian control of economic resources despite the male bias of market structures. This paper analyzes cross-sectional variation in women's control of land, technology, and incomes across levels of increasing household commercialization (Ecuador) and nontraditional export crop production (Guatemala). It also explores the structural and cultural bases of gendered resource control in these settings, where much of the earlier research supporting the marginalization thesis originated.

## GENDER AND AGRICULTURAL COMMERCIALIZATION IN THE CENTRAL ECUADOREAN SIERRA

The study region comprises three indigenous (Quichua) communities located on the eastern slopes of the inter-Andean basin in Cantón (county) Salcedo, Cotopaxi Province. Quantitative measures are based on a 1992-93 three-round survey of a probabilistic sample of 116 households, derived from a population of approximately 470 households. Analysis will utilize data collected from 108 wife-husband pairs. The population comprises nuclear-family households (80 %) with access to small amounts of land that average 2.6 ha (standard deviation 2.6; median 2.0). Only one sampled household is headed by a single individual. Located some

10-20 km from the county seat, only one of the communities is directly served by a paved secondary road. Education is limited to poorly-staffed elementary schools; public health clinics are chronically short of medicines and are served only occasionally by rotating medical personnel.

Although the population is primarily indigenous, Spanish is the dominant language (only elders also speak Quichua) and people no longer wear regionally-distinctive ethnic clothing. Syncretic folk Roman Catholicism is universal and little pre-Conquest mythology has been preserved. However, traditional Andean social forms have survived many generations of enforced indentured service to a landed elite—service that ended only in the early 1970s. Bilateral kinship reckoning and gender-egalitarian inheritance of land are observed, as well as extra-household labor exchange and other forms of economic reciprocity negotiated by both male and female household heads (Hamilton 1998: 45-71, 182-209).

The local economy is based on small-scale commercial production of potato, grains, and vegetables; crop incomes are supplemented by dairying and livestock production. On average, households derive nearly 90 % of their cash income from agricultural production; local people have been commercializing over 80 % (by weight) of total agricultural yields for at least 25 years (SEDRI 1981: 150). About half of the sample also rely on men's cash incomes derived from nonagricultural wage work, transportation, and commerce; local nonagricultural wage-labor opportunities for women are severely limited. During 1992-93, around one-fifth of male household heads migrated seasonally to urban areas for work, a relatively low percentage by highland standards (DeWalt et al. 1990).

Virtually all households have land for agricultural production; however, distributions of both income and land holdings are positively skewed. The top economic quintile is composed of

families who own as much as 20 ha; own trucks and farm machinery; practice high-technology agriculture; own large concrete and tile houses equipped with gas ranges and perhaps refrigerators; provide post-secondary education for their children in nearby cities; and use private medical care. The three-fifths of households comprising the middle-income tier control 2 to 5 ha; own plow animals or rent tractors for relatively high-technology agriculture; live in two-room concrete houses; may own a small gas stove and television; do not have indoor plumbing or large appliances; and must sacrifice to educate their children beyond primary school or to use private health care. The poorest quintile comprises people who live in one-room houses (some of adobe and thatch); own 1 ha of land (or less); may have only rudimentary tools; and cannot afford secondary education or purchased health care.

Relatively little of the commercial agricultural infrastructure created by governmental and quasi-governmental agencies has reached the smallholding sector in Cantón Salcedo. Local dairy and livestock production associations provide credit and supplemental income to around half of local households. Nearly all members of these associations are male, as the groups were initially formed of men recruited by international development agencies (see Fernández 1988); national law prohibited membership by husband and wife in any production cooperative (Cooperatives Law of 1973, see Phillips 1987). Publicly-subsidized cheap credit is not available to smallholders, who must pay around 60% interest on the short-term loans available from formal financial institutions. Thus access to production- association credit funds can be a critical benefit of membership. Private extension of technology and credit through contracts between producers and buyers has not been developed in the region.

## Gender-egalitarian Ownership of Land and Division of Labor

Women and men own land equally. Around 80 percent of surveyed women own land, a slightly higher proportion of the sample than men who report ownership. Half of these women have inherited land; half own land they have purchased jointly with their husbands. Many women own both inherited and jointly-purchased plots. Among surveyed women, the average amount of land owned is 1.8 ha (standard deviation 2.5). Surveyed men reported owning 2.3 ha (standard deviation 4.6). Mean differences in the amounts of land owned by women and men are not statistically significant (two-tailed probability of  $t = .430$ ), even though men may have included some of their wives' lands in their reporting. Gender equality in landholding is observed despite the fact that the research communities are located on lands of former haciendas and participated in the Ecuadorean land reform program of the 1960s and 1970s. This program by law permitted only "household heads," nearly always male, to receive hacienda subsistence plots formerly worked by their households or to access communal lands expropriated from an hacienda (Phillips 1987, see Deere 1986). In these and other Ecuadorean land-reform communities, however, traditional gender-egalitarian practice governs the inheritance of land acquired during the reform (Stark 1979, 1984; Alberti 1986). Parents scrupulously apportion plots of equal quantity and quality among their children, regardless of gender.

Household agricultural production is a family endeavor: all household lands are worked jointly by both household heads and the income from all household production is pooled. There are no "women's crops" or "men's crops," nor do women specialize in livestock production to a greater or lesser degree than do men. Nearly all women are full-time farmers who participate in all agricultural activities throughout the production cycles. Contrary to practice observed in Andean mestizo populations (Deere and León 1982), women's labor in agricultural production is

not conditioned by the wealth level of their households (Hamilton 1998: 144-166). Some forms of labor complementarity exist within individual households, but no productive labor domains are closed to women. Both men and women report that the agricultural work of men and women is igual (similar or equal). Both men and women insist that no activities are suitable for--or performed well by--only men or women. Many families hire agricultural labor; male and female workers earn an equal wage.<sup>1</sup>

#### Gender-egalitarian Intrahousehold Resource Dynamics

Economic decision-making is a consensual process in which women have at least an equal voice with their husbands, according to survey responses from both female and male household heads and informal interviews and behavioral observations from a subsample of 10 women and their husbands. Most surveyed women report having an equal say in decisions regarding land use (when, what, and how much to plant) and in the selection of agricultural technology (Table 1). Nearly 90 % of women report at least equal participation in the management of household income. Although surveyed women were not asked to identify household members who manage income from all sources, men were asked to provide this information. Table 2 shows that husbands credit their wives with the management of both agricultural and off-farm cash incomes, the latter earned by husbands. Table 3 demonstrates that these resource control patterns characterize households that derive more of their total income from market-oriented agriculture, as well as households that derive less. Table 4 presents statistical tests of association designed to test whether the degree to which households derive

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<sup>1</sup> Men share reproductive labor to an extraordinary degree (Hamilton 1998b, Chapter 5).

Although women do more of the child care for the youngest children, men share the burden of food preparation, laundry, house cleaning, and fuel gathering.

their livelihoods from market-oriented production affects women's control of household lands, agricultural technology, or incomes. The proportion of total household income derived from commercial agriculture was ranked into four quartiles. This indicator for level of household commercialization was used because reporting of income proved to be highly reliable in this sample, and this measure indicates the relative importance of commercial agriculture to household livelihood. Following the logic of the marginalization thesis summarized above, women's control of productive resources should decrease in households that derive more of their income from agriculture. Correlational analysis does not support this thesis, as correlations are near zero, and none is statistically significant.

Both men and women emphasize the importance of collaborative intrahousehold decision-making by the "Dos Cabezas" (two household heads). Within most of the households observed regularly, a dynamic balance is maintained between two decision-making partners. When spouses disagree concerning the disposition of economic resources, neither wife nor husband always prevails concerning a particular resource or within an individual household, although women tend to have greater authority over finances. The spouse with greater knowledge, past success, commitment or stubbornness tends to prevail in a given resource-control decision. Although consensual decision processes require a great deal of negotiation, often prolonged when two equally-powerful householders go head to head, most women and men express respect for the vigor and knowledge of their partners and satisfaction with the ultimately egalitarian results.

Gender-egalitarian Control of Household Lands, Agricultural Technology, and Incomes: Case Studies<sup>2</sup>

Clemencia (age 32) and her husband Alejandro (age 34) have both inherited land; during their 11 years of marriage, they have also bought land together, and farm a total of 5 ha. Both are full-time farmers who invest in hired labor and in modern machinery and tools; nearly 100% of their cash income is derived from agriculture. Both are community leaders, holding offices in a number of organizations.

Clemencia participates equally with her husband in decisions concerning the choice of crops in which their land will be invested. She considers soil, rainfall potential, pricing trends, resistance to pests, labor and other input requirements, and benefits to be derived from crop-rotation patterns in making her recommendations. Alejo does the same, and the couple usually reach consensus without prolonged negotiation. This process is also followed with respect to agricultural inputs, including expensive agrochemicals. Clemencia has specialized knowledge of the dangers of highly toxic chemicals as she earned a scholarship to attend a training course in the US that included this information. Alejo is more knowledgeable regarding traditional forms of biological pest management. They pool their knowledge and have worked out an integrated pest management practice that meets her requirements for cost effectiveness and mutual goals to reduce health risks associated with pesticide application.

Clemencia is responsible for managing the household budget--determining how much can be spent for current agricultural inputs and how much must be saved for future investments--as

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<sup>2</sup> These cases describe women in their twenties and thirties. Resource-control patterns are similar in households whose female heads are 40-65 years old. Individuals' names have been changed.

well as doling out money for weekly expenses such as food. Although large savings and expenditures are negotiated between wife and husband, both men and women perceive that women hold ultimate responsibility and veto power for managing financial resources.<sup>3</sup> Clemencia's authority over financial resources includes income from all household crop, livestock, and dairy production, as well as loans and payments resulting from Alejo's membership in the dairy production association, of which he is president. Two-thirds of surveyed women market their family's products, but Clemencia does not, as she dislikes dealing with potato market intermediaries. Although women's control of financial resources does not depend on direct control of marketing, other women in the sample derive considerable respect from their husbands for their tough bargaining with intermediaries and knowledgeable negotiation with agricultural input suppliers and with lending institutions.

In the wealthier household of Alegría (age 35) and Rubén (36), the female head moved to the region as a young bride with 12 years of education but with no land of her own. Alegría and Rubén purchased land to add to his inheritance and jointly control the largest holdings in the

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<sup>3</sup> Women's control of household consumption and accumulation in the study communities is not unique within indigenous communities in Ecuador. Ethnographic studies from throughout the sierra report that income is pooled and that women have equal participation in establishing household accumulation goals and greater than equal participation in managing daily expenditures, even in households heavily dependent on migrant males' wages (Barsky et al. 1984; Alberti 1986; Poeschel 1988; L. Belote and J. Belote 1988). However, Mary Weismantel finds that in one region of Cotopaxi Province, men no longer feel obligated to turn over wages to their wives, with the result that women may have access to their husband's cash earnings only when the men are at home (1988).

research population (20 ha locally, plus 60 in the Amazon Basin). Both are full-time farmers whose considerable income is derived entirely from commercial production.

Rubén is eloquent on the need to "industrialize" agricultural production to enhance yields of their potato crop. They plant high-yielding varieties and apply heavy weekly doses of chemical pesticides. Rubén is also eloquent on the subject of his wife's managerial skill. He says that she is bien organizada (well organized, a good manager) and that her managerial ability pays off in matters of recruitment and supervision of hired workers and cost-benefit analysis of inputs. She has recruited several families from another province to work on their farms; she also supervises Rubén and his father, as well as the hired laborers, during harvests. While working in the field herself, she examines the output of each worker, exhorting the less industrious to increase their loads. Rubén says that Alegría works harder than he because she has to organize things as well as work in the fields. He tries to make up for this by increasing his share of the cooking and child care.

Like Clemencia, Alegría is an equal partner in decisions regarding saving, investment, and current expenditures. Like other relatively wealthy women, including women more than 20 years older than she, Alegría works in the fields although her family does not need her muscle power and she could secure nonagricultural employment. In her view, she has a great deal of managerial authority in household enterprises which she would not have if she took an office job in town, and her contributions boost agricultural earnings by a margin greater than she could earn off-farm. Alegría also prefers a participatory style of labor management, as do many other women whose attention to labor organization is valued highly by their husbands.

Both men and women strongly state that, while participation in field labor is not a requirement for entitlement to decision authority over land, labor, products, or incomes, both

household heads are expected to contribute to decision processes regarding any productive domain in which they work. The association between labor and decision authority is locally viewed as self-evident. This association has been posited as an important indicator of egalitarian (versus patriarchal) household production systems (Deere 1995).

Both of these households derive their cash income primarily from commercial agriculture. If the paradigm positing male control of household commodities production were appropriate for this population, women would be marginalized from control of productive resources and incomes. Clearly this is not the case for these market-oriented families. However, these relatively affluent cases represent less than half of the research population. What happens in poorer, less market-oriented households? Two cases demonstrate ways in which families with much less land also participate in commodities markets, and the ways in which women invest cash resources earned off-farm by their husbands in commercial agricultural production.

Susana (age 23) and her husband Nicolás (age 26) are recently-resettled migrants who lived for several years near Quito, where they worked in a cheese factory. They sharecrop about 1 ha of land, some of which comes into the household through her parents and some from his. Susana recommended they plant one plot in garlic, an expensive, high-risk, and high-value crop. Nicolás readily agreed that her crop choice could maximize earnings from a small land area, basing his pro forma decision input on his wife's greater knowledge of the crop, gained through her more careful attention to neighbors' experience. A soil-borne disease destroyed the crop, but Nicolás supports Susana's plan to try again when the land has "rested" sufficiently to be productive again.

Susana and Nicolás derive around two-thirds of their total income from commercial agriculture. Nicolás works part-time for wages at the local dairy production association; his wage

covers household subsistence expenses and helped to pay for her selections of expensive plant sets and agrochemicals. Susana also arranged with a cousin to feed the cousin's pigs in exchange for a share of piglets, and used the whey runoff from cheese production as part of her feeding program. The couple heatedly negotiate the proportion of their agricultural income that must be reserved for future land purchase, but both reported that Nicolás had come to accept Susana's judgment concerning luxuries to which they were accustomed in the city but could no longer afford.

Mariana and Enrique, a poor couple in their late thirties, also hope to buy sufficient land to support their large family. Each inherited less than 1 ha and they derive a little less than 40 % of their annual income from commercial production. Although they have a small land base, they invest Enrique's off-farm income in hired labor and agrochemicals that are applied, under Mariana's supervision, to the production of crops for sale. Enrique works in construction in the capital city for several months each year and relies on Mariana to manage his salary as well as production earnings. Mariana explains her role in budget management and accumulation:

My husband is very good about bringing home the money....He spends very little on himself. So you might think I have a lot of money to spend, but I don't. We wanted to join the [cattle production] cooperative. That costs a lot and we had to pay it all at one time. And we are saving to buy land....Well, I decide what we can spend. My mother taught me how to get along on very little.

This case is not unusual, as income earned by temporary migrants is managed by their wives in nearly three-fourths of households reporting such income. Off-farm income subsidizes high-input commercial production on many farms, including some of the smallest.

## Gender Ideology and Women's Resource Control in Highland Ecuador

Gender-egalitarian control of land, labor, technology, and financial resources is related to ideological constructions of gender based in traditional Andean concepts and in local political-economic history. Local people express strong preferences for collaborative, egalitarian social and economic institutions. Collaboration among households is widely viewed as a survival mechanism that enabled local people to outlast the hacendados' hold on their land and continues to offer the best hope of social security in communities largely without public social infrastructure.

Collaboration between wives and husbands is valued in much the same way as cooperation among families. Men express high valuation of their wives' (and other women's) agricultural expertise, economic judgment, physical strength and hard work, political acumen, and bargaining skill in the marketplace; wives praise their husbands for similar strengths. There does not appear to be a gendered division in the attribution of these strengths. And there is a generalized understanding that "two heads are better than one" in the management of household production, consumption, and accumulation; the pooling of skills is an important part of the enterprise. However, the preference for dualistic power sharing in households goes beyond practical considerations, important though these are.

Throughout the Andes, ethnographers have found evidence for a tradition in which cultural norms prescribe that households have two equally-powerful heads: one female and one male (Allen 1988, Harris 1978). Both balance and dynamism must characterize the relations between these two heads if the household is to prosper. The desired balance of power is maintained in households where neither head controls a greater share of material, social, or spiritual resources. Dynamism is achieved by a continuous and egalitarian shifting of the

balance, as neither head dominates all decisions or decision-making domains. The perception is strong that maintaining this dynamic provides the push enabling the household to move forward in time, to grow and mature properly: literally the "power of balance." This fundamentally Andean preference for dualistic headship has been reinforced, rather than eroded, by the challenges of making a living in small-scale commercial agriculture.

## GENDER AND AGRICULTURAL COMMERCIALIZATION IN HIGHLAND GUATEMALA

The research population comprises two primarily Kaqchikel Maya communities in Chimaltenango Department, the largest nontraditional agricultural export (NTAE)-producing area in Guatemala. Quantitative analysis is based primarily on a 1998 probabilistic-sample survey of 141 households from a population of 406 households. The sample used for analysis of women's control of land and other productive resources includes the 87 households in which an interviewee reported producing crops for domestic or export markets. Only interviewees in these households were asked to report resource-control decision patterns. In 17% of households, both male and female household heads were interviewed (some of these included widows and adult sons). In 4% of households, only a female head was interviewed. In the remainder, only the male household head was interviewed; 4% of these men did not have a spouse or partner. All interviewees responded to a single survey. If spouses supplied noncontradictory information, the common value was entered. In cases where values differed between spouses, the woman's response was entered.

Among commercial producers, 98% are self-identified as Kaqchikel. Nearly all women and men are bilingual. The religiously-affiliated majority of households are divided nearly

equally among Roman Catholic and Protestant denominations. Two-thirds of households are comprised of nuclear families; 6% are headed by single women. As in the Ecuadorean case, social and economic infrastructure are severely limited.

The local economy is agriculturally-based, comprised of mixed subsistence and commercial production in most households, and characterized by a highly and positively skewed distribution of land among households. On average, households access (including rental) 1.5 ha.(SD 3.6). Nearly one-sixth of households do not own land, and an additional 60% own less than 1 ha, while only 3% own 5 or more ha and one household owns 33 ha. This distribution is evened out somewhat through land rental. Land quality and limited access to needed irrigation are similar for the Ecuadorean and Guatemalan populations. Although their land base is much smaller, the Guatemalan communities exhibit distributions of improved housing and ownership of vehicles and other material goods that are remarkably similar to those reported by their Ecuadorean counterparts.

Local producers have been growing high-value nontraditional exports, primarily snow peas and broccoli, for around 15 years. Although smallholders move in and out of NTAE production for a variety of reasons, including increasing price uncertainty, U.S. rejection of produce with pest or pesticide-residue contamination, soil depletion associated with the overuse of agrochemicals and rising land pressure, and lack of insurance (Carletto, de Janvry, and Sadoulet 1999;Barham, Carter, and Sigelko 1996), 66 households planted these crops in 1998. Most NTAE producers also planted commercial crops for the domestic market (potato, strawberry, cabbage), as well as subsistence crops (maize, beans). The remaining 21 households commercialized nontraditional production for the domestic market only.

Access to agricultural infrastructure is limited. Although many Guatemalan smallholders produce and market nontraditional export crops through cooperatives, the local market is dominated by private intermediaries, with a minority of producers contracting sale of crops (primarily broccoli) with exporters. One-fourth of men and 5% of women belong to groups self-organized to market nontraditional exports through contracts with intermediaries or agroexporters.

#### Intrahousehold Division of Land, Labor, Decision-making, and Incomes

The ownership of land, division of agricultural labor, and provisioning for household consumption needs are much more differentiated by gender than in the Ecuadorean case. Women have traditionally earned incomes through craft production, storekeeping, small animal production, and selling nonagricultural products in regional markets, while men were primarily responsible for subsistence agricultural production. Separate budgets for subsistence (food, clothing, domestic technology) and agricultural production were managed by women and men respectively. Earlier studies from the region concluded that household adoption of NTAEs results in increased field labor for women, who may decrease the amount of time devoted to independent income-producing activities (von Braun, Hotchkiss, and Immink 1989). Since men dominate the marketing of NTAEs through coops and other forms of export contracting, while women are responsible for stretching the household subsistence fund they administer to cover food and many domestic expenditures, women depend on their spouses to share receipts in a manner that compensates for any decrease in their own independent incomes. One study found that, although women did not give up independent income-earning activities when they took to the NTAE fields, they received a smaller proportion of incremental income derived from NTAE production than did women whose households' income increments derived from other sources

(Katz 1995). Kaqchikel populations have also been characterized as patriarchal with respect to landholding and land-use decision-making (even on women's land) as well as with respect to control of agricultural incomes and other economic resources (Katz 1995, Nieves 1987).

In the study communities, only 22% of women have inherited or bought land individually—compared with 57% of men—while another 29% have bought land together with their husbands. However, nearly half of the households report renting land, a strategy that enables the expansion of NTAE production.

Women are heavily involved in household production of nontraditional exports and other commercial crops. Among producers of snow peas and broccoli, 94% of men report that their wives work with them in harvesting (92%), planting (77%), fertilizer application (20%), and/or hoe cultivation (22%). Women also market crops in many households (Table 1), although only 17% of snow pea producers report that women sell the crop and all broccoli was sold by men. Observation of intrahousehold decision-making indicated that women and men together decide who will work in the fields, and that women control their own labor to the same degree as do men (Brenda Tevalán, personal communication). Only 4% of women reported earning agricultural wages outside family production. Male-biased wage differentials reflect both the division of labor by task, with men performing tasks perceived to require more strength (such as spraying agrochemicals from backpack sprayers), and the length of the working day, which is often shorter for women. Given the access women have to proceeds from household agriculture (see below), their agricultural labor brings greater returns if applied to household production.

Despite the domination of landholding and NTAE marketing by men, three-fourths of commercial producers reported that land use decisions are made jointly between male and female household heads (Table 5). Nearly one-third also reported joint decision-making regarding the

selection of agrochemicals, an expensive input. This figure partly reflects the contribution by 46% of women to the purchase of agrochemicals, seeds, and other inputs. If a man does not have money for agricultural inputs, he must ask his wife to contribute from her own income or from household subsistence funds, even though the funds she controls may have originally derived from his crop sales. Women execute or share control of incomes derived from nontraditional export production in 69% of producing households.<sup>4</sup>

Women in the Chimaltenango research communities were not marginalized from land-use decision processes, nor did they forego their own independent income producing activities, in households that invested more of their resources in NTAE production (Table 5). Statistical tests of association between indicators of women's resource control and levels of NTAE production demonstrate that women are more likely to have independent income from animal

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<sup>4</sup>The survey did not quantify the proportion of this income directly controlled by women. The proportion of household income controlled by women was quantified in a 1994 study of a Kaqchikel community near Guatemala City, which showed that women in NTAE-producing households directly controlled 58% of all incomes; in households that derived all of their income from agriculture, women and men each controlled half of the income. It should be noted that, although many households were affiliated with a male-oriented production and marketing cooperative, women marketed snow peas in 40% of producing households and French beans in 60% of producing households, taking advantage of their proximity to urban markets (Asturias de Barrios and Tevalán 1996).

production, and less likely to supply money for inputs, in households that plant more land to NTAEs (Table 5). These households tend to have a larger economic resource base; women may be better able to invest in their own farm-based enterprises. The level of NTAE production is not associated with the likelihood that women will make land use and agrochemical selection decisions, manage incomes derived from NTAEs, or earn income from nonagricultural enterprises.

Given the pronounced traditional gender division of labor and management of household provisioning in the Guatemalan population, together with the male-dominated marketing infrastructure and reportedly patriarchal cultural setting, it is surprising to find that women do not appear to be marginalized from control of land, labor, and incomes related to NTAE production. A partial explanation may lie in material payoffs from more egalitarian control of resources, such as that observed in highland Ecuador. In a Kekchi Maya population in Belize, Richard Wilk found that households exemplifying a "mutual interest" pattern of shared economic decision-making, responsibility, and resources were able to accumulate more capital than households exemplifying a patriarchal pattern of authoritarian control with intrahousehold bargaining over individually-controlled resources (1990). When economic decision-making is "conceived as a group decision over group resources rather than as a process of bargaining between individuals," (p.340) each householder has a stake in household productivity and becomes more willing to share tasks flexibly, to work hard, and to manage resources carefully. Perhaps household patriarchs in Chimaltenango have realized over time the economic benefits of shared decision-making.

## CONCLUSION

In the central Ecuadorean highlands, women and men have compelling political-economic reasons for believing that egalitarian intrahousehold resource dynamics have served them well. Both the perceived need to cooperate under conditions of past hacienda indenture and a fundamentally Andean preference for dualistic household headship underlie egalitarian intrahousehold relations in market-oriented households. A number of traditional concepts, values, and socio-economic structures enable the endurance of egalitarian forms. Egalitarian inheritance patterns have been perpetuated together with the conviction that women and men are equally worthy trustees of family wealth. The high valuation of women as economic actors is an important component of women's control of economic resources in market-oriented agriculture. This valuation is based on both cultural tradition and perceived material benefits of gender-egalitarian relations of production.

In the Guatemalan highlands, traditional gender complementarity in work and resource control and a more patriarchal baseline do not afford women the structural and ideological bases for egalitarian commercial-agriculture resource control observed in the Andean population. Yet women and men cooperate in a more egalitarian manner than expected, despite the male orientation of many institutions. Women are more likely to have a farm-oriented independent productive base in households that rely more on nontraditional agricultural export production, rather than losing ground as household agriculture becomes more market oriented. Although income sharing takes the form of two-way transfers, rather than the female-administered pooling observed in the Andes, women appear to share equitably in the income derived from commercial production.

The paradigm positing increasing male control of economic resources as a general, and perhaps inevitable, corollary of increasing market orientation among smallholders in Latin America proves inadequate to encompass the dynamics of intrahousehold resource control in these settings. These cases demonstrate that particularities of local political-economic history and socio-cultural institutions, as well as macro-economic policy environments, profoundly influence gendered outcomes of household agricultural commercialization. The “myth of the masculine market” (Hamilton 2000) obscures the productive potential and constraints of Latin American women working in household commodity production and marketing and should not be relied upon in policy formulation.

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## TABLES

1. WOMEN REPORT GENDER-EGALITARIAN CONTROL OF HOUSEHOLD ECONOMIC RESOURCES, CANTÓN SALCEDO (ECUADOR)
2. MEN REPORT GENDER-EGALITARIAN CONTROL OF HOUSEHOLD CASH INCOMES, CANTÓN SALCEDO (ECUADOR)
3. GENDER EGALITARIAN CONTROL OF HOUSEHOLD ECONOMIC RESOURCES by LEVELS OF AGRICULTURAL COMMERCIALIZATION, CANTÓN SALCEDO (ECUADOR)
4. CORRELATIONS: WOMEN'S CONTROL OF HOUSEHOLD ECONOMIC RESOURCES WITH INCREASING COMMERCIALIZATION OF HOUSEHOLD AGRICULTURE CANTÓN SALCEDO (ECUADOR)
5. WOMEN'S MARKETING AND PARTICIPATION IN PRODUCTION DECISIONS BY LEVEL OF HOUSEHOLD NTAE PRODUCTION, CHIMALTENANGO (GUATEMALA)

TABLE 1

WOMEN REPORT GENDER-EGALITARIAN CONTROL<sup>a</sup>  
OF HOUSEHOLD ECONOMIC RESOURCES  
CANTÓN SALCEDO (ECUADOR), 1992-93

Resource Control Domain	Percentage of Women Reporting Equal Control <sup>a</sup>
LAND USE	84 %
ALL INCOMES	88 %
AGRICULTURAL TECHNOLOGY	71 %

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<sup>a</sup> Women's self-reported control of resource as equal to husband's control or greater than husband's control  
N = 108

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Data Source: NSF/FUNDAGRO Household Surveys, Cantón Salcedo, August 1992- July 1993

TABLE 2  
 MEN REPORT GENDER-EGALITARIAN CONTROL  
 OF HOUSEHOLD CASH INCOMES  
 CANTÓN SALCEDO (ECUADOR), 1992-93

Income Sources	Households Earning (Sample N = 99 <sup>a</sup> )	Percentage of Earning Households with Egalitarian Income Control <sup>b</sup>
Crops (potato, grains)	93	92%
Milk	70	93%
Animal sales	69	89%
Wage labor, local <sup>c</sup>	23	93%
Salary, local <sup>c</sup>	7	100%
Wage or salary earned during temporary outmigration <sup>c</sup>	14	73%
Transportation <sup>c</sup>	13	100%
Commerce <sup>d</sup>	6	100%

N = 99 male household heads reporting income amounts (92% of sample of 108 male household heads)

<sup>b</sup> Husband reports wife's equal or greater control of income per income source; in 91 of the 93 households that produced cash crops, the husband reported who controls income derived from crops

<sup>c</sup> Income was earned by husbands

<sup>d</sup> Income was earned by husbands in most cases

Source: NSF/FUNDAGRO Household Surveys, Cantón Salcedo, August 1992-July 1993



TABLE 3  
GENDER EGALITARIAN CONTROL OF HOUSEHOLD ECONOMIC RESOURCES  
by  
LEVELS OF AGRICULTURAL COMMERCIALIZATION  
CANTÓN SALCEDO (ECUADOR), 1992-93

	Percentage of Total Household Income Derived from Commercial Agriculture			
	0 - 37% (N = 24)	40 - 60% (N = 25)	61 - 76% (N = 25)	77 - 100% (N = 25)
Percentage of women reporting resource control equal or greater than husband's for:				
LAND USE	83%	88%	80%	80%
AGRICULTURAL TECHNOLOGY	67%	76%	68%	68%
ALL INCOMES	96%	80%	88%	88%
	Percentage of Total Household Income Derived from Commercial Agriculture			
	1 - 37% (N = 16)	40 - 60% (N = 25)	61 - 76% (N = 25)	77 - 100% (N = 25)
Percentage of men reporting wife's equal or greater control of:				
CASH CROP INCOME	100%	91%	91%	94%

N = 99 households for which male head provided complete income information (92% of sample of 108 households), allowing computation of percentage of total income derived from commercial agriculture; in 91 of the 93 households that produced cash crops, the husband reported who controls income derived from crops.

Data Source: NSF/FUNDAGRO Household Surveys, Cantón Salcedo, 1992-93

TABLE 4  
CORRELATIONS:  
WOMEN'S CONTROL OF HOUSEHOLD ECONOMIC RESOURCES <sup>a,b</sup>  
WITH  
INCREASING COMMERCIALIZATION OF HOUSEHOLD AGRICULTURE <sup>c</sup>  
CANTÓN SALCEDO (ECUADOR) 1992-93

Dependent Variables: Resource Control Domains	<i>Symmetric Measures</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>Approx.T</i>	<i>Approx. Sig.</i>
Land Use <sup>a</sup> (N = 99)	Gamma	-.107	.201	-.529	.597
	Spearman	-.054	.102	-.535	.594
Input Selection <sup>a</sup> (N = 99)	Gamma	-.018	.166	-.109	.913
	Spearman	-.011	.102	-.110	.913
Household Finance <sup>a</sup> (all incomes) N = 99	Gamma	-.113	.200	-.560	.575
	Spearman	-.050	.088	-.491	.625
Income from Crops <sup>b</sup> (N = 91 producers)	Gamma	-.248	.245	-.926	.355
	Spearman	-.078	.080	-.712	.478

<sup>a</sup> Women=s self-reported control of resource: control equal or greater than husband=s coded as 1; less than equal control coded as 0

<sup>b</sup> Women=s control of crop incomes, reported by husbands: control equal or greater than husband=s coded as 1; less than equal control coded as 0.

<sup>c</sup> Percentage of total household income derived from commercial agriculture, ranked into quartiles.

Households grouped by percentage of total household income derived from commercial agricultural production:

Group 1 (N = 24) 0 - 37 % percent of total income derived from commercial agriculture

Group 2 (N = 25) 40 - 60 %

Group 3 (N = 25) 61 - 76 %

Group 4 (N = 25) 77 - 100%

For women=s control of crop incomes, as reported by husbands:

Group 1 (N = 16 male household heads reporting crop income) 1-37% of income derived from commercial agriculture; Groups 2, 3, and 4 same as above.

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Source: NSF/FUNDAGRO household surveys, Cantón Salcedo, 1992-93

**TABLE 5**  
**WOMEN'S MARKETING AND PARTICIPATION IN PRODUCTION DECISIONS BY**  
**LEVEL OF HOUSEHOLD NTAE<sup>A</sup> PRODUCTION**  
**N = 87**  
**CHIMALTENANGO (GUATEMALA) 1998**

		Market Berries	Market Potato	Market Snow Peas <sup>c</sup>	Control NTAE Income <sup>d</sup>	Produce Animals <sup>d</sup>	Control Land Use <sup>d</sup>	Control Inputs <sup>d</sup>
Hectares planted to NTAEs by Household		%	%	%	%	%	%	%
0 <sup>b</sup>	N 21	73 (N=15)	50 (N=4)	0	71	24*	91	48
.06-. 11	N 37	63 (N=8)	38 (N=8)	15 (N=34)	68	32*	68	27
.23-4.74	N 29	67 (N=3)	15 (N=14)	21 (N=24)	69	55*	76	24
<b>TOTAL</b>	<b>N 87</b>	<b>69 in (N=26)</b>	<b>27 in (N=26)</b>	<b>17% in (N=58)</b>	<b>69 (N=87)</b>	<b>38 (N=87)</b>	<b>76 (N=87)</b>	<b>31 (N=87)</b>

<sup>a</sup> Nontraditional agricultural exports (snow peas and broccoli)

<sup>b</sup> Produce variety of commercial crops, for domestic market only

<sup>c</sup> Women did not sell broccoli in the 15 households that produced the crop.

<sup>d</sup> Statistical tests of correlations between level of NTAE production and intrahousehold socioeconomic indicators were computed for households that produce commercial crops (N = 87).

\* Gamma is significant at  $p = <.05$ .

Data Source: IPM CRSP Household Surveys, Chimaltenango, 1998