

MODÉLISATION ET ESTIMATION DE LA VALEUR DES TERRES AGRICOLLES DANS LES ZONES DU COTON DU BENIN: DÉBAT ET PERSPECTIVE

MODELING AND ESTIMATION OF THE VALUE OF AGRICULTURAL LAND IN THE BENIN COTTON ZONES: DEBATE AND PERSPECTIVE

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Abstrat: The objective assigned to this article is to highlight the determinants of the price of agricultural land in the Benin cotton zone. Thus an econometric analysis of 110 agricultural villages was made. The field survey took into account 110 villages in total on the basis of a random-choice sampling of which 105 or 95.45% are rural villages with agricultural income of the commune against 4.55% urban city districts low income farm. The results show that the determinants of the price of agricultural land are: the soil fertility indicator (IFA), the land availability represented by the ratio of cultivated land / total area (CTR), the growth rate of population (TCP) and village location vs. city (LTV), sales market (MV), type of sale (TV) are the determinants of the value of agricultural land in the study area by order of decreasing importance, land availability, population growth rate, soil fertility index, and village location.

Key Words: Agricultural Annuities - Land Value - Cotton Zones - Rural Foragers
JEL: Q54, Q51, Q15

Introduction

The earth, very good building par excellence has always been a very important stake in the development of all the Nations. The awareness of this reality by the metropolis had led it to take since the 1900s including a number of texts to organize the appropriation, exploitation and land use in French West Africa (AOF). The first Government of Dahomey after independence also perceived the need for land control. The earth will thus be at the heart of the process of strengthening the Dahomey State and its system of economic development. More than a century later, the problem of land management continues to arise in terms of access to land, boundary of territory, settlement of land disputes. The dualism of customary law and modern law forms a heterogeneous whole that paralyzes any easy mutation towards private property. This situation, which is difficult to explain, is worrying in the face of a world made up of more than 61% of peasants who practice agriculture as their main income-generating activity.

The strong expansion of this activity is hampered by the difficult access to land, although Benin has enormous potential for cultivable land. Even in some departments where land problems are acute, there are large untapped and third-party estates for speculative purposes. At the same time, the landless peasants languish in misery by becoming sharecroppers and / or agricultural laborers.

Moreover, a quick and uncompromising inventory shows that, to date, urbanization in Benin is difficult and haphazard. Very quickly, we are confronted with the scarcity of land and its high prices that have pushed towards the outskirts of cities, not only the modest populations but also local activities. This situation is aggravated by the absence of an adequate institutional framework and the poor application of land legislation. As a result of this chaotic application of the law, an unreliable land imbroglio in many respects does not reassure foreign or national economic operators or banks and other financial institutions despite the efforts of the State to establish sustainable tenure systems safe.

The issue of land markets has become central to economic thinking about development. The markets of temporary and definitive transfer of rights on land are seen as potentially playing a determining role in the process of agricultural development, allowing to improve the allocation of factors in a context where the endowments in factors of production and

capacities management are heterogeneous. The negative effects, in terms of equity and / or efficiency, which could be attributed to the functioning of the land markets (thus justifying land policies prohibiting or severely restricting them) are analyzed by contemporary development economics. as resulting rather from the failure of the market environment (credit market, insurance ...) (Colin, 2004). In the African context, the issue of land markets is usually addressed by an analysis of the change in customary tenure systems towards private ownership. The standard evolutionist approach interprets the emergence in Africa of individualized and transferable land rights according to the teachings of the economic theory of property rights. The emergence of private property rights appears as the result of an arbitration between the expected benefits of establishing such rights and the cost of excluding others from the use of the resource. The combination of population growth, the development of crops for the market and changes in cropping systems (development of perennial plantations, disappearance of shifting cultivation systems, shortening of fallow periods), would increase the value of the land and would spontaneously lead to the individualisation of land rights and an opening of the spectrum of rights, in particular the right of alienation, which would result in increasing monetization of access to land through sale and rental. A sequential evolution is established between the opening of the bundle of rights and the commodification of these rights: the emergence of market transfers (right of transfer) would lead to the opening of the bundle of law, once firmly established all the others beam elements (Colin, 2005).

A series of confusions is recurrent in the field of land in Benin. Difficulties related to the high cost of land and opacity in transactions, all of which inevitably lead to the impoverishment of the population, led the Economic and Social Council (CES) to consider among other things the land issue. This is why, he has self-grab of the topic: "The land in Benin: federal problems and perspectives". The subject deserves a thorough treatment because of its decisive implications in sensitive and recursive issues such as agricultural policy, spatial planning policy, environment and social housing. Several authors have examined the question of land tenure and the price of renting or buying farmland in different localities in Benin (Zogo, 2006; Biao, 1991; Zannou, 1994; Ahohounkpanzoun, 1986; Lakoussan, 2004; Bremer 1979). However, it has been noted that the number of studies on the northern region of Benin is limited, or they are often not very detailed. In addition, they do not propose econometric modeling with a quantitative empirical study to assess the market value of farmland. In

addition, these studies do not generally deal in depth with the quantitative aspects of the dynamics of individualization and monetization of agricultural land in Benin, especially in the regions located in the cotton basin of Banikoara. What is also striking is that these studies often do not offer a systematic analysis of the factors that influence the price of land in Benin. This article has been considered to fill this gap.

The objective of this article is to highlight the factors that determine the price of agricultural land in the cotton basin of Banikoara in northern Benin in order to give the public power elements of decision-making. Thus, we analyze, first, the Beninese land tenure and its limits. We then characterize the Beninese land market and the various modes of access to agricultural land in northern Benin. Finally, we proceed to estimate an econometric model of the price of agricultural land in northern Benin and to highlight its determinants.

I. THEORETICAL AND EMPIRICAL REVIEWS

1.1. Theoretical reviews

The notion of ground rent has given rise to much discussion, especially since the 19th century with the work of the classics, because it related to the main factor of production of the economies of the 19th century. On the other hand, it weighed on her a great ambiguity. Very many controversies have arisen: for example, a discussion between Ricardo and Malthus; Criticism - addressed by Carey, Bastiat, to the "scheme: Ricardian; George's proposals on the nationalization of the soil; Walras remarks on the social value of the soil; Chamberlin's analysis of the differences between urban rent and the rent of agricultural land (the latter being only partially explained by the influence of location) ... This ambiguity is essentially due to the separation, can describe as regrettable; between the phenomena of production and those of distribution. More precisely, if we want to define the particular income that is the rent of the soil, we must rely on the fact that, first and foremost, the land must be considered as a factor of production. It then becomes possible to illuminate the analysis of income (or flow) by that of capital (or stock) and that in all reciprocity. Land presents itself as a complex factor of production for various reasons: first it's natural and acquired fertility (through the work of man). We then speak of fertility; then his situation or location; it is a quality that is not intrinsic, but related to the economic environment "as pointed out by A. Marshall, and E.

Chamberlin¹; these authors have emphasized the role of opportunities, access, or accessibility in the situation with respect to the market supplying opportunities. To characterize² the influence of these different elements, we speak of a situation rent. Contemporary theory has introduced the notion of rent of intensity to mark the variable influence of "successive doses of capital and labor", a hypothesis already considered by Ricardo. Indirectly, this amounts to recognizing the possible influence of the different and unequal behavior of entrepreneurs in the formation of the price of land and rent. Would it not be better, moreover, to speak of "rent of competence", to the extent that the influence of the behavior of entrepreneurs in the use of the soil is accentuated?

These three elements make it possible to identify a second fundamental characteristic of the earth as a factor of production: it is an essentially heterogeneous and varied good. Also; would it be more accurate to talk about land, not land (or the land market rather than the land market)?

The removal of the land from productive factors of value may seem arbitrary and deserves attention. Smith, or Ricardo, were not so stupid as to ignore the fact that land is indispensable to production, even to industrial production. Moreover, it is for this reason that factories or farms rent the land, and agree to pay an annuity to its owner. But the earth, as a geographical space, has not been produced by human activity, it is there at all times, waiting for labor or capital to come to apply to it. Whether a society creates much or little wealth, it always has the same amount of land, in other words, land is for nothing in the increase of wealth (here we speak of the land as space. If it is a land whose properties have been modified by the action of human labor, things are presented differently: not because of the land itself, but because of the work incorporated in it). The land can therefore give rise to an income (land rent), without having contributed to creating wealth. This income therefore necessarily corresponds to a levy on wealth created elsewhere. It is made possible by the fact that land exists in limited quantity, that it can not be produced in additional areas, and that it is appropriately private. The owners are therefore in a situation of monopoly, and this allows them to oblige industrialists and farmers to give them a portion of their income. Ricardo, who was not a socialist, would point out that if the land belonged to the state, it could suppress the land rent. The overall wealth of society would in no way be diminished, and the money thus saved by

¹ 1) MARSHALL (A.). — Principles of Economics - 8th éd. London, The Macmillan Co 1925, p. 441. — CHAMBERLIN (Edward) : The Theory .. of Monopolistic < Competition, Cambridge., Harvard University Press- 1933, p. 200.

² 2 Voir à cet égard l'exposé du Dr von' Randow : la formation des prix de vente et de location du sol en Allemagne.

capitalists and farmers would enable them to invest, and thus to further increase this global wealth.

First, the differential rent according to Malthus is based on the same principle as that of Ricardo, however it does not draw the same consequences at all. Indeed his theory of differential rent is intended to justify the high price of wheat. The price of silver wheat is necessarily higher in rich countries because our wealth compels us to develop crops. However, this rise in the price of wheat is not negative because the natural wage is in line with this rise in prices and increases at the same time.

According to Adam Smith, land rent is fixed differently from wages. We must therefore observe on the rent in the composition of the price of commodities in a very different manner than wages and profits. The high or low rate of wages and profits is the high or low cause of the goods: thus the high or low rate of the rent has an effect on the price. Secondly, according to Marx the most sterile land still gives enough wheat to provide a supplement to the average rate of corporate profit: it is the absolute rent. If we move to more and more fertile land, variable amounts of differential rent will be added to this absolute rent. In fact, Marx has shown that it is a general rule that, on any given ground, capital which is brought in the form of materials and labor yields more than the average profit of the industry; absolute land rent, which is a basic, minimum rent that any landowner withdraws. Moreover, the error of Ricardo, claiming that the differential rent is obtained only by the difference in fertility of the land. In fact, reverse changes can occur as well, the lands of a certain category are transformed into lands of another category (because of the progress of the agricultural technique of the growth of the cities, ...), so the famous "The law of diminishing fertility of the soil" is a profound mistake which tends to put on the account of nature (different fertility) the defects, the limitations and the contradictions of capitalism. We have presented the doctrine of Marx but it would be a huge job to bring to term his theory.

However some examples allow Marx to be more explicit through a situation it is the case when he takes the example very much of the industrialist who derives his driving force from a waterfall rather than, as his colleagues, thermal machines. Since he will reduce his production price, the average value of his products and the selling price on the market remaining constant, he will be able to support a rent without which the owner of the fall would not give

him the permission of apply a hydraulic motor: this rent is a real absolute rent. We have therefore clearly understood the specificity of differential rent across eras and authors.

1.2. Empirical review

In the recent literature, some authors have addressed this issue of the value or price (rent) of agricultural or peri-urban land. In a study on estimating the value of agricultural land. In the peri-urban area of Bangui in the Central African Republic, Mbetid-Bessane, (2014) performs an econometric analysis of 120 farmers in Central Africa. According to its results, the determinants of the price of agricultural land are, in order of decreasing importance, the availability of land, the rate of population growth, the index of soil fertility and the location of the village. . According to this author, with the demographic pressure, combined with the impoverishment of the villages, the commercialization of agricultural land is accentuated and its availability becomes critical in this peri-urban area, which could call into question the development of peri-urban agriculture. He suggested that this new data should lead the State to adopt the draft law on the agropastoral land code and promulgate it, and to define the rules for the functioning of the agricultural land market. In this same perspective, Moussaratou (2008) analyzes the determinants of the price of agricultural land in Benin. According to this author's analyzes, the costs involved in these exchanges are often well known throughout the country. According to his investigations, there is a price for renting agricultural land in almost all the communes of Benin and even if its level is very variable; it would be in the range 3.000 FCFA 40.000 FCFA per hectare in rural areas.

According to the same source, the highest prices are observed in municipalities located in the south of the country. In addition, the study confirmed the position advocated by a growing number of authors who reject the idea that in Benin, and particularly in the sparsely populated areas of this country, land is a collective or community property whose access involves practically no costs (Doevenspeck, 2004) and has noticed different forms of lease (cash or in-kind payment in the form of agricultural products or work done by the tenant in the landlords' fields) are developing strongly and traditional borrowing is endangered in all municipalities in the country The School of Evaluation, as defined by Erenstein (1999), encompasses all studies aimed at quantifying economic values (costs, benefits and effects) associated with soil

conservation. More specifically, these studies focus in a given context, to verify if the conditions of implementation of soil conservation are guaranteed. Evaluative studies also help to compare different conservation alternatives, or justify the decision to invest in conservation, compared to other alternative investments. Different evaluation methods can be mobilized and grouped according to whether or not they mobilize the demand curve. Empirical work has shown that countries with high external incomes are not a good example of analysis to understand what is commonly termed "food dependency" (Bessis 1979). In this respect, the work of Amin et al (1997) explains that the food deficit of developing countries has traditionally been attributed to excessive state consumption of peasant production. It is on the basis of this levy that the countries of the South have in general built their industrial apparatus, or even, as in the case of the new independent nations of the 1960s, the State itself. The arguments in favor of this form of agricultural rent are centered on the principles and methods inherited from the colonial period. The authors show that levy mechanisms come in various forms, including taxes, the underpaid channelization of savings, low remuneration of the labor force, transfers through relative prices, the destructive exploitation of resources, etc. All of these modalities are combined with demographic trends and difficult agronomic problems, leading to a situation of submission, low productivity and the general crisis of the peasant world in many developing countries. (Billa and Diawara 1981).

Colin (2005) offers a contribution to the discussion of the conditions of emergence and development of land transactions in Africa from the case of Côte d'Ivoire. The issue of land markets has become central to economic thinking about development. The markets of temporary and definitive transfer of land rights are seen as potentially playing a determining role in the development process, allowing to improve the allocation of factors in a context where the endowments in factors of production and capacity management are heterogeneous. The negative effects, in terms of equity and / or efficiency, that could be attributed to the functioning of the land markets (thus justifying land policies prohibiting or severely restricting them), are analyzed by the contemporary economy of the land. development as resulting rather from the failure of the market environment (credit market, insurance). In other words, the major factor in the dynamics of individualization, privatization and commodification, from our point of view, is the valuation of the land allowed by irrigation. It is the valuation of land by water that creates the land market, much more than the formal title

of private property. The frequent role of the arrival of non-indigenous actors in the commodification of land. In the situations studied, this logic is undeniable with respect to the emergence and development of the FVI market (Derderi et al., 2015; Ouendeno et al., 2015).

The direct impact of this factor on the buy-sell market is much less marked, but the role played by these actors was, on the other hand, real, upstream, in the diffusion of the technical change, with the control of the techniques of drilling and irrigation and the introduction of high value-added crops. Fautras (2017) shows that the undivided tribal land regime, which was predominant in the center and south of the country, was replaced by an individual private property regime. This has had important effects on rural areas: the mutation of agrarian systems and the development of a localized land market, as in the Regueb region, where transactions have involved non-native protagonists since the 1990s. It highlights the understanding of process of commodification of the land, by analyzing the "local system of actors" of the land market, as well as the links existing with the evolution of uses and values of agricultural land. This article shows how the capitalist logics contribute to recomposing this rural space and weakening the land rights of peasants. This fragilization is partly driven by seasoned entrepreneurs and speculators, who master the workings of this system, and some of whom have a long history of land appropriation in the hinterland of Sfax. At the same time, capitalist logics remain mixed with endogenous social logics, in which the economy does not overdetermine social life. The socio-economic marginalization of a part of the peasants, which we are witnessing today, results both from economic and political relations of domination, and from endogenous material and immaterial factors that curb the expansion of capitalism.

II. METHODOLOGY

2-1. Estimation method

To achieve the objective assigned to our research, the methodological approach adopted favors an econometric analysis supported by an empirical study using the ordinary least squares method. Thus, the econometric model proposed for estimating the monetary value of farmland in the study area is:

$$VM_{TA_i} = \beta_0 + \beta_1 TCP_i + \beta_2 LTV_i + \beta_3 IFA_i + \beta_4 RTC_i + \beta_5 MV_i + \beta_6 TV_i + \mu_i \quad (1)$$

In this model, $VMTA_i$ is the variable explained and corresponds to the monetary value of a farmable agricultural land in village i , it is estimated in FCFA per Ha; TCP_i : Average growth rate of the rural labor force in the village, taking into account both natural and migratory growth, the higher the population, the higher the population density, expressed as a percentage; LTV_i : geographical location of the land in relation to the village, it is measured in Km, and is an indicator of market access and agricultural specialization; the closer the village is to the urban center, the more the system is geared towards short-cycle productions, which makes it possible to expect a high income and reduces transport costs; IFA_i : the fertility index is measured by the number of plant species indicative of soil fertility, plus the plot contains plant species indicative of soil fertility, plus the land is fertile which directly influences the price of soil fertility sale as rental; RTC_i : the ratio of land cultivated on the village's arable land, the higher the ratio, the lower the availability of land, and according to the law of supply and demand the price will be high; MV_i : the variable sale market makes it possible to clarify whether it is about a formal sale or an informal sale, the sale is said formal when it was the subject of a sales agreement and this before the competent authorities and it is called informal otherwise, the variable takes the value 1 for the formal sale and 0 in the case of an informal sale; TV_i : the standard sales variable makes it possible to distinguish the sale under financial constraint and the deliberate sale by the seller, according to our investigations in the field, when the seller has financial difficulties or financial constraints, the sale is made regardless of the price offered by the buyer which is usually very low compared to the reference price and the characteristics of the land, in the case of a deliberate sale, the selling price is often a price of equilibrium, it takes the value 1 for a deliberate sale and 0 for a sale under duress. μ = error term. To estimate the econometric model, we used the functional form (ln), which allows us to easily interpret the estimated coefficients that are nothing other than the elasticities. It is used only for quantitative variables. The model becomes:

$$\ln VMTA_i = \alpha_0 + \beta_1 \ln TCP_i + \beta_2 \ln LTV_i + \beta_3 \ln IFA_i + \beta_4 \ln RTC_i + \beta_5 MV_i + \beta_6 TV_i + \mu_i \quad (2)$$

The software used to estimate the econometric model of the price of agricultural land in the Banikoara cotton basin is Eviews 9.5. The estimation process is described as follows: First, we studied the correlation between the explained variable and the different explanatory variables of the model before the final choice of the variables of the model. After studying the correlation, we proceed to estimate the model by the ordinary least squares (OLS) method. To

test the validity of this estimated model, we performed the following tests: White Heteroskedasticity Test, Breusch-Godfrey Self-Correlation Test and Jacque-Bera Normality Test.

2-2. Data source

This article uses some of the information from the Sociodemographic and Economic Survey carried out in the municipality of Banikoara by the Ministry of Agriculture, Livestock and Fisheries (APRM) in 2016. This municipality is subdivided into ten districts, including an urban district (Banikoara-Marou) and the rural districts (Founougo, Gomparou, Goumori, Kokey, Kokiborou, Ounet, Somperekou, Soroko and Toura). The field survey took into account a total of 110 villages on the basis of a random-choice sampling of which 105 or 95.45% are rural villages with agricultural income of the commune against 4.55% urban city districts. low income farm. The survey questionnaire was developed on the basis of both closed questions and semi-open and open questions. In total, 99 villages and city districts are selected for the survey, representing a percentage of 90% of the target population. The data collected during this survey are: the average selling price of one hectare of agricultural land in the village or town district, the area of cultivable land, the total area of agricultural land, the types of sale, the markets of sale, the number of plant species indicative of soil fertility generally sold land, the geographical location of land relative to the city center. The growth rate of the village population is obtained in the database of the National Institute of Statistics and Economic Analysis (INSAE).

III. RESULTS AND DISCUSSION

3.1 Mode of access to land and cost of acquisition

Acquisition is the main mode of access to land for domestic investors. Land rental is infrequent. Land purchase costs vary considerably from 100.000 FCFA (76 €) to 500.000 FCFA (456 €) per hectare depending on the villages and the quality of the soil or the presence of rivers nearby. Virtually the majority of transactions are based solely on sales agreements without certification by local authorities. Very few are the subject of a notarial act or a land certificate as required by the land law. These transactions are often arranged by local

intermediaries. They have more facility to negotiate with the peasants because native of the community. Uninformed farmers are sometimes harassed by daily purchases. These intermediaries resort to false promises (recruitment in future exploitations or economic development) and artifices such as the false rumors of expropriation of their land planned by the State to convince farmers to sell their plot. Although the lands are owned by the community, the transactions are made mainly by a direct approach of the sellers by the intermediaries both with the traditional chiefs and in a rather weak proportion by contacting the communal authorities which characterizes the extent of the informal circuit in land transactions. Increased conflict within families and villages in relation to agribusiness rent management, which can lead to intra-family competition in land sales. This is the case in the district of Goumori where these conflicts have been exacerbated in recent months with clashes between villages. Indeed, land belongs to families and their boundaries are not always known in the absence of rural land registers in the communes. But there are many cases of illicit sales of land by some family members without the consent of the head of the family. Threats to the control of the water sources that are on these lands sold but water several plots downstream and whose management was the responsibility of the community. Risks of occupation of classified or protected areas (wetlands ...). This is all the more worrying as land use plans are not finalized in the area. Several protected areas or livestock tracks are likely to be sold, as is the case in the commune of Monipébougou in Burkina Faso, where obstacles to traffic have been observed causing conflicts between breeders and peasants. The main fear is the disappearance of family farming, practiced by farmers with land of less than 10 hectares and provide most of the food production of Benin. This will pose a significant threat to food security especially in rural areas and exacerbate the phenomenon of rural-urban migration. This will result in the loss of endogenous practices, traditional values and a social fabric that is torn apart because the earth is at the base of social life in Africa. The uncontrolled introduction of seeds of Genetically Modified Organisms in cultures can also have significant long-term consequences for biodiversity in the country.

5.2 Econometric model of the price of agricultural land in the cotton zone of Benin
The results of the econometric analysis of the price of agricultural land in the Benin cotton zone are given in Table 1 below.

**Table 1: Regression model of the price of agricultural land in the cotton basin of
Banikoara (Benin)**

Model		Coefficients	t	Signification.
1	(Constant)	0,165	1,874	0,064
	L_TCP	0,090	0,851	0,0397**
	L_LTV	-0,175	-1,656	0,0101**
	L_IFA	0,080	0,790	0,0432**
	L_RTC	-0,094	-0,915	0,0362**
	MV	0,159	1,523	0,0131**
	TV	0,010	0,092	0,0927*
	a. Dependent Variable: L_VMTA			
	R Square			0,731
	Adjusted R Square			0,723

Source: Results from our estimates, 2017

These results show that all the explanatory variables are statistically significant at the 5% level; it is the soil fertility indicator (IFA), the availability of land represented by the ratio of cultivated land / total area (CTR), population growth rate (TCP) and localization of the village in relation to the city (LTV), sales market (MV), the type of sale (TV). The expected signs of the regression coefficients are all confirmed.

The coefficient of determination R^2 is equal to 0.70, which means that the independent variables account for 70% of the total variability of the price of agricultural land in the cotton zone of Benin. The Soil Fertility Indicator (IFA), the availability of land represented by the ratio of cultivated land / total area (CTR), population growth rate (TCP) and the location of the village in relation to The city (LTV), sales market (MV), the type of sale (TV) are the determinants of the value of agricultural land in the study area. An individual interpretation of the elasticities shows that increasing the rate of growth of the village population by 1% leads to an increase in the price of agricultural land of 0.90%; as the population of the village

increases, so does the pressure on the land, which reduces the availability of land and therefore increases the price of agricultural land.

The location variable of the village in relation to the city center shows a negative and significant coefficient. This result simply indicates that the shorter the distance between the village and the city center is the market value or the monetary price granted to the agricultural land expressed by the transfer price, the rent or share price. When the distance between town and village decreases by 1%, the price of agricultural land increases by 0.175%; the closer the village gets to the city, the higher the price of agricultural land because of the high demand, which is in line with the theory of demand. Similarly, a 1% increase in the soil fertility index leads to an increase in the price of agricultural land of 0.80%; as the number of plant species that are indicators of soil fertility increases, the price of land increases because of its natural fertility, which is in line with the theory of land rent (Michaud, 2007 and Driouchi, 1992).

The sales market variable that distinguishes between formal and informal markets indicates that when land is sold or leased in the case of a formal market, the price per hectare increases compared to that sold in the case of an informal market. Similarly when the seller is subject to financial constraints, he becomes a price taker (pricetaker). In such a situation, the price set by the acquirer is naturally lower than the reference price. Who buys land in Benin? According to the results of our survey carried out in the study area, the primary buyers are mainly individual purchasers. For the moment, commercial companies and multinational enterprises represent a small number of primary buyers. There are a large number of national non-governmental organizations (NGOs) that have invested in jatropha cultivation for biodiesel production in areas ranging from 2.500 hectares to 200.000 hectares. The main buyers of Benin's land are the Deputies, the Ministers and the Businessmen. Foreign buyers are mainly Libyans, Saudis, Lebanese, Italians, Chinese, Nigerians and United Arab Emirates nationals.

3.2 Discussions

A critical analysis of the results of this study confirms the empirical results of some studies and confirms for others. According to our analysis results, the population growth rate has a positive and significant effect on the price of agricultural land at Benin, these results are consistent with those obtained by Honlonkoun (Honlonkoun, 1994) who concluded that the density of the population has a significant positive effect on the price of agricultural land in

Benin. In this same line, other recent studies of Zogo, A. (2006) and (Mousaratou, 2008). The Soil Fertility Indicator (IFA), the availability of land represented by the ratio of cultivated land / total area (CTR), population growth rate (TCP) and the location of the village in relation to The city (LTV), sales market (MV), the type of sale (TV) are the determinants of the value of agricultural land in the study area. Most of these determinants identified by this study are consistent with those of several studies conducted in the past and in some developing countries. This is the case of Mbetid-Bessane, (2014) who performs an econometric analysis on 120 agricultural land suppliers in Central Africa. As far as this author's results are concerned, the determinants of the price of agricultural land are, in order of decreasing importance, the availability of land, the rate of population growth, the index of soil fertility and the location of the land. town. Beyond the determinants identified by this author, our study revealed some variables as very relevant such as the type of sale, and the sales market as to explain the problem of the commercialization of rural land in Benin.

Conclusion

Land law in Benin is governed by Law No. 2013-01 of 14 August 2013 on the Land and Land Code in the Republic of Benin. The purpose of this code is to determine the fundamental rules and principles applicable to land and tenure and to govern the organization and operation of land and tenure.

The main objective of this study is to identify the factors that determine the price of agricultural land. It allowed economic theory in this field to be compared to empirical data from the Banikoara Cotton Basin in Benin. It has been observed that no organization or institution has a database covering the whole country in Benin on the prices of agricultural land in Benin. The present has tried to make up for this deficit; an effort has been made to build a database of agricultural land prices covering Banikoara commune in Benin.

The investigations undertaken have shown that the mode of acquisition of agricultural land dominating in Benin remains the legacy in rural areas. However, agricultural land swaps are increasing and the commodification of land deals is accelerating. The surveys revealed that the costs involved in these exchanges are often well known throughout the country. There is a price for renting agricultural land in almost all Benin municipalities according to our surveys, even if its level is very variable; it would be in the range 100.000 FCFA 500.000 FCFA per

hectare in rural areas. The highest prices are observed in municipalities located in the south of the country. The study confirmed the position advocated by an increasing number of authors who reject the idea that in Benin, and particularly in the sparsely populated areas of this country, the land is a collective or community property whose access involves virtually no costs (Doevenspeck, 2004). Different types of lease (cash or in kind in the form of agricultural products or work done by the tenant in the land of the owners) are developing strongly and the traditional loan is disappearing in all the communes of the country.

In addition, the econometric analysis shows that the soil fertility indicator (IFA), the land availability represented by the ratio of cultivated land / total area (CTR), population growth rate (TCP) and the location of the village in relation to the city (LTV), sales market (MV), the type of sale (TV) are the determinants of the value of agricultural land in the study area. Thus with the increasing demographic pressure in these rural areas of Benin combined with the impoverishment of villages, a consequence of repeated political-military crises, the commodification of agricultural land is becoming more pronounced and its availability is becoming critical, which is why could undermine the development of rural agriculture. This new information should prompt the State of Benin to quickly adopt a draft law on the land code specific to the agro-pastoral sector and enact it in order to provide the country with an indispensable tool for the establishment of land tenure security users of agropastoral land; and then to define the operating rules of the agricultural land market. The study also suggests the realization of the rural land plan and cadastre in all the Benin communes in order to minimize conflicts related to land management in Benin.

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