

Proposed paper:

**State withdrawal and institutional changes in the West-African dairy sector:  
what prospects for new policy instruments ?**

Guillaume DUTEURTRE<sup>1</sup>

---

**Abstract**

The ongoing process of State withdrawal in Africa has had a strong impact on the whole sector. After many years of government intervention in the provision of livestock services and market administration, the dairy sectors were privatized and milk markets liberalized throughout the 1990s and 2000s. In this context, a large number of new organizations and institutions have progressively emerged in which government services are often involved in partnership with private actors: milk collection schemes, dairy processing plants, genetic improvement projects, producer associations, inter-professional organizations, quality standards, forums on trade agreements and trade negotiations, etc. Drawing on literature dealing with institutional economics (particularly J. R. Commons' concept of “futurity”), the present study aims at identifying successes achieved and problems arising from such new types of partnership between private and public organizations. The difference in the vision of the future (“what needs to be done”) between some of the stakeholders appears to generate quite invasive institutional failures that impair the role of the State in market regulation. In particular, the visions of technical development models, of the role of dairy imports, and of the transformation of rural farming, appear to be very heterogeneous among the various stakeholders. In the future, the type of regulation for dairy markets will depend to a great extent on the capacity of stakeholders to agree on two different development projects for the sector: one based on a modern periurban industry, and another one based on rural small-scale dairy production and marketing systems.

**Key-words** : institutions, regulation, market, recent history, livestock, Africa

---

**Introduction**

In the context of the global liberalization happening in the developing world, livestock constitutes one of the most rapid changing sectors. Understanding those changes might therefore bring interesting elements to analyze the impact of the State withdrawal on economic life, and to identify new instruments of public action.

The ongoing changes affecting livestock have had a strong impact on rural communities, because of the importance of animal production in income generation, livelihoods, human health, natural resource development, social organization and cultural identities (Alary et al., 2011; Duteurtre et Faye, 2009). Thus, there is a need to better understand this huge transformation and the way to manage it.

In response to a very high increase of the demand for animal products, livestock production systems and marketing chains in developing countries appear to be more and more intensified and industrialized. The concept of “livestock revolution” has been proposed to underline this important transformation occurring at various speeds in Asia, Latin America, and Africa (Delgado et al. 1999).

---

<sup>1</sup> CIRAD, Unité mixte de recherche « Selmét » ([duteurtre@cirad.fr](mailto:duteurtre@cirad.fr)), based in Senegal from 2003 to 2009.

The concept of “revolution” is probably not the best one for describing such a gradual, complex and heterogeneous transformation. And market changes are obviously not the only factor impacting the transition of livestock systems in developing countries. However, we shall recognize that “*the sustained rise in demand for food of animal origin, driven by growing populations, increasing consumer affluence, and increasing urbanization, is underpinned by structural changes along the whole animal food supply chain*” (Steinfeld et al., 2006).

Several authors have focused on identifying methods to better understand “drivers” of changes of this “livestock revolution” and “consequences” on economic, environmental and social dimensions of this transition. In reviewing those various methods, Steinfeld et al. (2010) identify 4 groups of “drivers” of changes impacting the livestock sector: (i) market changes (trends in consumption, changes in trade patterns, retail, supply chains, food production systems, quality standards); (ii) use of natural resources (land, water, fossil fuels, climate, climate change); (iii) availability of technologies (genetics, nutrition, health control, etc.); and (iv) policy and institutions (including the regulatory framework and incentives). This review underlines the weak development of the literature dealing with the latter, i.e. the need to better understanding the role of policy framework and institutions in managing the livestock revolution in the developing world.

The present communication aims at proposing a framework for analyzing those institutional factors affecting the livestock sector. Focus is made on the dairy sector in West-Africa, which has been changing a lot in the last 20 years, and which is facing a strong competition from imported dairy powder. Information and data used for this analysis provide from a quite extensive literature review on dairy production and marketing in West-Africa (Duteurtre, 2007; Duteurtre et Koussou, 2007) and from a more detailed analysis of narratives on dairy policies in Senegal (Duteurtre et al., 2011).

The paper is organized in 3 parts. The first part gives a brief presentation of the historical transformation of the dairy sector in West-Africa, focusing on the evolution of the role of the State in the regulation of the sector. The second part presents the theoretical background proposed for the analysis, based on the Commons’ theory of collective action. And the third part deals with the new instruments of public action that might be underlined for the regulation of the dairy sector, in relation with elements provided by Commons’ concept of “*futurity*”. This last part argues that new instruments should be focused on building common perspectives between public stakeholders and private actors.

## **History of the role of the State in the dairy sector**

The recent history of the role of the State in the dairy sector might be divided in two main periods of time: the *State capitalism*, which started in the 1960s some years after the Independence, and the *liberalized (or market) economy*, which progressively started during the 1980s until now (Duteurtre, 2007).

The State capitalism in the African dairy sector has been characterized by the idea that the local production should be developed through public services, industrial public investments, and intensive production units. State Farms using imported genetics and cultivated feed were developed in different places in Africa, and large-scale industrial dairy factories were set up with the help of public investment (Government loans, or support by Unicef, Fao, etc.). Animal health services were provide by government services through vaccination campaigns and administrated livestock extension services. In most countries, State industries (with a capacity of often more than 30,000 liters/day) had the monopoly for milk collection, which precluded the development of small-scale or middle-scale private processing industries (See illustration Table 1).

All the “traditional” or “small-scale” forms of milk production, processing and marketing were considered as “informal”, i.e. most of the quantities produced by African farmers and pastoralists and consumed by urban consumers were not included in the development programs supported by Government.

This period was also characterized by weak infrastructure, low level of education, low demand for industrial dairy products and frequent problems of management in government organizations. This situation resulted in a patent failure of the modernization development programs and in the incapacity of industries to collect significant amounts of milk from the local production. In the same time, imports of dairy powder used by the industries rose significantly. Despite the informal marketing chains were quite dynamic, provided raw milk, fermented products and melted butter to local markets, those chains remained largely ignored by Government programs and official institutions. This informal economy represented however around 90% of the milk quantities produced in the region at the end of the 1990s.

The failures of the State development program led to a period of liberalized economy, which started in the context of the Structural Adjustment Programs in the middle of the 1980s. This emergence of the liberalized policies in the dairy sector was gradual, and concerned both an internal liberalization of the domestic markets, and an external liberalization. In West Africa, the internal liberalization included the privatization of the State-owned dairy industries, and the removal of their monopole on milk collection.

**Table 1: Some of the State dairy industries set up after Independence in West-Africa**

Country	Name of the industry	Year of creation	Processing capacity (l/j)	Collection of local milk (l/j)	Year of privatization
Mali	ULB (Union laitière de Bamako)	1969	30 000	5 400 (en 1991)	1994 (Mali-lait)
Niger	Olani (Office laitier du Niger)	1970	40 000	300 (en 1970)	1998 (Solani)
Sénégal	Ucolait (Complexe laitier de St-Louis)	1968	10 000	550 (en 1971)	1974 Dépôt de bilan

Source : AlimenTerre, 2008 ; Metzger et coll., 1995 ; Vatin, 1996 (cited in Duteurtre, 2007)

The liberalized period was also characterized by a very rapid development of the urban population and of the consumption of dairy products (table 2 and 3).

**Table 2: Total population in West, Central and East Africa from 1961 to 2008 (in million of inhabitants)**

	1961	1981	2001	2008
Afrique de l'Ouest	85,6	143	243,9	291,2
Afrique de l'Est	84,1	147,7	269,4	310,5
Afrique centrale	32,8	55,4	100,8	122,5

Source : Faostat

**Table 3: Urban population in West and East Africa from 1961 to 2008 (in % of the total population)**

	1961	1981	2001	2008
Afrique de l'Ouest	15,8	27,8	39,4	43,5
Afrique de l'Est	7,6	15	21,1	23,2
Afrique centrale	18,3	29,3	37,7	41,8

Source : Faostat

In this new context, the government dairy development program started to focus on the private sector, encouraging the private production and private processing units to “feed the cities”. But the main focus of those programs remained the promotion of intensive specialized dairy farms using imported genetics, and industrial processing units using mainly imported powder. Between 2000 and 2005, the number of dairy industries operating in Dakar grew from 2 to 11, with nearly no impact on the amount of local milk collected by the industrial sector.

The “traditional” dairy economy, consisting mainly of raw milk and fermented milk marketing, remained mainly considered as “informal”, and was only “tolerated” in the vicinities of the very big cities. However, some development projects started to promote low-input peri-urban dairy production systems and small-scale dairy processing units. Those “local dairy systems” showed a very high capacity to develop, based on (i) pluri-active family farms using local animal genetics, pastoral resources, and complementary feed provided by local agro-industrial by-products (such as cotton grains, cotton cakes, noug cakes, etc.), (ii) fresh-milk collection systems based on bicycles or motorbikes transportation and oral contracts, and (iii) small-scale processing units using simple techniques and selling pasteurized or fermented milks in simple plastic packaging. Between 2000 and 2005, the number of small-scale processing units operating in the secondary cities of Senegal grew from 10 to 40. The evolution was comparable in Mali and in Burkina-Faso.

The liberalization period was thus characterized by a clear State withdrawal in the production and processing activities. However, government services remained mainly focused on promoting large-scale industries and specialized intensive dairy farms which had been the model in the State capitalism period. And the “real” dairy economy remained mainly ignored by official policies, who decided to lower import taxes for powder milk at the beginning of the year 2000 in the context of the WAEMU<sup>2</sup> regional policy.

However, local government officials and development agencies started to be involved in some institutional innovation aimed at better regulate the “real” dairy economy. Those institutions were focused on facilitating access to resources and access to market for local producers. They included for example: producer associations, collective milk collection schemes, genetic improvement associations, cooperative processing units, private processing enterprises, inter-professional organizations, quality standards, forums on trade agreements and trade negotiations, etc.

Those institutional changes had a very progressive impact on the government policies. At the end of the 2000s decade, dairy policies were characterized by a high degree of uncertainty concerning the technical model to be promoted, the level of taxation of imported powder milk to be set up, and the locations where to invest in dairy production support programs (Duteurtre, 2009). Despite Government officials continued to focus on promoting the modernization of the sector (through large peri-urban specialized farms and large-scale dairy industries using partially powder-milk), producers associations, NGOs, research institutions and some development agencies seemed to rather recommend the investment of public programs in the promotion of “low input dairy systems” localized in poor rural areas, as well as the increase of the import tariff for dairy products (Duteurtre, 2011). But will those recommendations be followed by Central Government authorities? Are the West-African dairy policies going to shift from a modernization model to another rural perspective?

Before analyzing into more details those institutional changes, and the way the State supported or limited those changes, we shall now present the theoretical background that will be used further in our discussion.

### **Theoretical background for the analysis of institutions and the role of State**

Understanding institutions affecting the livestock sector requires firstly a definition of the concept of institution. In economics, there are two main approaches of institutions and institutional mechanisms. The first refers to the new institutional economics literature. In that perspective, authors broadly define organizations as “players of the game” and institutions as the “rules of the games”<sup>3</sup>. In that conception,

---

<sup>2</sup> WAEMU : West African Economic and Monetary Union, which is composed of 8 countries : Benin, Burkina-Faso, Cameroun, Guinée-Bissau, Mali, Niger, Sénégal, Togo. The Common External Tarif (CET) of WAEMU was set up on January 2000.

<sup>3</sup> Les institutions économiques sont généralement définies comme « *un ensemble de règles durables, stables, abstraites et impersonnelles, cristallisées dans des lois, des traditions ou des coutumes, et encastrées dans des*

institutions are “given”, they impose their rules to economic actors (Gislain, 2010). The main limitation of this first approach is that it does not allow to understanding the historical dynamics of institutions, i.e., the reasons why institutional changes would appear in certain social conditions, and the conflicts associated to those changes. As expressed by Reynaud (2004), the rules of the game cannot be understood without analyzing the type of regulation which produce those rules, and which involve the different actors of the game themselves. For Gislain (2010), this approach does not provide a theory of economic actions, on which it would be possible to build a theory of institutions.

The second approach of institutions in economics refers to the “old institutionalism”, which defines economic life as a “social process”. In that second perspective, social institutions cannot be isolated from the rest of the economy. In order to better understand the institutional processes and the role of State in the livestock sector, we will refer here to this second approach, and particularly to the Commons’ theory of collective action, which has been too much neglected in the past years (Bazzoli, 1999).

For Commons, institution is “*a collective action in control, liberation and expansion of individual action*” (Commons, 1931). Those institutional forms range all the way from unorganized custom to the many organized “*going concerns*”, such as the family, the corporation, the trade association, the trade union, the reserve system, the state. The concept of organized “*going concern*” is very near from the concept of “organization”, but Commons prefers referring to the concept of “*going concerns*”, in order to underline the fact that collective action is very rarely a “unified body” with a clear “common strategy” as expressed by the concept of “organization<sup>4</sup>”. The control of collective action on individuals is made by customs or organized “*going concerns*” through “*working rules*” that determine what individuals can or cannot do, must or must not do, is allowed or not allowed to do (Gislain, 2010).

Commons identify three types of transactions (trans-actions) in which individuals participate to the collective action in the real economic life<sup>5</sup>: the “*bargaining transactions*”, the “*managing transactions*”, and the “*rationing transaction*”<sup>6</sup>. The “*bargaining transactions*” define the way property is transferred by agreement between two equal entities, i.e. typically by exchange on the market. The “*managing transactions*” are those through which property is “efficiently” managed towards the production of goods and wealth. This type of transactions defines the executive hierarchy and command between individuals of different juridical status (inferior/superior). The “*rationing transaction*” establishes agreements that define the sharing conditions of “*burdens and benefits*” of economic activity between members of the collectivity, based on negotiations between legal representative bodies. This third type of transaction is the expression of governance and sovereignty. If the first two types of transactions refer to the “struggle for richness”, the latter rather refers to the “struggle for power”, i.e. to “politics” and governance (Bazzoli, 1999:95).

If the bargaining transactions are the focus of a liberal or capitalistic economy, it does not mean that the other types of transaction do not play a role in the collective actions in place in this economy. Moreover, the three types of transactions are inter-dependant and variable in a perpetual changing and uncertain world (Commons, 1930).

Commons’ definition of institutions might result in three major methodological consequences for our analysis:

---

*dispositifs qui implantent et mettent en oeuvre, par le consentement et/ou la contrainte, des modes d’organisation des transactions* » (Ménard 2003, 106, cit. in Gislain, 2010)

<sup>4</sup> L’action collective n’est pas ici à comprendre comme l’anthropomorphisation d’un groupe humain agissant comme s’il était une entité homogène (Gislain, 2010 : 6)

<sup>5</sup> Selon Commons, « l’économie institutionnelle est l’activité des transactions dans la relation des hommes aux hommes » (1934, 424, cité par Gislain, 2010 :6)

<sup>6</sup> Que l’on traduit en Français par : transactions de marchandage pour « *bargaining transactions* », transactions de direction (ou de commandement) pour « *managing transactions* », et transactions de répartition (ou de gouvernance) pour « *rationing transactions* » (Bazzoli, 1999 ; Gislain, 2010)

- Understanding institutions requires an historical approach : “*Les institutions sont une construction sociale d’abord parce qu’elles sont un construit historique : on ne peut les analyser sans prendre en compte le processus historique dont elles découlent* » (Bazzoli et Dutraive, 2004: 3).
- The market might be view as a particular institution and is “socially built” ; as expressed by Bazzoli et Dutraive (2004) : “*Market is assumed to be an institutional phenomenon that results from a built social process. More over the opinion defended here is that the social construction of market facts is precisely an historical path in which related political and economic powers play a major role*”.
- The role of the State might be understood through its involvement in the institutional process, i.e. through its participation in the collective action, in the form of building “*working rules*” in the “*going concern*”. In the three types of transactions (bargaining, managing and rationing transactions), the state contributes more or less in setting up institutions, in deep interaction with other actors of the economy. The governance is therefore understood by Commons more as a dynamic process of negotiation and management of conflicts, than as a top-down decision process.

To even better understand this involvement of the State in the institutional transformation, we shall refer to another important point of Commons’ theory of collective action, which is the concept of “*futurity*”<sup>7</sup>. According to Commons, a major specificity of human nature is its “*willingness*”<sup>8</sup> oriented towards the “*futurity*”. In other words, actions of individuals are determined by the perception they have of what will be the consequences of their actions. This perception is their “*futurity*”. In other words, the futurity is not the future, but the “*signification*” the future has for the actor (Gislain, 2010:10). The more an actor will have a futurity full of signification, the more his perspectives will be secured, the more he will be pro-active in the current activities. Hence, the futurity determines the power and the security of the collective action (Gislain, 2010:12).

In this theoretical perspective (Commons (1930) calls it the “*negotiational psychology*” theory), the futurity defines the expectations, the beliefs, and the rules of action that will be followed by the actors. In order to underline that this futurity results from individual expectations, but also (and mainly) from collective beliefs and expectations, Commons defines what he calls the “*common significative futurity*”. This common significative futurity is based on a “*common consensus of opinion*”. The author also underlines that the individual actor is an “*institutionalized mind*”, or that economic activity is an “*institutionalized action*” (Commons, 1934, cit. in Gislain, 2010).

From this presentation of Commons’ theory of collective action, we propose the following conceptual framework that will help us to analyze institutions in the dairy sector. The idea of this framework is to identify the linkages between different “*common concensus of opinion*” concerning the future of the dairy sector and the different types of institutions observed in the reality.

Conceptual framework for the institutional analysis of the dairy sector  
Based on Commons’ concept of “*futurity*”

Types of transactions	Social consensus of opinion (defining a “ <i>common significative futurity</i> ”)	Observed institutions (“ <i>going concerns</i> ” and “ <i>working rules</i> ”)
Bargaining transactions Managing transactions Rationing transaction		

<sup>7</sup> En Français : futurité

<sup>8</sup> En Français : volition

## Perspectives for new instruments of public action

The paragraph on the recent history of the dairy sector in West-Africa has underlined the dominance of the “modernization” programs focused on promoting large intensive specialized dairy farms and industrial processing plants. This rapid history has also showed the recent emergence of an alternative development model based on a more extensive production system, a lower level of input and investments, and a more rurally-based organization of the sector. Those two development perspectives might be summarized in the following figure, based on the conceptual framework proposed here-above.

Development models →	Model 1 : “Modernization”		Model 2 : “Alternative”	
Types of transactions ↓	Social consensus of opinion	Observed institutions	Social consensus of opinion	Observed institutions
Rationing transactions	Modernity is what we need →  Powder milk must be imported if it is cheaper than producing local milk →	Genetic improvement schemes, support policy to industrial projects  Reduction of tariff and suppression of import quotas (CET WAEMU)	Rural tradition is part of our identify →  Local milk creates employment and is better for our economy	Rural development projects, decentralization policy,  Committee for discussing about the 5 <sup>th</sup> band (35% taxes) in the CET CEDEAO Geogr. Indicat. regulat.
Managing transactions	Modern products are good for health →  Higher productivity enhances competitiveness →	Use of HACCP and industrial norms for quality management  Investment in high input techniques and know-how (intensive big farms)	Typical products are good for health →  Low input production techniques are sources of competitiveness	Book of good hygiene practices for small-sc. enterprises. Participatory quality improvement.  Local work contracts to valorize “traditional” know-how (Fulani shepherd, etc.)
Bargaining transactions	Industrial processing brings higher market security and quality →  Price of milk must be adjusted to each producer →	Vertical integration and formal contract with industry  Market mechanism and payment to quality	Local processing and “typical African products” bring higher market revenue  Price of milk must be the same for every-body in order to avoid “free-riders” behaviors	Small-scale processing units using contractual arrangements with producers  Local inter-professional committee for collective price negotiation

The above table shows that the two different development models rely on two different types of “futurities”, and lead to two different types of institutions. The dairy sector in West-Africa seems to require segmented policies that would take into account this heterogeneous institutional context.

In the first (“modernization”) perspective, the policy instruments that are required are related to facilitating access to land and to capital for industrial projects, facilitating importation of animal genetics and modern know-how, facilitating the increase of the size of the dairy farms, the setting up of milk market mechanisms and the promotion of professional dairy associations.

In the second (“alternative”) development perspective, the policy instruments that are required are related to encouraging local development policies, promoting geographical indications regulations, increasing import taxes for milk powder and other dairy products, promoting local employment and local know-how, and enhancing rural producers organization and inter-professional bodies.

This analysis underlines the different pathways for dairy development, some of them referring to the development of modern and intensive periurban dairy industry, and some of them referring to the development of a peasantry-based production.

## Conclusion

The case-study presented here underlines the strong relations between economic activities, institutions, cognition and governance. The commons' theory of collective action gives a very satisfactory explanation of those relations, in particular by proposing the concept of "futuraity" and its impact on the collective action.

For many years, dairy policies in Africa have been characterized by the reference to only one development model, i.e. the modern development model based on intensive specialized dairy farms and large-scale processing industries. The rest of the dairy sector had been considered as an "informal" sector during the "state capitalism period", and further.

More recently, however, the liberalization process has give space for small-scale industries to develop, which has led to the emergence of an "alternative" development model, based on low input production systems and small-scale processing units. This model is still on discussion. Its future will be highly impacted by the way Governments will decide to support it or now through appropriate policy measure.

It is very likely that in the future, the two development models will continue to co-exist, and that they will offer different services and benefits to the different groups of actors. But as it is suspected in Commons' theory, this will probably involve some conflicts that the public services will have to help solving by appropriate negotiation and governance.

## References

- Alary V., Duteurtre G. et Faye B., 2011 : « Élevages et sociétés: les rôles multiples de l'élevage dans les pays tropicaux [Livestock and societies: Multiples roles of livestock in tropical countries] », *INRA Prod. Anim.*, 2011, 24 (1), (sous presse)
- Bazzoli L., 1999 : *L'économie politique de John R. Commons : Essai sur l'institutionnalisme en sciences sociales*, Paris, L'Harmattan, 234 p.
- Bazzoli L., Dutraive V., 2004 : « La conception institutionnaliste du marché comme construction sociale : une économie politique des institutions [The Institutionalist Conception of Market : a Political Economics of Institutions] », VII Aispe Conference "Economics and Institutions. Contributions from the History of Economics", Palermo, September 30 – October 2, 2004, 20 p.
- Commons J.R., 1931 : "Institutional Economics", *American Economic Review*, Vol.21, 1931, pp.648-657 (see [http://www.cooperativeindividualism.org/commons\\_insteconomics.html](http://www.cooperativeindividualism.org/commons_insteconomics.html))
- Delgado C., M. Rosegrant, H. Steinfeld, S. Ehui, and C. Courbois, 1999 : *Livestock to 2020 : the next food revolution*, Food Agriculture and Environment Discussion Paper 28, Washington D.C., International Food Policy Research Institute, 85 p.
- Duteurtre G., 2007 : « Commerce et développement de l'élevage laitier en Afrique de l'Ouest : une synthèse », *Rev. élev. méd. vét. pays trop.*, 60 (1-4), pp. 209-223.
- Duteurtre G. et Koussou M.O., 2007 : « Économie pastorale et marchés laitiers au Sahel : L'âge d'or du commerce de beurre clarifié au Tchad de 1930 à 1970 », *Rev. élev. méd. vét. pays trop.*, 60 (1-4), pp. 29-38.
- Duteurtre G. and Faye B., 2009: *L'élevage, Richesse des pauvres : Stratégies d'éleveurs et organisations sociales face aux risques dans les pays du Sud*, Quae, Versailles, 286 p.

- Duteurtre G., Corniaux C., Dia D., Diao-Camara A., 2010 : « Les importations laitières au Sénégal : vraie question, ou faux problème ? » in Pillon P. (Coord.) 2011 : *La question alimentaire sénégalaise dans la mondialisation*, Paris, L'Harmattan, sous-presses, 17 p.
- Gislain JJ, 2010 : « Pourquoi l'économie est-elle nécessairement instituée ? Une réponse commonsienne à partir du concept de futurité », Séminaire Hétérodoxies, Centre d'Économie de la Sorbonne – Université Paris I, 11 mai 2010, 23 p.
- Reynaud J.D., 2004 : « Les règles du jeu : l'action collective et la régulation sociale », Armand Colin, Paris, 3<sup>ème</sup> éd., 348 p.
- Steinfeld H., P. Gerber, T. Wassenaar, V. Castel, M. Rosales and C. de Haan, 2006: *Livestock's long shadow: Environmental issues and options*, Rome, FAO
- Steinfeld H., H.A. Mooney, F. Schneider, L. E. Neville (Ed)., 2010: "Livestock in a changing landscape : Volume 1, Drivers, Consequences, and Responses", Inland Press, Washington, 396 p.