Simulation model of the social game associated to the potato seeds in a Venezuelan region

Abstract.

Like many regions of the world, in Latinamerica, and in particular in Venezuela, consumption and production of potatoes (and potato seeds) is highly important. The region around Mucuchíes town in Venezuela concentrates the highest national production of potato seeds. This work aims at representing the (social) game of power around the potato seeds in this region. Such a game involves not only private entities but also the Venezuelan state, which seems to have contradictory strategies and actions: on one side, it favors research and production of national potato seeds; and, on the other side, it supports potato seeds importation, part of which frequently is contaminated. Importation of foreign potato seeds discourages national production. The importation process is permeated by corruption, and brings potato diseases from outside the country, which infects the local lands. We built a computational model of that social game, by using the simulation platform SocLab. The model is aimed at understanding better the game of power, and to evaluate the potential (power) of the Venezuela State to significantly increase national potato seeds production. We will show that the low identification of the Venezuelan state with national production of potato seeds is a critical factor that not only makes difficult the creation of a national system of production of potato seeds in a good state, but also has important direct negatives effects in the actual system (or SOC).

1. The Model of the potato seeds systems in the area of Mucuchíes, Venezuela.

The goal of the model is to help us in understanding better the interaction of actors around the production of potato seeds in Venezuela, and, in particular, to explore some hypothesis, which we will introduce after the description of the actors and relations included in the model.

We have elaborated a model with six relations and six actors. Initially the model had more relations and actors, but we reduced both of them to six. This was necessary because, on one hand, the model was too heavy and the simulations took too long in our computers, and, on the other hand, we realized that some actors had similar or close behavior and controlled similar or correlated relations. The actors and relations are shown in Figure 1, and can be described as follows:

The name PROINPA_MCT stands for an actor that includes two organizations: PROINPA, an association of producers of certified potato seeds, and MCT, the Ministry of Science and Technology. PROINPA and MCT are joined as a single actor, who controls the resource "Pre-basic and industrial seeds", named SEM_PREB_IND_Y_VAR. The goal of this actor is to promote growing of native potato seeds, specially the pre-basic one, but also others. The pre-basic seed is the prime seed with excellent phytosanitary conditions. These conditions are assured via a certain certification given by an institution of the Venezuelan state, which is included in the actor ESTADO (state). To produce pre-basic seed good laboratories and other expensive resources are needed, which in Venezuela require the support of the ESTADO and especially of the MCT. At present, PROINPA do not have the capacity to produce all pre-basic seeds required in Venezuela, what justifies importation of part of the potato seeds required in the country. The pre-basic seeds are used by producers of potato seeds (PROD_NAC_SEM_CONS_AGRO) to grow other basic seeds. These seeds finally are used to produce potatoes to be brought to the national potato market for consumption, or used as recycled seeds, which have low quality, when basic (good quality) potato seeds are scarce. The recycled potato seeds are controlled and used by the producers of potatoes (PROD_PAPA_CONS_AGRO) (see below).

PROINPA's goal collides with that of those actors importing seeds. It is common that the imported seeds bring potato diseases to local lands. Also, some entrepreneurs (importers of potato seeds) get high economical benefits from importation of potato seeds. Such actors do some lobby in the government, and manipulates the governmental agents, in order to get the importation authorization and access to foreign currency. In general, the imported process is corrupt. Some of the actors involved in this process are the seed importers (IMP_SEM_AGRO), the state (ESTADO) and the mafia (MAFIA_AGRO).

As can be seen in the Figure 1, PROINPA_MCT is interested mainly on the relation it controls, on support from the state (stake is 2), and on the industrial potato seeds (stake is 1).

The ESTADO (state) actor represents several "institutions" of the Venezuelan state, such as the Ministry of Agriculture and Lands, the INIA (agricultural research institute), and other organizations responsible for providing agricultural inputs (an exception is the MCT, who behaves differently from most of these entities). This actor manages the relation agricultural support (material, legal, certain kind of research, etc.), which has been called SOPORT_PROD. Thus, support here means help to get, for instance, agrochemicals, technical guidance and seeds certification. This actor is highly interested in the resource it controls, and in production of potatoes used for national consumption, and as recycled seeds. The ESTADO is politically pressed/compelled by potato producers to help them in getting potato seeds. Because of this, the ESTADO usually allows importation of potato seeds and potatoes in general, becoming a sort of collaborator of the mafia (the mafia obtains benefits from potatoes in the market, either imported or national) and from the importers of potato seeds. The availability of potatoes for national consumption is important for any state, but even more for a populist state that is permanently active in the search for votes, as is the case in Venezuela. Because of this, the state is solidary with the potato importers. We can also notice that the potato importers can destine part of their economical benefits got from importation to support political parties in electoral campaigns. Importers of potato seeds could either "extort" governmental functionaries, and/or participate with them in a game interchanging payments of diverse kind. Consequently, the importers along some state functionaries constitute a sort of mafia of the importation of potato seeds.

The actor PROD_NAC_SEM_CONS_AGRO stands for the national producers of seeds. As explained above, there are several kinds of seeds including the pre-basic (in Venezuela produced by PROINPA or imported), the basic produced by the PROD_NAC_SEM_CONS_AGRO by using the pre-basic seeds, and the recycled ones (grown by the PROD_PAPA_CONS_AGRO). The basic seeds are the resource SEM_CERT_IND_NAC, which, in Venezuela, is controlled by the actor PROD_PAPA_CONS_AGRO. This actor is also interested in the national production of pre-basic seeds, and works along PROINPA (in fact, there exists certain solidarity between them).

The actor IMP_SEM_AGRO represents the importers of potato seeds, whose final goal is to obtain economical benefits from this activity. It controls the relation "importation of potato seeds", or equivalently, in the negative sense, the relation: "not to import potato seeds", which was introduced in the model as: NO_SEM_CERT_IMP_AGRO. They can buy potato seeds by using the external currency (e.g., dollars) got from the government. They get cheap foreign currency, but sometimes sell the imported potato seeds in a relatively high national price in the national currency, or distribute

the imported potato seeds at their convenience among the producers (e.g., to some particular producers, who pay well for it, either legally or illegally via marginal payments), in order to get high economical benefits.

The actor PROD_PAPA_CONS_AGRO stands for growers of agro-industrial potato seeds for national people consumption, but part of which is taken as (low quality) recycled seeds. Their input is either national or imported basic seeds, or those recycled seeds coming from the potatoes they themselves produce. This actor manages the relation SEM_RECICLADA (recycled seed). This low quality resource has become important because of the scarcity of basic good quality seeds.

The actor MAFIA_AGRO has appeared as part of those traders involved in commercialization of potatoes in the Venezuelan market. They are interested in controlling the market in order to create instability in the potato prices, and then get benefits from it, by speculating with the potato product. Thus, they have become a sort of mafia whose goal is to trickily control the marked. They control the relation: manipulation of the market. We have introduced in the model the negative relation respect to this one, i.e., we have included in the model the relation "no manipulation of the market", which has been called: "NO_MANIP_MERCADO" (a low negative value of NO_MANIP_MERCADO means that the market is highly manipulated). Consequently, the actor MAFIA-AGRO controls the relation NO_MANIP_MERCADO.

As can be seen from above, at present two opposed behaviors can be identified in the modeled game: on one hand that of PROINPA_MCT and on the other hand that of the MAFIA_AGRO, IMP_SEM_AGRO, and PROD_PAPA_CONS_AGRO; the first actor (PROINPA_MCT) aiming at the increase of production of national potato seeds (and a *sane* potato market: without mafias, promoting national production, and importing only when necessary good quality potato seeds), and the second group of actors aspiring at the increase of the importation of potato seeds (even if they are of low quality or contaminated) and even at manipulating the market, in order to get economical benefits. The behavior of the other two actors is more ambiguous, but they might support either one or the other of the previous described behaviors. All these forms of action of the actors are going to be investigated, in order to be better understood, in the present model.

In the present stage of the research, some specific hypothesis are of interest. These hypothesis could lead to other new hypothesis, and to a new version of the model, in a second stage of the research. The initial hypothesis to be explored are:

Hypothesis 1: If the agro industrial mafia were des-activated, or if its action changed to that of a "normal" trader in a market, then availability of imported potato seeds will appreciably decrease.

Hypothesis 2: A higher identification of the ESTADO (Venezuelan state) with the actual system of production and distribution of potato seeds (that one modeled), would notably favor the increase of national production of potato seeds.

Hypothesis 3: An ESTADO reeducated and highly identified with the production of national potato seeds (PROINPA_MCT's goal) would significantly favor the increase of national production of potato seeds.

Figures 2, and 3 show the stakes of the actors on the relations, the solidarities between pairs of actors, and the effect functions of the relations on the actors.

stake	**PROINPA_MCT**	**ESTADO**	**PROD_NAC_SEM_CONS_AGRO**	**IMP_SEM_AGRO**	**PROD_PAPA_CONS_AGRO**	**MAFIA_AGRO**
SEM_PREB_IND_Y_VAR	**6.0**	1.0	2.0	0.5	0.0	0.5
SOPORT_PROD	2.0	**4.5**	1.5	1.5	2.0	1.0
SEM_CERT_IND_NAC	1.0	1.0	**4.5**	0.5	1.0	0.5
NO_SEM_CERT_IMP_AGRO	0.5	1.0	1.5	**5.0**	1.0	1.5
SEM_RECICLADA	0.0	2.0	0.0	0.5	**4.5**	1.5
NO_MANIP_MERCADO	0.5	0.5	0.5	2.0	1.5	**5.0**

Figure 1: Stakes of the actors in the relations. (the bold weights indicate which relation each actor controls)

solidarity	**PROINPA_MCT**	**ESTADO**	**PROD_NAC_SEM_CONS_AGRO**	**IMP_SEM_AGRO**	**PROD_PAPA_CONS_AGRO**	**MAFIA_AGRO**
PROINPA_MCT	1.0	0.0	0.05	0.0	0.0	-0.05
ESTADO	0.0	0.85	0.0	0.15	0.0	0.0

PROD_NAC_SEM_CONS_AGRO	0.05	0.0	0.85	0.0	0.1	0.0
IMP_SEM_AGRO	0.0	0.15	0.0	0.75	0.1	0.0
PROD_PAPA_CONS_AGRO	0.0	0.0	0.1	0.1	0.7	0.1
MAFIA_AGRO	-0.05	0.0	0.0	0.0	0.1	0.95

Figure 2: Solidarities between pairs of actors

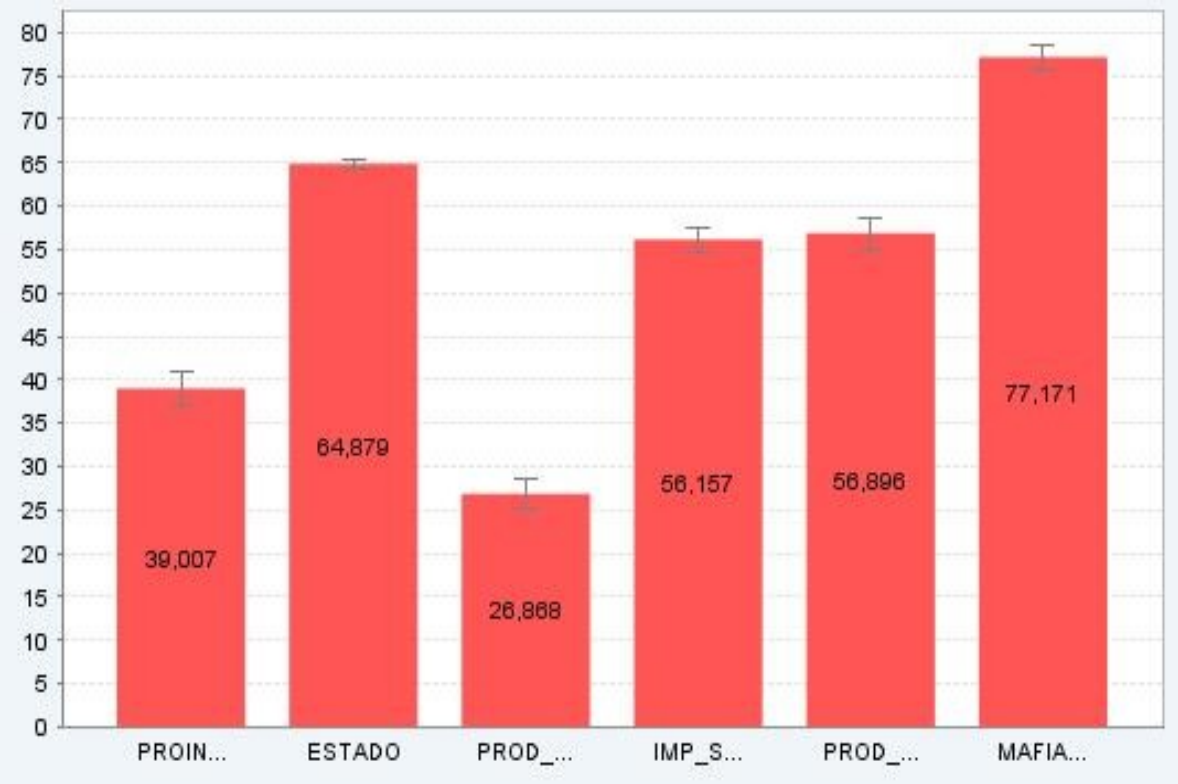
effect	**PROINPA_MCT**	**ESTADO**	**PROD_NAC_SEM_CONS_AGRO**	**IMP_SEM_AGRO**	**PROD_PAPA_CONS_AGRO**	**MAFIA_AGRO**
SEM_PREB_IND_Y_VAR						
SOPORT_PROD						
SEM_CERT_IND_NAC						
NO_SEM_CERT_IMP_AGRO						
SEM_RECICLADA						
NO_MANIP_MERCADO						

Figure 3: Effect functions of the relations over the actors.

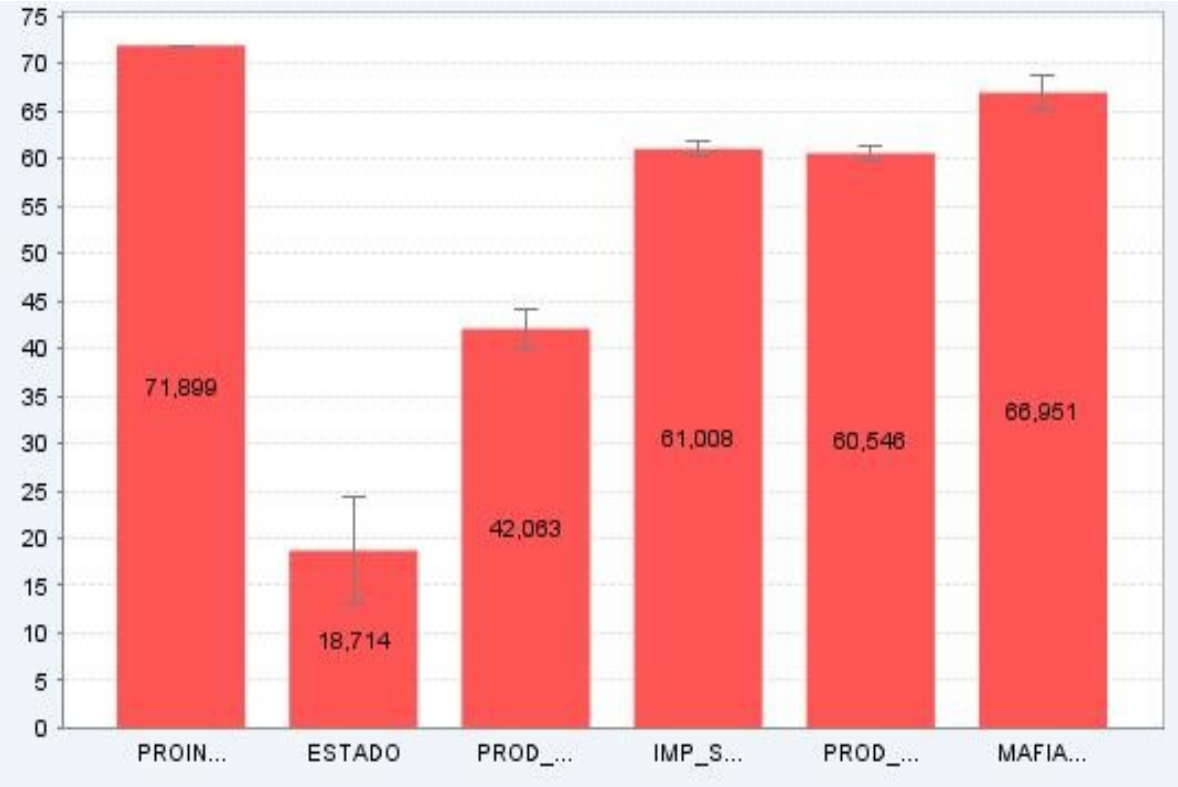
2 Results

2.1 Results from the Simulation

The simulation consisted in 50 runs, and has taken 13.308,18 average steps. Figure 4 and 5 show the satisfaction and influence of the actors, respectively.



Figures 4: Satisfaction of the actors.



Figures 5: Influence of the actors.

We can see that PROINPA_MCT receives little while gives a lot. Differently, actors such as the MAFIA_AGRO, the producers of recycled seeds and the potato importers are highly satisfied. Notice that the ESTADO gives little and receives a lot. What this means? Why the state is so well satisfied? Who gives to the state, and to who the state gives? Who are the state allies? Who are the PROINPA allies?. How far is the behavior of the state from PROINPA's (nationalistic) goal? This questions will be investigated below.

In the Figure 6 we see that PROIMPA_MCT gets satisfaction positive from itself from the state and from the national seeds producers, while it get negative satisfaction from the Mafia and the importers of seeds. The state gets positive satisfaction from all actors, what can be explained by the fact that it is highly ambiguous. The last three actors in the y axis rest on what they give among them, becoming a sort of coalition, of which the state is a partial ally – so as it partially also allies with PROINPA_MCT. The state's satisfaction rests mainly on the importers of potato seeds (IMP_SEM_AGRO), and on the national producers of potatoes and recycled potato seeds (PROD_NAC _SEM_CONS_AGRO).

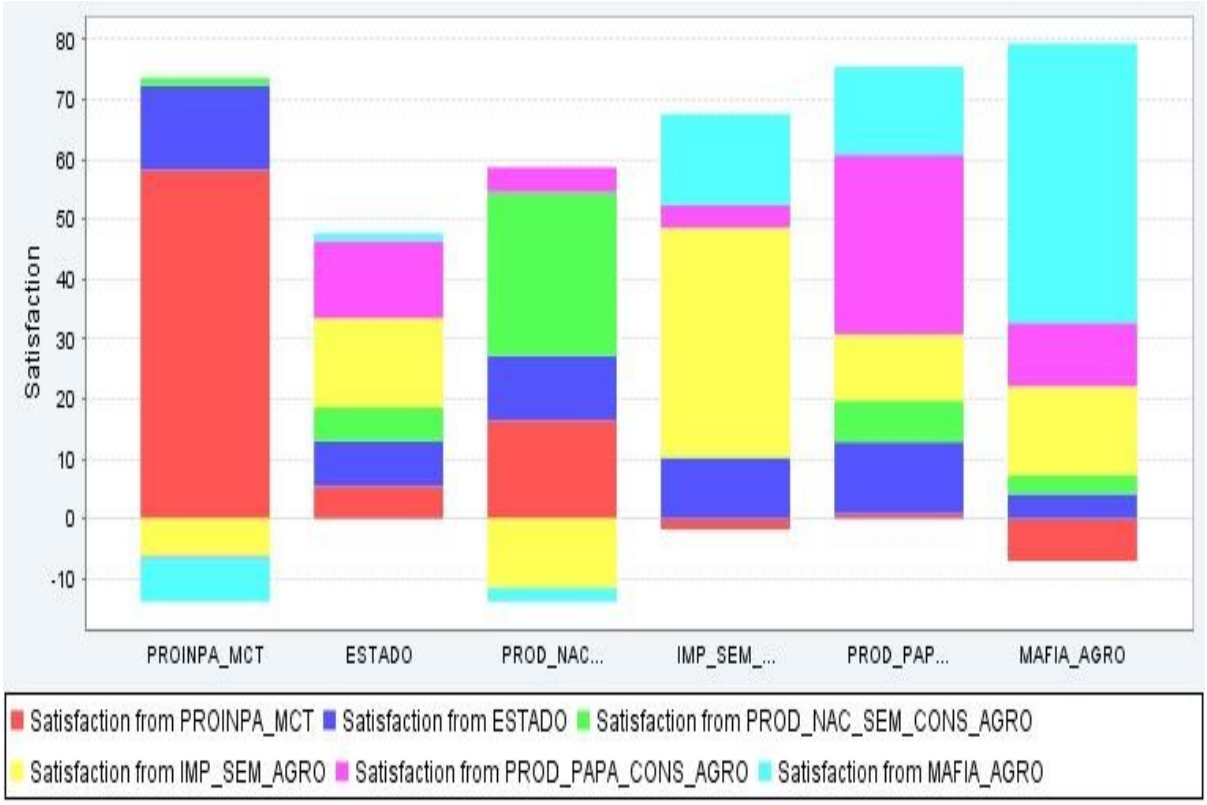


Figure 1: Proportion of satisfaction the actors receive from each other.

Figure 7 shows the influence actors have on each other. We can see in this Figure that PROIMPA_MCT gives mainly to itself, to the national producers of basic seeds and to the state. On the other hand, as expected we also see the ambiguity of the state (as it depends on many actors, including the importers of potato seeds and the mafia, whose behavior is contrary to national interest) and the sort of alliance among the last three actors shown in the graph: the importers of potato seeds, the mafia and the producers of recycled seeds.

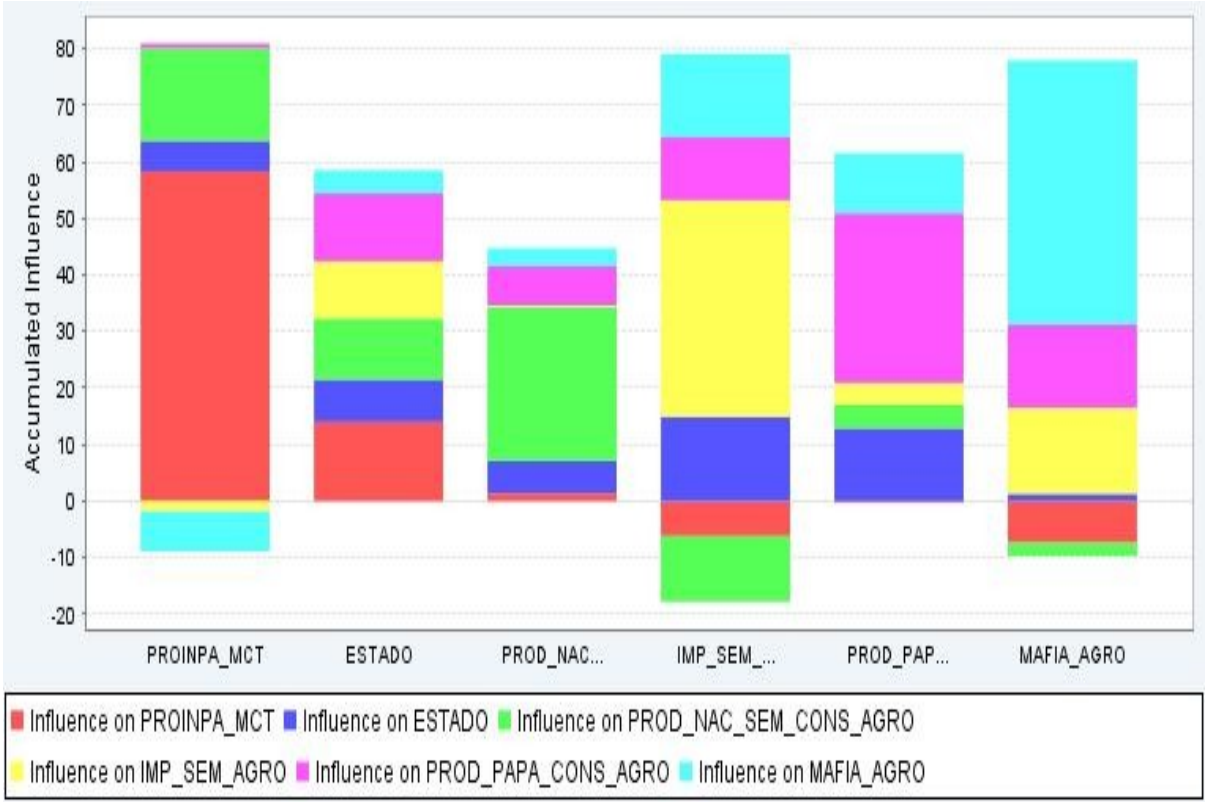


Figure 7: Proportion of influence the actors have on each other.

The state of the relations is shown in Table 1, and in Figure 8. There we can see the state of the modeled system at present, which has been validated by Professor Liccia Romero, who knows the modeled system (or SOC) very well. In fact, Prof. Liccia has served as the main consulted expert to build the model, and has guided the present research. She frequently visits the area/region of the system of production of potato seeds represented in the model, and is involved in community activities, especially in those associated with the production of native potato seeds. Also, Prof. Liccia has developed her M.Sc., her Ph.D., as well as many further projects in that community.

Table 1: State of the relations resulting from the simulations.

Relation	State	Interpretation
SEM_PREB_IND_Y_VAR	***9.69***	There is good production of pre-basic seeds, however, that is not enough for the national needs.
SOPORT_PRODUCCION	***-1.6***	There is low support to the production by the state.
SEM_CERT_IND_NAC	***1.94***	There is low production of national industrial (basic) seeds. Consequently, producers have the need to go to the market and buy seeds from dubious precedence, and with low quality.
NO_SEM_CERT_IMP_AGRO	***-9.35***	There is a good amount of imported seeds for the national production.
uSEM_RECICLADA	***8.71***	There is a good level of recycled seeds, and of potatoes for

		national consumption.
NO_MANIP_MERCADO	**-9.43**	There is a good level of manipulation of the market, and the price of the potatoes is high.

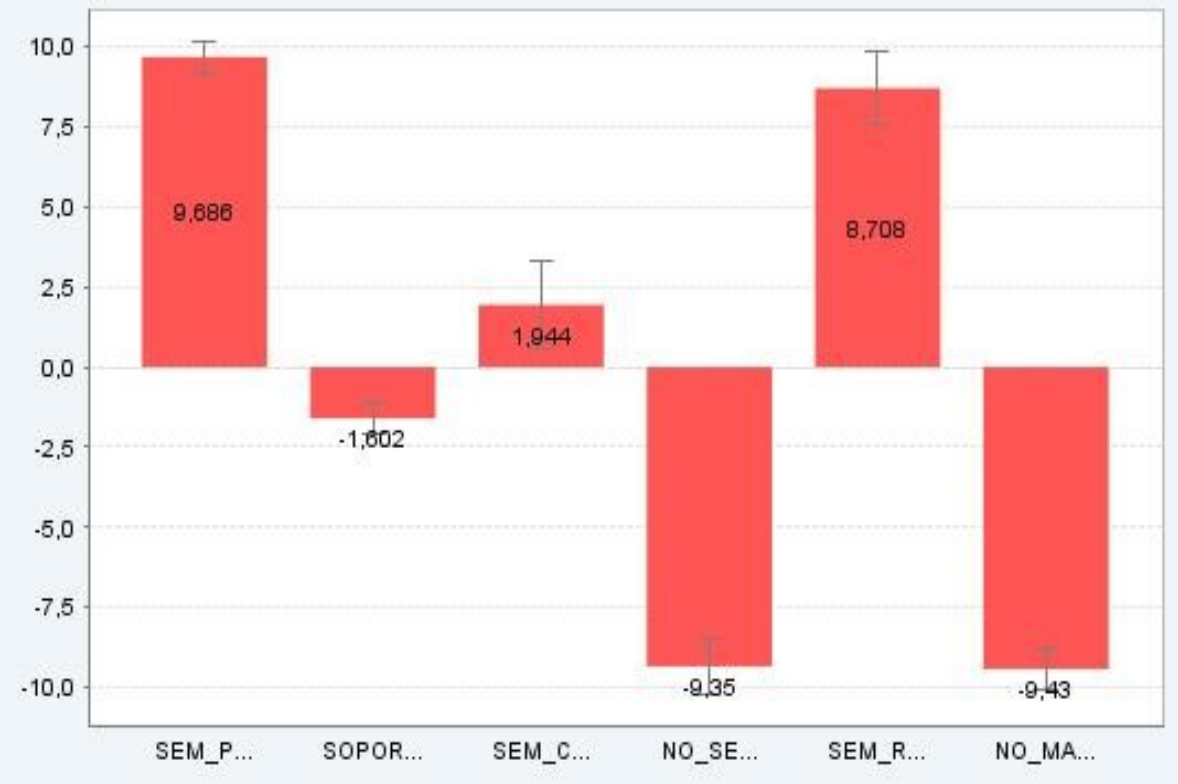


Figure 2: Graphical representation of the state of the relations.

Results for several cases of interest are shown in the Figures 9-11. The interest is in understating better the possibilities for promoting the increase of the production of native potato seeds (produced by PROINPA). We analyze the cases where those actors behaving against of such a goal minimize their satisfaction, and the case where the actor whose behavior favors such goal maximizes its satisfaction. I.e., we analyze the cases in which: a) the satisfaction of importers of seeds is minimized, b) the satisfaction of the mafia is minimized, and c) the satisfaction of PROINPA is maximized.

a) Minimizing the satisfaction of the importers of potato seeds.

In Figure 9, we observe that when minimizing the satisfaction of the importers of potato seeds, also the satisfaction of the mafia and national producers of recycled seeds and industrial potatoes decrease. Similarly, the satisfaction of the state decreases significantly. Notice in Table 2 that the support of the state to the production of potato seeds is the lowest possible (-10). All this indicates a close relationship between the state, the producers of potato recycled seeds, the importers of potato seeds, and the mafia.

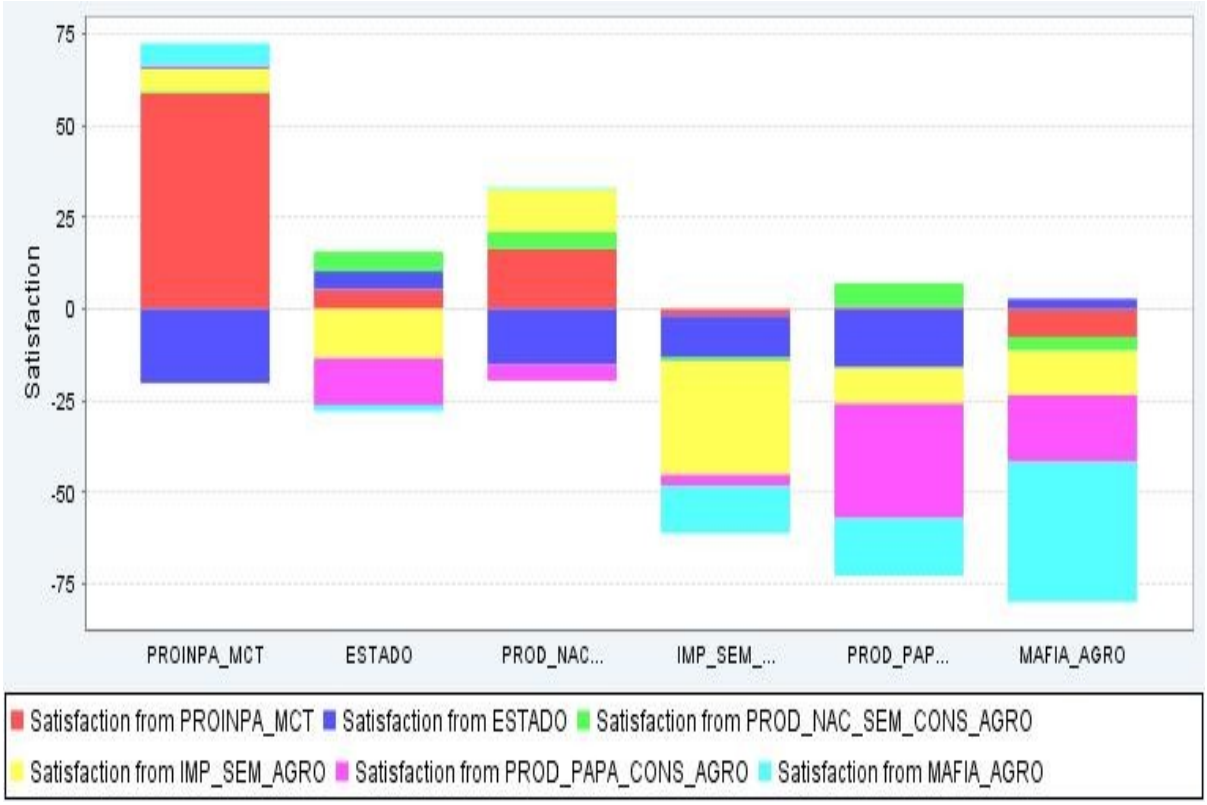


Figure 9: Distribution of satisfaction when the satisfaction of importers of potato seeds is minimized.

Table 2: State of the relations when minimizing the satisfaction of the importers of potato seeds.

Relation	State	Interpretation
SEM_PREB_IND_Y_VAR	*10.0*	*PROINPA is producing certified potato seeds at its maximal capacity*
SOPORT_PROD	*-10.0*	*There is not support for the production of potato seeds*
SEM_CERT_IND_NAC	*10.0*	*There is good production of basic industrial seeds*
NO_SEM_CERT_IMP_AGRO	*10.0*	*There are not certified imported seeds*
SEM_RECICLADA	*-10.0*	*There are not recycled potato seeds. This means that the national production of potatoes is all destined for consumption because of the scarcity of potatoes in the market*
NO_MANIP_MERCADO	*10.0*	*There is not manipulation of the market.*

b) Minimizing the satisfaction of the mafia.

In this case we see again that the satisfaction of the national producers of recycled seeds, the importers of potato seeds, the state and the mafia is very low. They seem to be somewhat related or allied, as it was previously said. It is significant (compare Tables 2 and 3)

that the fundamental difference with the previous case is that now the state is highly collaborative (a level of collaboration that is negative for the state itself, as it is not highly compromised with the improvement of the system of production of native potato seeds).

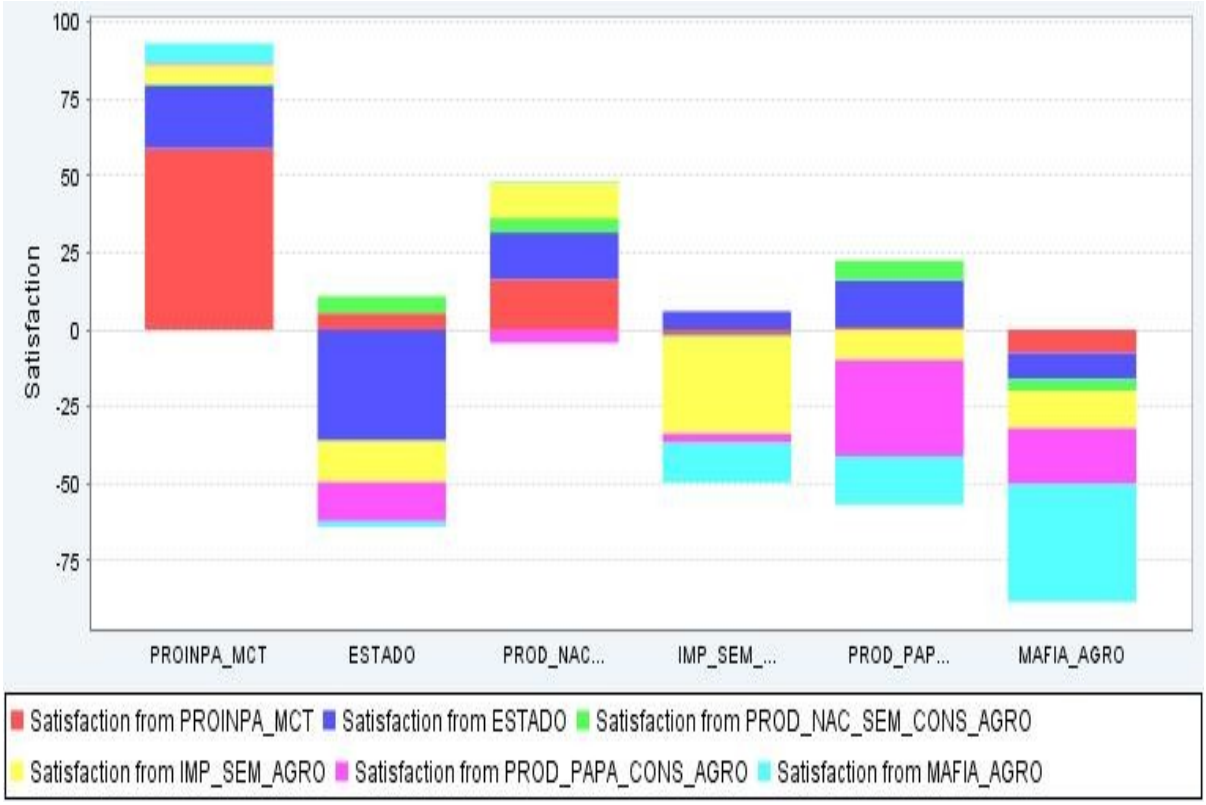


Figure 10: Distribution of satisfaction when the satisfaction of the mafia is minimized.

Table 3: State of the relations when minimizing the satisfaction of the mafia.

Relation	State	Interpretation
SEM_PREB_IND_Y_VAR	*10.0*	*PROINPA is producing certified potato seeds at its maximal capacity*
SOPORT_PROD	*10.0*	*There is good support for the production of potato seeds*
SEM_CERT_IND_NAC	*10.0*	*There is good production of basic industrial seeds*
NO_SEM_CERT_IMP_AGRO	*10.0*	*There are not certified imported seeds*
SEM_RECICLADA	*-10.0*	*There are not recycled potato seed. This means that the national production of potatoes is all destined for consumption because of the scarcity of potatoes in the market*
NO_MANIP_MERCADO	*10.0*	*There is not manipulation of the market.*

c) Maximizing the satisfaction of PROINPA_MCT

Once more, as can be seen in Figure 11, what is good for PROINPA is not good for the following four actors: the state, the importers of seeds, the mafia, and the national producers of recycled seeds, especially for the first three. The figure also shows that the national producers of basic seeds have a good level of satisfaction (partly, they share PROINPA's goal).

Table 4 shows the state of the relations. This table indicates that the state is highly collaborative (despite of the fact that this is not good for itself, what makes this scenario lowly probably), there is not importation of potato seeds, and there is very low manipulation of the market.

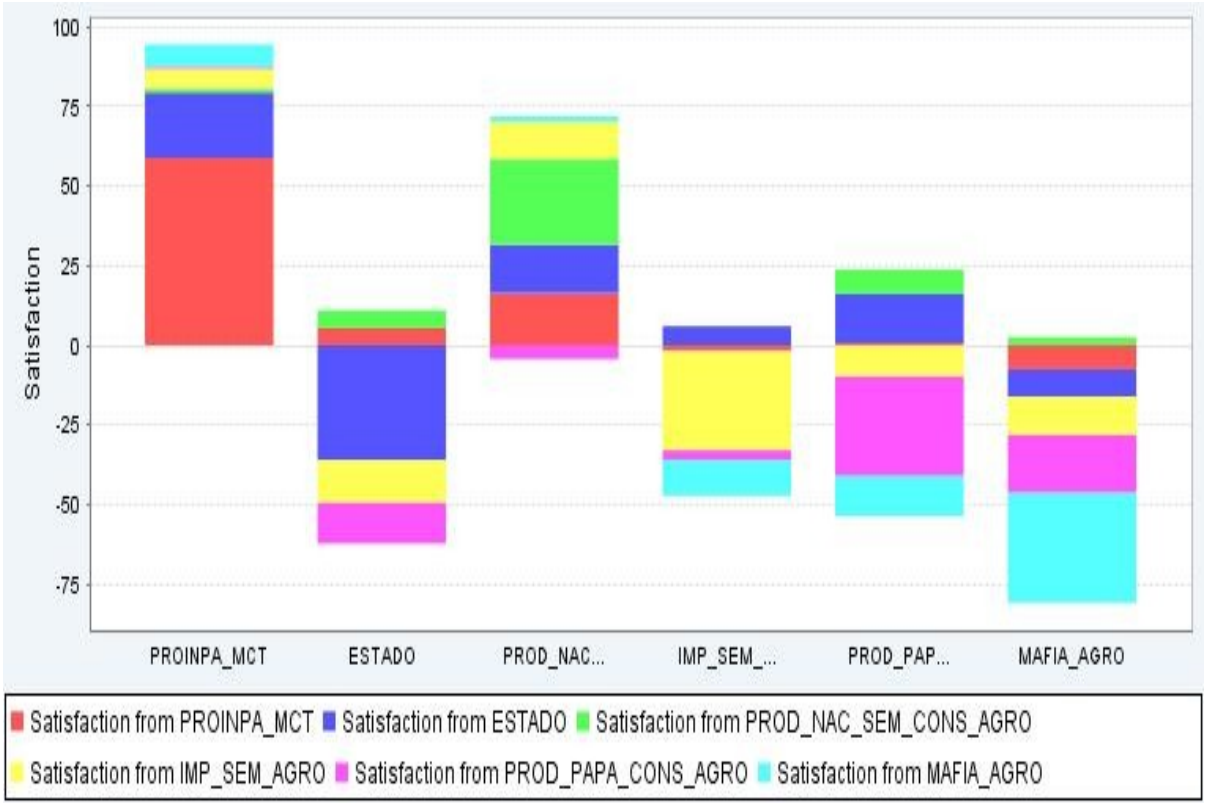


Figure 11: Distribution of satisfaction when the satisfaction of PROIMPA_MCT is maximized.

Table 4: State of the relations when maximizing the satisfaction of the PROINPA_MCT.

Relations	State	Interpretations
SEM_PREB_IND_Y_VAR	***10.0***	*PROINPA is producing certified potato seeds at its maximal capacity*
SOPORT_PROD	***10.0***	*There are good support for the production of potato seeds*
SEM_CERT_IND_NAC	***4.0***	*There is not enough production of basic industrial seeds*
NO_SEM_CERT_IMP_AGRO	***10.0***	*There are not certified imported seeds*
SEM_RECICLADA	***-10.0***	*There are not recycled potato seeds. This means that the*

		national production of potatoes is all destined for consumption because of the scarcity of potatoes in the market
NO_MANIP_MERCADO	***7.0***	*There is very low manipulation of the market.*

2.2 Sensitivity analysis: varying the state's satisfaction from 0 to 1.

In order to investigate better the role of the state (which seems to be an ally of actors whose goal is different, and even contrary, to that of promoting national production of potato seeds), and the consequences of its activity, we are going to explore scenarios varying the identification of the state. The identification of all actors above, in the previously described experiments, is 0. Thus we are going to vary the satisfaction of the state from 0 to 1.

Figures 12-14 illustrates the results of 20 experiments, with 20 runs each one. Figure 12 indicates that, in general, the average number of steps necessary to reach the regulated state decreases as the identification of the state increases, except for the case of unconditional collaboration (identification 1).

In accordance to Figure 13, as the identification of the state is increased, we have: the satisfaction of the state decreases significantly; the satisfaction of PROINPA_MCT, national producers of basic seeds, and producers of recycled seeds increases in a good proportion; the satisfaction of the mafia decreases; and the satisfaction of importers of seeds increases initially (when the identification of the state is varied from 0 to about 0.4) and then remains stable.

From there once more we confirm the contrary attitude of the state in relation to increasing its collaboration (its satisfaction decreases as its collaboration increases); as well as the ambiguous effect of such collaboration, since as the state's collaboration (identification) increases, the benefits not only to the different producers of potato seeds but also to the importers of potato seeds (negative actors of the system) increases, while the mafia is only slightly disfavored (it maintain its benefits).

Figure 14 shows that the influence of the actors remain constant, except that of the state, which initially increases and then decreases slightly (from a bit before the middle part of the curve to the right side), and finally reduces significantly (at the last point of the curve, when identification is 1). Perhaps the fact that the other actors do not increase their collaboration prevents the increase of the influence of the state in this part of the curve (when identification is at about 0.4-1).

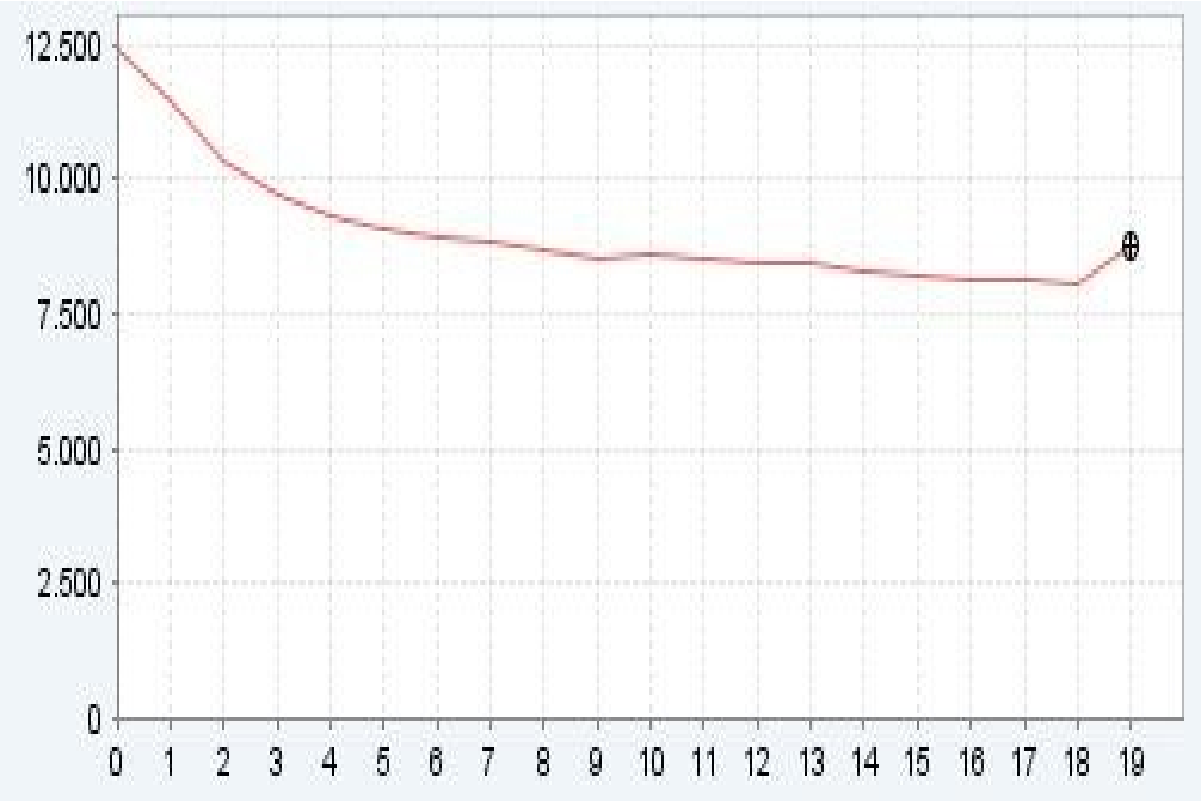


Figura 12: Numero de pasos para el estado regulado.

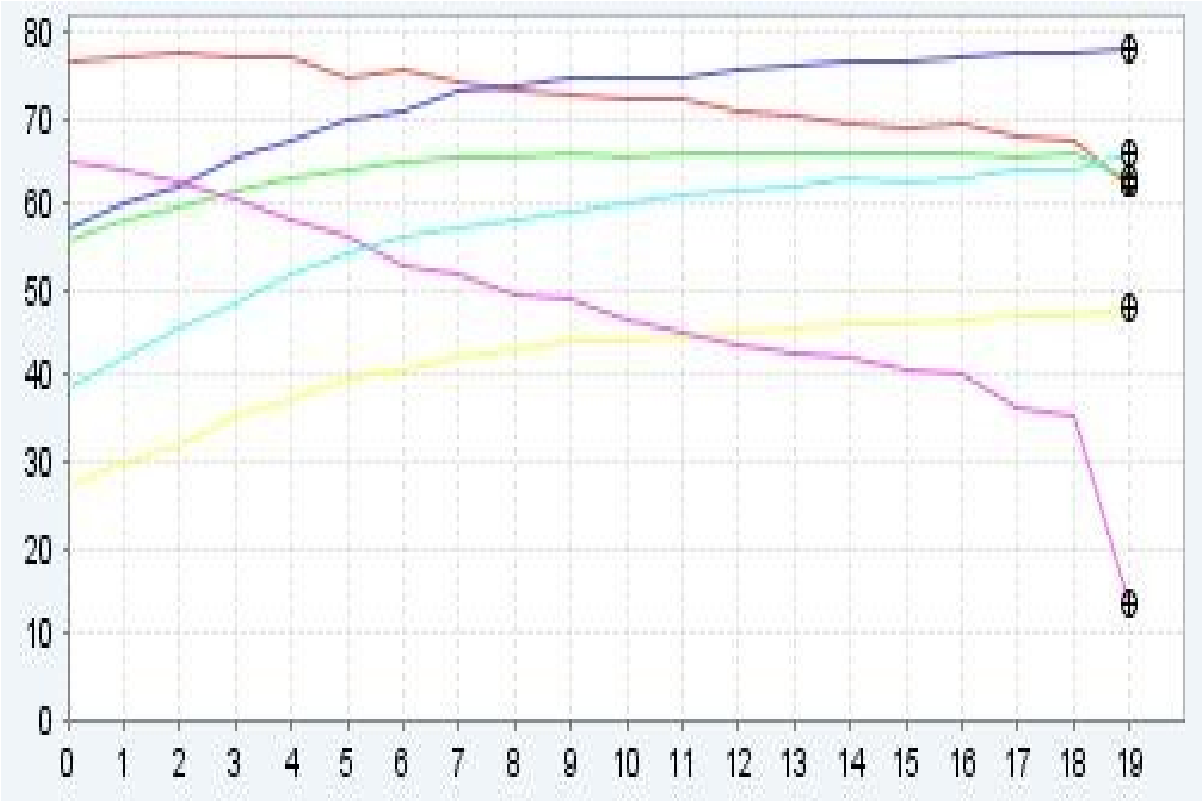


Figura 3: Satisfaction of the actors when the identification of ESTADO is increased from 0 to 1.

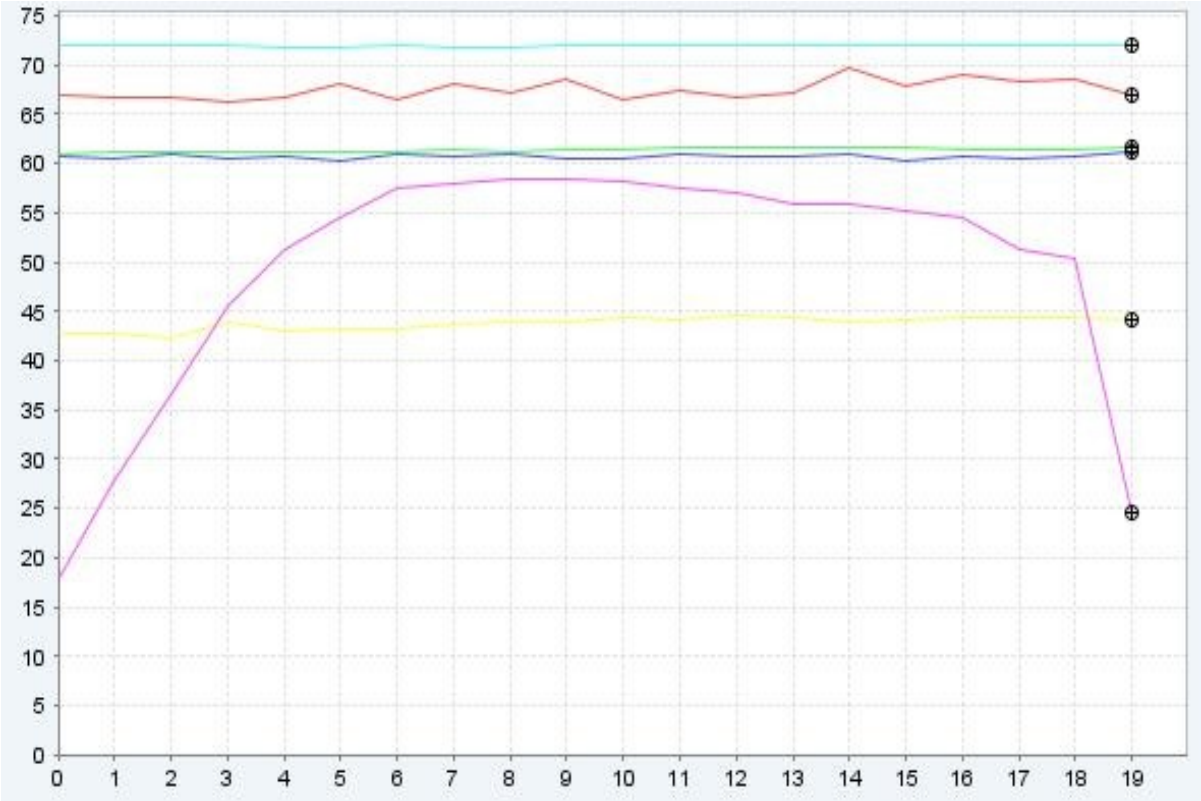


Figure 4: Influence of the actors when the identification of ESTADO is increased from 0 to 1.

3. Discussion regarding the hypothesis

We must have clear the differences between two games:

a) the ideal game, where the attitudes of the actors of the local system of production of potato seeds (especially of the state) is in favor of increasing the national production of potato seeds, i.e., this is a sane system in the sense that mafias such as that manipulating the market, or the one importing seeds that contaminate the lands, have not place (there importers of good quality and healthy (with good phytosanitary conditions) potato seeds are welcomed);

b) the other is the actual game, where the state and other actors are not in favor of the national production of potato seeds, or are ambiguous in respect to this aim.

This first distinction allows us to make a second important distinction, in relation to the effect of increasing the identification of an actor in the SOCLAB system:

In general, the effect of increasing the identification of an actor in SOCLAB in the simulated SOC, for instance that of the state, does not implies an increase of the *attitude* of thise actor in favor of strengthening the national system of production of potato seeds. In such a case, the state would become more active, increasing its collaborating with all the other actors, i.e., with the actual SOA and its goal whatever it is. In case of increasing the identification of the state, it would have a higher collaborating with PROINPA (an actor compromised with a sane system or SOC of production of potato seeds), but also it would have a higher collaboration with the mafia and the importers of potato seeds (actors who are not compromised with a sane SOC).

In order to have a state with a different attitude (i.e., compromised with a sane SOC of production of potato seeds), it would be necessary to widely change the design (structure) of the actor, including changes in his stakes and effect functions (the actor must have an interest similar to that of PROINPA_MCT). This would imply a state very different from the actual one, it would be a *re-educated* state.

Now we can discuss the hypothesis.

Hypothesis 1: If the agro industrial mafia were des-activated/neutralized, or if its action changed to that of a "normal" trader in a market, then availability of imported potato seeds will appreciably decrease.

In the section "results from the simulation", Figure 6-7, 9 and 10, we can see that there is an important effect of the action of the mafia over the importers of potato seeds. Figure 3 shows the effect function of the relation controlled by the mafia over the importers of potato seeds. There we can realize that the active action of the mafia (i.e., its manipulation of the market) favors the importers of potato seeds; while their inactivity or lack of success (no manipulation of the market) disfavors the importers of potato seeds. We can see that such a relation is monotonic. This allows us to confirm the hypothesis 1.

Lack of activity of the mafia means that the market is not influenced and biased (it becomes a normal market where what is brought is sold in accordance to the interest of the sellers, who get a low benefit, and the buyers), in which case the actor mafia can be eliminated from the simulation model. Notice that this is a structural difference between the actual system and an ideal one, where the actors would be compromised with a sane (sane in the sense defined above) SOC.

Hypothesis 2: A higher identification of the ESTADO with the actual system of production and distribution of potato seeds (that one modeled) would notably favor the increase of national production of potato seeds.

When the identification of the ESTADO (state) is increased (see the sensitivity analysis above), we can see that the satisfaction of PROINPA_MCT (actor with the highest interest in promoting the production of national potato seeds) is improved. However, the increase in the collaboration of the state (generated by its increased identification) also favor other actors, who are contrary to the goal of having a sane market, such as the mafia and the importers of potato seeds. Even more, the state's satisfaction decreases. Thus the goal of PROINPA is only partly supported by a highly collaborative state (with the attitude it has at present). Consequently, this scenario is little probable in the present SOC. Despite of this, the hypothesis is confirmed as the satisfaction of PROINPA, and the other actors producing potato seeds, is improved. Perhaps, this is the best that can be achieve with the actual SOC.

Hypothesis 3: An ESTADO reeducated and more identified with the production of national potato seeds (PROINPA_MCT's goal), would significantly favor the increase of national production of potato seeds.

From the discussion of Hypothesis 3, we realize that an increase in the activity of the state does not improves a sane system significantly, thus a state structurally different, re-educated is required to notably transform the actual local system of production of potato seeds towards a sane system. In this case, the state must control or combat actors such as the mafia and the importers of potato seeds, rather than being its ally.

Remarks:

From the present discussion we can see that the actual game is structurally different from the ideal model where the actors are compromised with a local system of production of potato seeds in a good state. For instance, in the ideal model the mafia would not exist, the state will have a different attitude from that in the actual game (in the actual game the state has no control over the importers of potato seeds, who play a perverse game, where the sate becomes the ally of this actor in a certain sense), and the importers of potato seeds would be controlled by the state, so that they would bring in to the country only good quality and healthy potato seeds. Thus, it seems that ***we can not obtain the equivalent to the actual game represented in SOCLAB by changing only the identification of the actors in the ideal game (where for instance, the mafias do not exist, and the state has a different attitude), so that they become distanced from the ideal goal****.*