# The Economy of Family Farming Production

Forero-Álvarez, J. (2013). The Economy of Family Farming Production. *Cuadernos de Desarrollo Rural*, 10 (70), 27-45.

Jaime Forero-Álvarez*

Recibido - Submitted - Reçu: 2012-06-10 • Aceptado - Accepted - Accepté: 2012-06-11 • Evaluado - Evaluated - Évalué: 2012-08-15 • Publicado - Published - Publié: 2013-03-30

SICI: 0122-1450(201303)10:70<27:TEOFFP>2.0.TX;2-X

## Abstract

Based on the authors' own research, and on a review of literature on the subject, we propose a conceptualization of two types of family farming, peasants and capitalized non-peasants family farmers. The focus is placed on partial monetization of the production model. The existence of a monetary and a non-monetary dimension is the key to explaining the economic rationality of these two production models. As a way of explaining the economic efficiency of family farmers, the article concludes with a new conceptualization, which is of micro scale economies. This concept takes up the ideas of other authors who asserted that small-scale farming is more efficient than large-scale farming. It then moves on, and away from this idea by proposing that both large and small-scale farmers can be efficient; the former by virtue of scale economies, and the latter by obtaining scale micro-economies.

## Keywords author:
Peasant economy, family farming, economic theory, monetization, agriculture and livestock sector production systems, agricultural economy.

## Keywords plus:
Agriculture, family farms, agricultural productivity, economies of escale.

* PhD. Full Professor, Facultad de Estudios Ambientales y Rurales, Pontificia Universidad Javeriana, Colombia. E-mail:jforero@javeriana.edu.co. Translation by Sally Station.

# La economía de la producción de la agricultura familiar


## Resumen

Con base en la investigación de los propios autores, y de la revisión de la literatura sobre el tema, el texto propone la conceptualización de dos tipos de agricultura familiar: a. campesinos y b. agricultores familiares - no campesinos- capitalizados. La atención se centra en la monetización parcial del modelo de producción. La existencia de una dimensión monetaria y no monetaria es la clave para explicar la racionalidad económica de estos dos modelos de producción. Para explicar la eficiencia económica de los agricultores familiares, el artículo concluye con un nuevo concepto: economías de escala micro. Este concepto retoma las ideas de otros autores que afirmaron que la agricultura a pequeña escala es más eficiente que la agricultura a gran escala. Luego nos alejamos de esta idea y proponemos que tanto los agricultores de gran, como de pequeña escala pueden ser eficientes; los primeros gracias a las economías de escala, y los segundos mediante la obtención de micro-economías de escala.



## Palabras clave autor:

Economía campesina, agricultura familiar, teoría económica, monetización, agricultura y sistemas ganaderos del sector de producción, economía agrícola.

## Palabras clave descriptores:

Agricultura, granjas familiares, productividad agrícola, economía de escala.


# L'économie sur la production de l'agriculture familiale


## Résumé

Sur la recherche des auteurs et l'examen de la documentation sur le sujet, le texte propose la conceptualisation de deux types d'agriculture familiale: a. des paysans et b. d'agriculteurs familiaux - non paysans - capitalisées. L'accent est mis sur la monétisation partielle du modèle de production. L'existence d'une dimension monétaire et non monétaire est la clé pour expliquer la justification économique de ces deux modèles de production. Pour expliquer l'efficacité économique des agriculteurs familiaux, l'article conclut avec un nouveau concept: les économies d'échelle micro. Ce concept prend les idées d'autres auteurs qui affirmaient que l'agriculture à petite échelle est plus efficace que l'agriculture à grande échelle. Cependant, on s'éloigne de cette idée et on suggère que les deux : les grands agriculteurs et les agriculteurs à petite échelle, peuvent être efficaces; les premiers grâce aux économies d'échelle, et les derniers par l'obtention de micro-économies d'échelle.



## Mots-clés auteur:

L'économie paysanne, l'agriculture familiale, théorie économique, monétisation, l'agriculture et systèmes du secteur de production, l'économie agricole.

## Mots-clés descripteur:

Agriculture, exploitations familiales, productivité agricole, l'économie d'échelle.

# 1. The family farming: a partially monetized form of production

## 1.1. The family farming business and predominant forms of production in the current situation

In the current market economy, the private economic initiative is channeled through two predominant forms of business organization: the partially monetized family (or individual) business, and the totally monetized large-scale business. Globally, the former employs more people than the latter and the latter contributes more added value than the former. Another substantial space in each country's economy is occupied by governmental organizations responsible for a major portion of the overall employment.

In agriculture, large companies (totally monetized and fully integrated into the market) usually take one of two forms: vertically-integrated production under a single owner (or a single company), with large processing plants (oil production plants, refineries, sugar mills, cereal mills...) and companies that confine their activities to primary farm production (large corn, wheat, rice, soy bean and coffee farmers and raw milk or live cattle producers, for example). Profitability is a fundamental condition for the economic viability and reproduction of large companies, whose economic rationale is determined by its strategies for optimizing profitability.

The family business in the urban sector is part of the so-called informal sector of the economy, small businesses and other private self-employment activities (such as professional services). In farming, the family business includes both the peasant economy and all forms of small-scale agricultural activity where the family, or the individual farmer, is the center of the business organization, and the family or individual provides a substantial amount of the work related to farming activities.

We will refer to the family farmers in this article, as a category which includes two types of family farming: peasants and capitalized non-peasants. Peasants are family farmers (or family farm workers) who think of the soil not only as a productive asset, but also as part of their cultural heritage (physical or symbolic) and who belong to and are an active part of their rural communities. The economic organization of a peasant production unit is related to the family organization, a fact broadly accepted by important treatise writers such as the late 19th century, early 20th century Russian economist Alexander Chayanov (1990) and by Shanin, (1979;1986), Wolf (197125), Chonchol (1986) and Haubert (1997).

The peasant production differs from other forms of family agriculture such as the "capitalist family businesses" as Luis Llambí (1988) calls them, or from the modern family farming model and the family business model, names suggested by Lamarche et al (1991; 1994). In these types of production, land, work, and capital must increase in value (that is, they must be profitable) by keeping their opportunity cost. Although in non-peasant family farming (capitalized) the work of the farm leader is central, the family organization remains independent of the farming and livestock business. This type of farming is currently very common in both industrialized and Third World countries, as seen in Lamarche's research: only 21% of farmers researched in Tunisia turned out to be actual peasants and only 22% in Brazil (Lamarche et al, 1994). Lamarche says that peasants are weakly integrated to the market, their land is not just a productive active, but also represents a cultural heritage, besides that, peasants belong to a rural community (Lamarche et al, 1994). It is worth to highlitght that, in general, farming activities analyzed in Lamarche's study in France, Canada, Poland, Tunisia and Brazil do not strictly correspond to the four family farming patterns he defined (one peasant and the other three non-peasant family businesses) but instead "*are in intermediate situations with regard to the extremes, as if they would or could not enlist more deeply in the corresponding real model*" (Lamarche et al, 1994). In other words, Lamarche's research concludes that although most of the family farm workers analyzed do not correspond to the peasant model, neither do they differ radically from this form of production.

Like it was just mentioned, we will refer to family farmers in this article, a category which includes peasants and capitalized non-peasants, and to family production systems, which are family farming production units. The information available in Colombia and other countries (excepting for data used by Lamarche et al in 1994, resulting from his own surveys) does not allow us to differentiate between these two types of actors. A fundamental characteristic of the peasant is his/her ties to a rural community governed by family and neighborhood relationships (Shanin, 1983; Chonchol, 1986; Lamarche et al 1994; Van der Ploeg, 2010 and two other classics quoted by Van der Ploeg: Pearse (1975) & Tepicht, 1973). The institutions through which individuals and their families relate to each other in the heart of the community, and the way members of rural communities relate with other agents (merchants, officials, local political bosses and civil, military, and church authorities) show a unique territorial behavior, quite different from the non-peasant family farmer whose links with the rural community, when they exist, tend to be limited to resource transactions.

In light of the transformation of rural communities caused by increasing interaction with urban areas and the high mobility of the rural home, Ethel del Pozo-Vergnes wonders whether "*we are witnessing the disappearance of rural communities*" and responds, supported by her research in the Latin American Central Andean plateaus, that "*certainly not. It is, rather, an evolution whereby the individual and the family affirm their own interests even more vehemently but, because of tradition, identification, 'attachment', or mere economic calculations, they try to do so within the framework of their community and not against it*". (Del Pozo-Vergnes, 2004)

## 1.2. Monetization of family production

Empirical evidence gathered in Colombia and other countries shows that family production systems (peasant and non-peasant) are highly monetized, both in their inputs (labor, supplies) and in their output (product sales), and even participate in the sale of land. Likewise, they systematically turn to credit (institutional and, mainly, private). With regard to family production system inputs, studies in Colombia show that in a significant number of areas, hired family labor accounts for 17% to 53% of the total work force while monetary costs account for up to 71% of total costs. Regarding output, sales of family farm products represent between 89% and 95% of the production value (see a collection of results of the above research mentioned in Forero (2010a)) meaning that the production, set aside for the family's self-consumption, accounts for less than 10% of the total production in the family production system. However, self-consumption, according to several sources, accounts for 30% of the average groceries consumed in peasant homes in Colombia (collection by Torres (2002). See also Corrales, Forero, Maya & Guacaneme (2007)).

There is also evidence that tends to confirm the high monetization of family production (peasant and non-peasant) in other countries: Soliz & Aguilar (2005), Korovkin (2008) confirm it for Ecuador. Tulet (2002) for Venezuela. Franqueville (2000) for Bolivia. For Peru Eguren (2006) and CEPES (2002). Brocheux (1991) for the Philippines. Dufumier & Srijantr (1997) confirm it for Thailand. Courade (1999) for cocoa and cotton production in several African countries, and Guillermou (1997) for Algeria. The monumental work of Dufumier (2004) shows that wide sectors of the peasant population are highly integrated into the products and supplies markets (doubly monetized) in Egypt, Syria, Tunisia, and Turkey, as well as in much of Latin America and South Korea, Taiwan, and China. The "decollectivization" of Chinese agriculture has caused a strong intensification of small farming systems due to the introduction of Green Revolution packages, as demonstrated by Aubert (2005), who contributes with data, showing that 67% of the monetary portion of Chinese peasants' net income comes from farming and livestock. Contrary to popular belief, Étienne (1987; 2005) argues that in India, with the second largest peasant population after China, vast regions of peasants in areas where the Green Revolution has been introduced, have benefited greatly from farming surpluses placed on the market. Finally, Van der Ploeg (2010), in a recent study that included his own evidence from Peru, Holland, and Italy and a broad review of Anglo-Saxon literature, concludes that "*peripheral farming systems (in the Third World) are more dependent, more commercialized, and more based on a 'complete circulation of merchandise' than systems at the center (European*)".

# 2. Dynamics and economic organization of rural family farming

## 2.1. Chayanovian economic logic and current conditions of peasant farmers

The microeconomic analysis of the peasant economy has, for a long time, been influenced by fundamental contributions made in the early twentieth century by Alexander Chayanov (1990), who proposed a decision model of peasant farmer behavior using variables that differed from those of the neo-classical marginal's theory. Chayanov proposed, through solid arguments and support from extensive quantitative data, that peasants did not seek to optimize earnings but, instead, to satisfy their basic needs according to their family size, the availability of family labor, and the amount of land. Consequently, Chayanov argued that economic categories of salary, price, and profit were not applicable to these production systems. Chayanov's legacy has been undoubtedly important to an understanding of the peasant (or rural family) farmer, and has brought us closer to an understanding of their rationality. It has, likewise, been fundamental in arguing the conceptions, both for and against of the peasant, as a historically backward being, absolutely unviable in the current society. But in the interim between Chayanov's Russia and contemporary society, many changes have substantially modified the economic context of present-day rural farmers. We feel that highlighting these differences is a good way to begin to explain certain central characteristics of the current family production. Of the many differences between farmers analyzed by Chayanov, some 90 years ago in Russia and contemporary peasants (or family farmers), we will enumerate those that are most relevant to our analytic perspective.

First of all, the Russian peasants at that time used labor that came almost exclusively from the family, while for contemporary peasants hiring workers means the possibility of expanding production beyond the family's work capacity. The decision to hire salaried employees depends on the situation: when surplus tends to be positive in the medium and long term, farmers obtain value in addition to the cost of hired labor. On the other hand, when there is a shortage of family labor, the farmer is forced to hire workers, transferring to the day laborer part of the income that he would get if he had no limitations in manpower allocation. This usually happens in homes with few members, or where women, children and the elderly are predominant. Insofar as the rural home turns to (or has the possibility of doing turning to) a variety of rural farming and livestock activities (day labor), or urban non-agricultural or livestock activities representing real alternatives to work on his own farm, the opportunity cost for family labor, measured in terms of remuneration outside of the plot, will influence the peasant's decisions.

Second, aside from certain tools and the purchase of certain animals, the supplies used by Chayanovian farmers were produced on the farm itself (non-monetary costs) while today's family farmers buy fertilizers, pesticides, medicine and food for their animals, machinery, tools, and all kinds of materials (cement, hoses, bricks, etc.) on the market (monetary costs).

Third, the goods on the market required for home consumption accounted for a greatly reduced portion of groceries in comparison with the present high percentage of purchased goods (about 70% according to several studies made in Colombia. See Forero (2010a)). Almost all clothing, a large part of home supplies, motor transportation, utilities, health, education, household appliances, cleaning supplies, etc., have to be acquired on the market.

Demand for non-bank credit (supply stores, merchants, neighbors) does not appear in Chayanov's model either but is a variable we must include in current analyses.

And, according to Chayanov, producers could fully satisfy their few needs without employing all their working capacity as long as they had an adequate portion of land. In contrast with the subsistence logic of the Chayanovian peasant, it is difficult to find peasants nowadays – although there are exceptional cases – who do not participate in the principle of insatiability (or the unlimited desire of consumers) in a society of mass consumption, which unlike the early 20th century rural Russia, has asserted itself currently as a consequence of the expansion of the market economy.

One of the ways to access to the monetized productive resources currently favored by peasants is to form associations among themselves, and with other businessmen or financiers, to take advantage of a wide variety of business opportunities in response to the availability of land, capital and the labor of those involved. These associations are frequently referred to as *medianerías*, associations in which the profit is generally shared equally among the partners. These contracts are quite common in Colombia (Forero & Rudas (1983); Bernal (1990); Gutiérrez (2011)) as a response to the monetization of production costs and the differences in supply capacity (including monetary capital), which was not a factor in the rural economy analyzed by the famous Russian economist.

Although these *medianerías* come, in some ways, from sharecropping, they differ greatly nowadays from that form of production, which was based on submission and income, paid in kind, by peasants to landowners. For several decades now, authors like Stiglitz (Newbery & Stiglitz, 1979) have recognized the *medianería* as a relationship created to increase production, to improve competitiveness and to share the risks in what we call partially monetized economies. As we discussed in another case study in Colombia, in areas that supply food to cities, there is a relationship that facilities the flow of land, labor, and capital which has allowed the expansion of a horticulture that uses - with greater intensity than other crops- the Green Revolution's technology (Forero & Rudas, 1983). Garrett y Xut (2003) (quoted by Gutiérrez, 2011) similarly suggests that the *medianería* is used on plantations with greater productivity. Lehman (1986) shows how in Ecuador's Carchi Province the *medianería* contributes to the consolidation of capitalized family farms and the expansion of potato farming, an integral part of the urban food market. Dufumier (1999) points to the current use of this type of association in other countries. Likewise, van der Ploeg (2010) calls attention to peasants' use of these strategies to, according to his interpretation, minimize the monetary expenses, which are covered by the partner who contributes with capital. We pointed out that business relationships among peasants nowadays (and in general among family farmers) are established in order to access monetized productive resources, which marks yet another difference with the Chayanovian model.

The growing connection between family farmers and monetized markets for products, supplies, labor and credit, as well as their participation as buyers in a mass consumer society, makes them tend to optimize their net income (peasants included), as explained by neoclassical theory. (According to neoclassical theory, producers tend to produce until net income is optimized, and will not stop producing, like the Chayanovian optimizer, once their basic needs are met). But a good number of them, perhaps the majority, cannot be characterized as pure neoclassical optimizers. Rather, they show, at the same time, certain of the Chayanovian decision-maker's traits[1].

In any case, family farmers, and especially peasants, are not, strictly speaking, capitalist businessmen, nor are they subsistence farmers.[2] As in every (or almost every) social category (including the economical categories), a large portion of actual cases (most of them perhaps) occupies an intermediate space among the paradigmatic types. Like it was just mentioned, according to our observations, some family farmers (apparently, a minority) tend to be subsistence producers, in the sense that they produce with a minimum effort in order to satisfy some basic needs while others, at the other end of the spectrum, behave as neoclassical optimizers (capitalists). In the middle, there would be the largest portion of family farmers or peasants.

## 2.2. Domestic and monetary dimensions

The family production systems, in turn, have both a monetary and a domestic (non-monetary) dimension. The former encompasses market transactions, according to price signals. The domestic dimension, on the other hand, is not included in the market mechanisms. Our observations have led us to conclude that the monetary and domestic dimensions of family production are not

1 We have found in multiple studies that family farmers tend to use all available resources to obtain the greatest possible income (see summary in Forero, 2010a). In one case only (Forero et al, 2002) we found a group of producers (in the Butaregua community) that demonstrated a typical Chayanovian behavior.

2 For the purposes of this discussion we use the concept of the capitalist businessman in the sense conceptualized by pure neoclassical microeconomics: a decision-maker that, acting in a market governed by a price system, directs his decisions and his business strategies at optimizing the balance between income and costs and not as conceived by Marxist theory: the owner of a business who hires salaried workers and monetizes all the production costs.

mutually exclusive but, on the contrary, form a complementary or "mutualistic" relationship, to use a biological term.[3]

Two of our studies analyzed in detail this complementary dynamic between the domestic, or non-monetary, dimension and the monetary dimension of family production systems. The first study took place in two contrasting regions, one with intense horticultural production and a strong non-peasant family farming presence, and the other where small-scale peasant farm owners dominated (Forero et al, 2002). The second study analyzed peasant adaptation strategies during the coffee crisis. These strategies are based precisely on the complementary relationship between monetary and non-monetary elements in the family coffee farmers' production systems (Forero, 2010b). From all the domestic resources (constituting the non-monetary dimension), family labor is the most important one, but this type of resource also includes the use of farm or ecosystem resources and self-consumption, and production arises from the production system and circulates through a reciprocal exchange. The monetary dimension includes the use of fertilizers, seeds, pesticides, machinery, tools and industrial materials purchased on the market. As well as a high percentage of labor (hiring of day laborers), and, of course, the sale of farming and livestock products.

## 2.3. Individual and collective dimensions

It has been said that the peasant family is individualist in its relations with the outside, while remaining strictly collectivist within (Chonchol, 1986). Even so, "*relations based on solidarity exist between different family cells*" (Chonchol, 1986) and between small rural communities and the local community (for example, the municipality in Colombia, or the parish in Ecuador). So peasant family agriculture has an individual family dimension in which decisions are taken according to the hierarchies and customs of the family group, and according to the availability of resources. These decisions are, naturally, subject to restrictions imposed by the socioeconomic and an ecosystemic environment. At the same time, family farming – especially peasant family farming – is part of a collective (or community, in some cases) economic dimension where decisions are made according to community social structures (family relationships, neighborhood relationships, institutions regulating the actions of authorities and local leaders)

3 This point of view differs from models on production and consumption optimization, models based on the consumer utility function, neoclassic theory (Ellis, 1988), because in our case the analysis unity is the agricultural production system instead of the household.

and community relations with the State, the Church, trade unions, political bosses, merchants, and politicians.

The collective dimension of peasant communities covers, for the most part, the strategies for undertaking community work. It is not only a matter of building physical works through regulated labor contributions, but also of interrelating with the State and political class in order to gain access to resources, allowing such undertakings to be executed. Regulations governing the access to environmental services are also part of the collective dimension, and affect the way the territory is shaped (with territory understood as the interrelation between the social strategies and the physical space). An special attention has been given to the idea of a community dimension in the rural family economies of indigenous and black communities, but this dimension is also clearly present in other mixed-race peasants on the subcontinent.

The collective dimension is a comprehensive part of the rural or peasant family economic system, achieving its full potential when these communities can regulate their own territory autonomously. Van der Ploeg (2010) also suggests a complementary peasant economy relationship between the individual and the collective in very similar terms to those outlined above: "*In fact, the world offers an astonishing variety of institutions that organize and regulate cooperation within the peasant economy… in all these organizational expressions of the institutionalized need for cooperation there almost always exists a balance between what is individual and what is collective… individual interests and perspectives are defended through cooperation*" (Van der Ploeg, 2010), a topic broadly studied by some fields of the New Institutional Economics supporting in the Game Theories (see Ostrom, 2000).

# 3. Efficiency and economic viability of family farming

## 3.1. Micro scale economies

Technocratic literature suggests, without evidence to support its postulates, that peasants are inefficient and that only a small portion of family farmers can produce acceptable levels of farm surpluses for the market (see, for example, Alexander Schejtman's frequently quoted texts, 1980 & 1994). Another more recent example is a series of studies sponsored by the FAO and the IADB, which given a lack of pertinent empirical information, strangely enough, use data from household surveys unconcerned with home production conditions to "prove" that only a very small percentage of family farmers are economically viable: in the Colombian case Maldonado (2006) and Wong & Ludeña (2006) for Ecuador. This is why social aid policies often take precedence over adequate support for peasant production.

Unlike the technocratic literature, academic studies tend to stress family farming as an efficient form of production, in many cases more so than large-scale commercial farming. Thus, for example, Berry (2011) asserts that small farmers tend to make better use of land and productive resources than large plantations. This has also been put forward by Bejarano who brings together several sources to conclude that peasants (family farmers) save on labor costs in their production processes, they are able to eliminate supervision and security costs, and, in certain processes, demonstrate less inefficiencies than large-scale farmers (Bejarano, 1998).

Academic debate has centered to a large extent on scale economies. The discussion has been driven by those arguing that production on large plantations is not always (or is very rarely) more efficient than that on a family scale. There is a tendency to state, in certain cases, that scale economies do not exist in agriculture (Barnum and Squire (1978) and Berry and Cline (1976) quoted by Bejarano, 1998). Dufumier (1999) suggests that in Third World countries, based on multiple cases examined by this author, "*scale economies did not produce the expected effects. Rather, a decrease in production is observed due to the fact that large-scale farmers, increasingly more akin to 'process managers', take less care of crops and animals.*"[4]

In our opinion, based on the research done in Colombia, a large-scale farming and livestock production gains significant advantages from the way in which productive factors are organized, making use of some economies of scale, while family farming and livestock production manages to develop micro scale economies derived of their own particular way of managing resources and farming and livestock processes, thus, reducing costs and, occasionally, increasing productivity of the factors, mainly of the land. Our most significant finding came from a study comparing the competitiveness of small, medium, and large-scale corn and milk farmers (Forero, Saboyá & Ezpeleta, 2007). The results showed that small farmers, in five of the six areas analyzed, earned incomes greater or similar

4 The non-existence of scale economies in farming has also been defended by Bardhan (1973), Carter (1984), & Feder (1985).

to those of large-scale farmers (labor costs included). Micro scale economies grow out of the direct relationship between small farmers and their crops and animals, which leads to implementation of specific management practices, resulting in efficient use of labor, hired workers and farm resources (Forero, 2010a).

In conclusion, we suggest, based on the aforementioned findings, the scale economies and micro scale economies exist simultaneously in farming. Therefore, neither efficiency nor inefficiency is an inherent characteristic of family or commercial farming.

## 3.2. The economic efficiency of family farming

A key indicator of the ability to produce income in a family farming system, is the relationship between surplus and wages from day labor performed by the family since, a comparison with wages from day labor on the labor market (including opportunity cost) will reveal whether farming and livestock activity is more or less remunerative, compared to other alternatives. This is perhaps the best indicator of a production system's economic viability given its objective of generating income (monetary and in kind) for the family: if the remuneration for family labor is higher than its opportunity cost, the system will tend to be economically viable.[5] The results of the Colombian case study are surprising, when we began our studies we hypothesized that family labor was underpaid compared to salaries in effect throughout the rest of the rural and urban economy. However, the results that appear in several publications show that family production systems analyzed in Colombia are viable because they remunerate the invested family labor at a higher rate than salaries obtained from other activities. Forero 2010a presents a collection of data resulting from studies made in eleven of the nation's different regions between 1991 and 2003. This evidence proves that peasants earn between 1.0 and 5.7 minimum wage salaries for every day they work their fields, this compensation not only exceeds the opportunity cost of family labor, but also exceeds the current salaries for unqualified rural and urban labor, including the salaries of most urban workers. Based on these results, the cause of poverty in peasant homes lies not in the productive organization of the peasants' production systems, but in the lack of

5 It should be noted that this indicator explains the viability of rural home farming and livestock production systems (or of urban home farming and livestock businesses), but not the viability of an entire family economy because, as we know, in most cases, surpluses generated by the farming and livestock production system account for only a portion of the family income.

resources, land, water and capital, which prevents them from using all but a small fraction of their labor in their own crops.

The Literature researched for other Andean countries show some indications pointing in this same direction: A study on coca production in Bolivia shows that peasant income is easily 1.3 to 6.2 times higher than that of a day laborer, depending on the yield. (Laserna, 2006). Obviously, coca production enjoys a higher remunerative price than other products. However, a survey made in 3,300 homes showed that the income of coca farmers is no higher than the one from farmers in the Bolivian valleys who do not cultivate coca (Laserna, 2006). In Ecuador, three pieces of evidence, all from the Andes, show that family farm work pays better than other activities (SWISSAID, 1999) and that, occasionally, it allows their production system areas to expand through the purchase of land using monetary surplus obtained during periods when prices are up (SWISSAID, 1999). Angélica Fort et al. (1999) conducted a study of small-scale cotton, rice, corn, and bean farmers on Peru's Piura coast. In 27 of the 30 situations analyzed, the income of farmers indicated that the systems were economically viable since manual labor was remunerated above the salaries paid for off-site activities[6].

# Conclusions

Family farming is a partially monetized production system in which productive strategies are characterized by a synergic combination of monetary and non-monetary economic dimensions. Whereas the capitalized family farmer behaves in a manner identified with the optimizer referred to in neoclassical economic theory, peasant farmers' decisions are based on a combination of elements pertaining to this optimizer and Chanovian or subsistence behavior. The peasant farmer is, in any case, highly monetized, since a good part of his costs, and a large portion of what he produces, are traded on the market. The family farmer frequently associates with other businessmen, generally in different forms of *medianería* in strategies to access land and capital to expand the family farm's market participation.

While technocratic literature generally regards peasants as economically (and technologically) inefficient, academic literature has shown that, on the contrary, because there are no scale economies in farming, small farming production

6 Other studies with familiar results in Peru include HUAMÁN, (1991:) & TRIVELLI C.Y., 2006)

systems produce better economic results than large plantations. When using available information found for Colombia and other countries is evident that the family producer remunerates his or her own manual labor above the salaries paid for off-site activities and beyond salaries paid to urban workmen. We, therefore, affirm that the family farmer is, in fact, highly efficient. We suggest that the family farming economic efficiency is due to their capacity to obtain micro scale economics derived from their own production system organization.

## References


Aubert, C. (2005). Le devenir de L'économie paysanne en Chine. En: *Tiers-Monde, tome 46. No. 183. Paysans: modes de survie*. (pp. 491-515). Retrieved on May 11th 2012. doi : 10.3406/tiers.2005.5590 url: http://www.persee.fr/web/revues/home/prescript/article/tiers_1293-8882_2005_num_46_183_5590

Bardhan, P. (Nov-Dec 1973). Size, Productivity, and Returns to Scale: An Analysis of Farm-Level Data in Indian Agriculture. *Journal of Political Economy*, 81 (6), 1370-1386.

Barnum, H. and Squire, L. (1978). Technology and Relative Economic Efficiency. *Oxford Economic Papers, New Series, 30 (2)*, 181-198.

Bejarano, J.A. (1998). *Economía de la agricultura*. Bogotá: TM Editores.

Berry A. and Cline W. (1976). *Agrarian structure and productivity in developing countries.* London: The Johns Hopkins University Press.

Berry, A. (2011). The case for redistributional land reform in developing countries. *Development and Change, 42(2)*. 637–648.

Bernal (1990). La aparcería contemporánea en el oriente de Cundinamarca. En: Bernal, F. (editor). *El campesino contemporáneo*. Bogotá: Tercer Mundo Editores.

Brocheux, P. (1991). La réforme agraire, la « Révolution verte » en Asie du Sud-Est : alternative ou indispensable association? En : Coquery-Vidrovitch (dir.), *Sociétés paysannes du Tiers Monde* (pp. 253-269). Paris : L'Harmattan.

Carter, M. (1984). Identification of the Inverse Relationship between Farm Size and Productivity: An Empirical Analysis of Peasant Agricultural Production. *Oxford Economic Papers, New Series, 36 (1),* 131-145.

CEPES, Centro Peruano de Estudios Sociales. (2002). *La economía campesina en la última década.* Lima: Punto y Coma Editores e Impresores EIRL.

Chayanov, A.V. (1990). *L'organisation de l'économie paysanne.* Paris: Librairie du Regard.

Chonchol, J. (1986). *Paysans à venir. Les sociétés rurales du Tiers Monde.* Paris: La Découverte.

Corrales R. E., Forero A. J., Maya V. D., Guacaneme F. (2007). *Evaluación Nacional del Programa ReSA Acción Social- Presidencia de la República.* (Resumen ejecutivo. Manuscrito no publicado). Bogotá: Universidad Javeriana, Organización de las Naciones Unidas para la Agricultura y la Alimentación (FAO).

Courade, G. (1999). Les payssaneries du Sud et la liberalisation des échanges. En Haubert, M. (dir.) *L´avenir des paysans, les mutations des agriculteurs familiales. (pp. 61-75)* Paris: Presses Universitaires de France, PUF.

Del Pozo-Vergnes, E. (2004). *De la hacienda a la mundialización. Sociedad, pastores y cambio en el altiplano peruano*. Lima: IEP-IFEA.

Dufumier, M. et Srijantr T., (1997). Agriculture paysanne, interventions de l'État et limites de la « révolution verte » en Thaïlande. En: Haubert, M. (dir.) *Les paysans, l´État et le marché. Sociétés paysannes et développement*. (pp. 161-174) Paris: Publications de la Sorbonne.

Dufumier, M. (1999). L'État interventionniste: « révolution verte » et réformes agraires. En Haubert, M. (dir.) *L´avenir des paysans, les mutations des agriculteurs familiales dans les pays du Sud* (pp. 45-59). Paris: Presses Universitaires de France, PUF.

Dufumier, A. (2004). *Agricultiures et paysanneries des Tiers mondes.* Karthala : Paris.

Eguren, F. E. (2006). Reforma Agraria y Desarrollo Rural en el Perú. En C. P. -CEPES., *Reforma Agraria y Desarrollo Rural en la Región Andina.* (pp. 20) Lima: Centro Peruano de Estudios Sociales -CEPES.

Ellis, F. (1988). *Peasant Economics. From households and agrarian development*. Cambridge University.

Étienne G. (1987). La Révolution Verte en Asie: essai de bilan et perspectives. *In Revue Tires Monde, 112.*

Étienne G. (2005). Agriculture et économie rurale en Inde - début de réveil. In *Tiers-Monde, 46(183).* Retrieved on may 11th 2012 from http://www.persee.fr/web/revues/home/prescript/article/tiers_1293 8882_2005_num_46_183_5592

Feder, G. (1985). The relation between farm size and farm productivity: The role of family labor, supervision and credit constraints. *Journal of Development Economics, 18, 297-313.*

Forero-Álvarez, J., y Rudas G. (1983). El trabajo familiar y las relaciones de aparcería entre productores campesinos. *Cuadernos de Agroindustria y Economía Rural 16.*

Forero-Álvarez, J. Saboyá S. E. y Ezpeleta S. (2007). *La competitividad de los productores agropecuarios colombianos integrados a la cadena de alimentos balanceados para animales – ABA - Y a la cadena láctea. Bogotá:* Minagricultura – FAO.

Forero-Álvarez J., Corrales E. et al. (2002). *Sistemas de producción rurales en la Región Andina colombiana. Análisis de su viabilidad económica, ambiental y cultural.* Bogotá: U. Javeriana - COLCIENCIAS.

Forero-Álvarez., J. (2010a). Economía campesina, pobreza, tierra y desplazamiento en Colombia. En: Forero A, J (Editor). *El campesino colombiano entre el protagonismo económico y el desconocimiento de la sociedad* (Colección Foro un Campo para el Campo). Bogotá: Pontificia Universidad Javeriana.

Forero-Álvarez., J (2010b) *Colombian family farmers, adaptations to new conditions in the world coffee market. Latin American perspectives*. (Victoria J. Furio Translation). 37 (2), 93-110.

Fort, A., Boucher, S., R. Cortéz y G. Riesco (1999). *La pequeña agricultura piurana: Evidencias sobre ingreso, crédito y asistencia técnica*. Lima: Editorial CIPCA.

Franqueville A. (2000). *La Bolivie d´un pillage a l´autre.* Paris: IRD Editions - Presses Universitarires du Mirail.

Garrett, M. y Xut, Z. (2003). The efficiency of sharecropping: evidence from the Postbellum South. *Southern Economic Journal, 69 (3),* 578-95.

Guillermou, Y. (1997). Changements techno-économiques et formes de différenciation de la paysannerie. Cas de l'Algérie. En : Haubert, M. (dir.) *Les paysans, l´État et le marché. Sociétés paysannes et développement* (pp. 171-181). Paris: Publications de la Sorbonne.

Gutiérrez, A. (2011). Nueva aparcería en la producción de arracacha (*Arracacia xanthorrhiza*) en Cajamarca (Colombia). *Cuad. Desarro. Rural. 8 (67)*, 205-228.

Haubert M. (dir.) (1997). *Les paysans, l´État et le marché. Sociétés paysannes et développement.* Paris: Publications de la Sorbonne.

Huamán M. (1999). Competitividad de la pequeña agricultura en una economía de mercado. I: *S. VII*, *Perú: El problema agrario en debate* (p. 172). Lima: ITDG-Perú.

Korovkin, T. (2008). La reforma agraria y las comunidades indígenas campesinas en Chimborazo. En: North L., & Cameron J.D. *Desarrollo rural y neoliberalismo*. Quito: Corporación Editora Nacional.

Lehman, D., (Sept-Dec 1986). La mediería y la transición capitalista en la agricultura. Una investigación en la Sierra Ecuatoriana. *Estudios Rurales Latinoamericanos*, 9 (2).

Lamarche, H. (Coord.). (1991). *L'agriculture familiale. Comparaison internationale - I. Une réalité polymorphe.* Paris: L'Harmattan.

Lamarche, H. (Coord.). (1994). *L'agriculture familiale. Comparaison internationale - II. Du mythe à la réalité.* Paris: L´Harmattan.

Llambí, L. (1988). *La moderna finca familiar.* Caracas: Fondo Editorial Acta Científica Venezolana.

Laserna, R. (2006). Coca y mercado en la economía campesina Yungas y Chapare en Bolivia. In: Eguren, F. E. *Reforma agraria y desarrollo rural en la región andina* (pp. 199-227). Lima: Centro Peruano de Estudios Sociales-CEPES.

Maldonado, J. (editor) (2006). *Caracterización de la agricultura familiar en Colombia.* Informe 1 FAO - BID. Bogotá: Uniandes, FAO, BID.

Newbery, D. M. G., y Stiglitz, J. E. (1979). The theory of commodity price stabilization rules: welfare impacts and supply responses. *The Economic Journal, 89 (356),* 799.

Ostrom, E. (2000) El gobierno de los comunes. La evolución de las instituciones de acción colectiva. Fondo de Cultura Económica. México.

Pearse, A. (1975). *The latin American peasant.* London: Frank Cass.

Shanin, T. (1979) El campesinado como factor político. *En Shanin T. Campesinos y sociedades campesinas.* México: Fondo de Cultura Económica.

Shanin, T. (1983). *La clase incómoda.* Madrid: Alianza Universidad.

Schejtman, A. (1980) Economía campesina: lógica interna, articulación y persistencia. Política de los sistemas alimentarios en América Latina. *Revista CEPAL, 11*.

Schejtman, A. (1994) *Economía Política de los sistemas alimentarios en América Latina.* Santiago de Chile: FAO.

Soliz, L., y Aguilar, S. (compiladores) (2005). *Producción y economía campesino - indígena, experiencias en seis ecorregiones de Bolivia.* La Paz: CIPCA.

SWISSAID (1999). *Granjas Ecológicas Campesinas.* Ecuador: SWISSAID.

Torres, L. E. (2002). Autoconsumo y reciprocidad entre los campesinos andinos. Caso Fómeque. *Cuadernos de Desarrollo Rural, (48),* 79 - 98.

Trepicht, J. (1973). *Marxisme et agriculture: le paysan polonaise.* París: (sin datos).

Trivelli, C. Y. (2006). *Pequeña agricultura comercial: dinámica y retos en el Perú.* Lima: IEP Ediciones.

Tulet, J. C. (2002). La révolution du maraîchage dans les Andes du Venezuela. In: *Cahiers Des Amériques Latines.* Paris: Editions IHEAL.

Van der Ploeg, J. (2010). *Nuevos campesinos.* Barcelona: Icaria Editorial, S.A.

Wolf, E. R. (1971). *Los campesinos.* Barcelona: Editorial Labor.

Wong, S., & Ludeña, C. (2006). *Caracterización de la agricultura familiar en Ecuador.* Preliminary Report. Quito: FAO - BID.