

Local Innovation and Production Systems (LIPS): Territorial and Social Issues and Challenges in Brazil and Amazon


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ipea 47 anos
Por um Brasil desenvolvido



In a country like Brazil, characterized by:

- Deep social inequality
- High structural diversity
- Diverse natural endowment and, hence,
- Strong regional and territorial disparities

Policies, that are uniform at national or even at regional and sub-regional level have great failure probability.

In Amazon, for exemple:

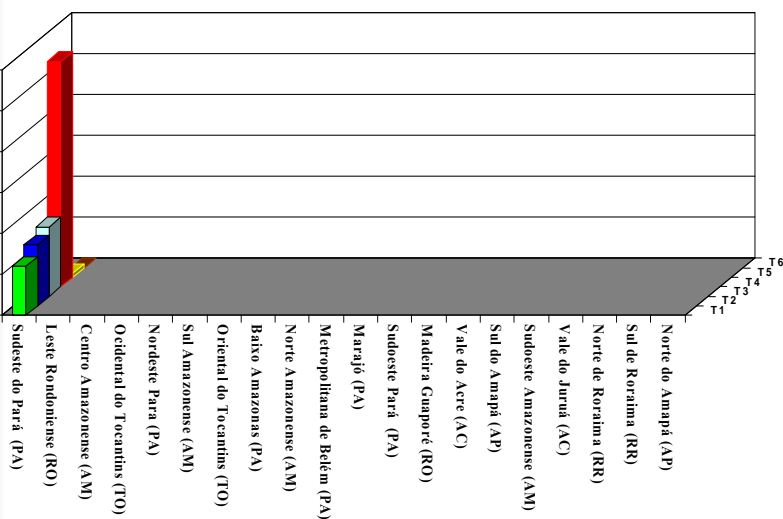
The rural dimension is based on two production forms and six very different technological trajectories, with important attributes for the development:

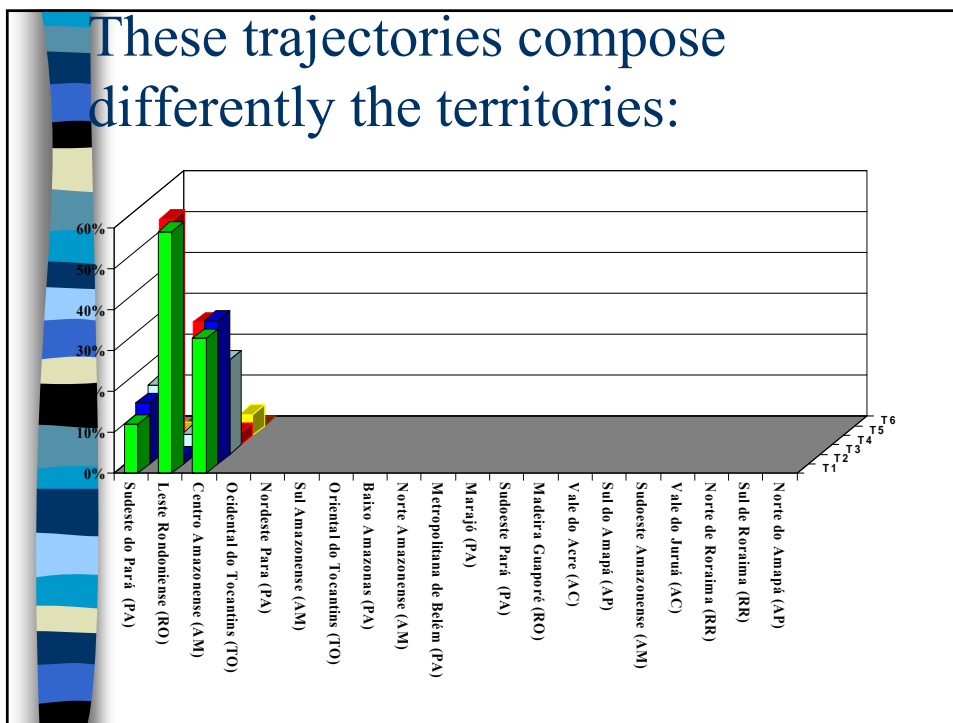
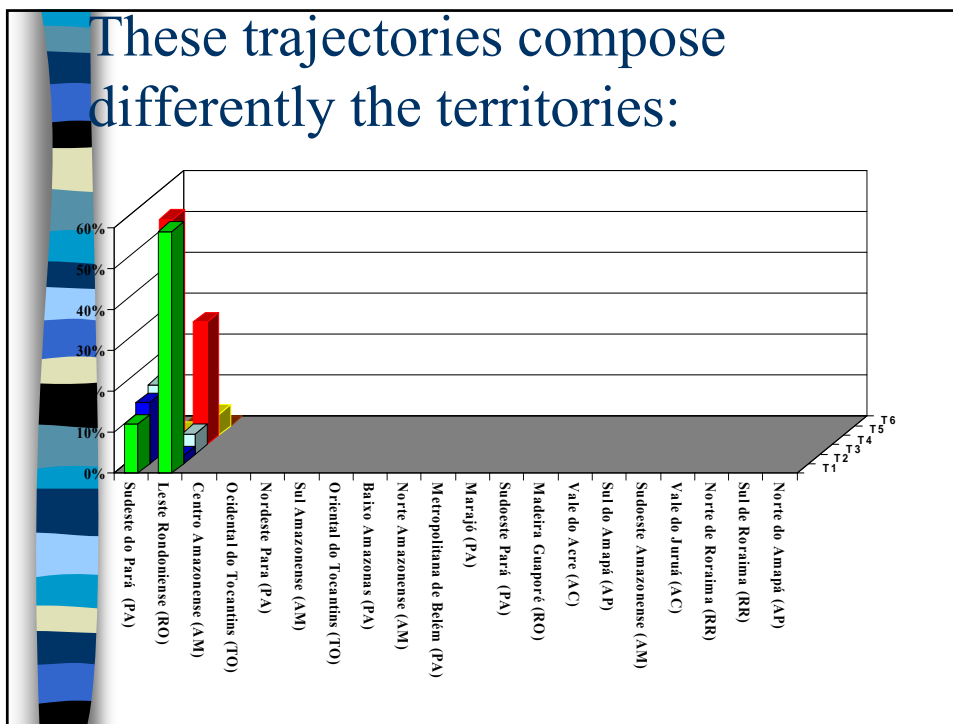
Trajetórias/ Características	Tecnological Trajectories						Absolute Values in 1995
	Peasants production systems converging to :			No-Paesant production systems converging to :			
	Dairy and permanent crops (T1)	Agro- Forestry (T2)	Cattle Raising (T3)	Cattle Raising (T4)	Plantation (T5)	Reforestr y (T6)	
Production Unit	171.292	130.593	109.405	27.831	4.444	3	443.568
Average Size (há)	54,47	23,04	62,23	1.196,00	472,62	413.681,7	125,74
GDP (R\$1.000.000)	27%	21%	19%	25%	6%	2%	100%
Occupied Personal	38,2%	26,6%	22,7%	10,5%	1,7%	0,2%	100%
Total of Land Owned	16,7%	5,4%	12,2%	59,7%	3,8%	2,2%	100%
Total of waste Land	10,2%	3,5%	14,3%	70,4%	1,6%	0,0%	100%
Institutional Density Index Institucional - IDR ¹	0,73	0,38	0,67	1,63	2,67	0,83	
Net CO2 emission	11,8%	2,6%	12,5%	70,5%	2,6%	0,0%	100%
Increase in total net yealding - 1995 - 2006	2,5% a.a.	7,9% a.a.	7,8% a.a.	8,4% a.a.	7,2% a.a.	-11,0% a.a.	6,4% a.a.
Increase in total GDP - 1995 - 2006	5% a.a	12% a.a.	7,0% a.a.	5,1% a.a.	2,5% a.a.	-2,9%	5%
Appropriation of new land	13%	8%	7%	64%	5%	2%	100%

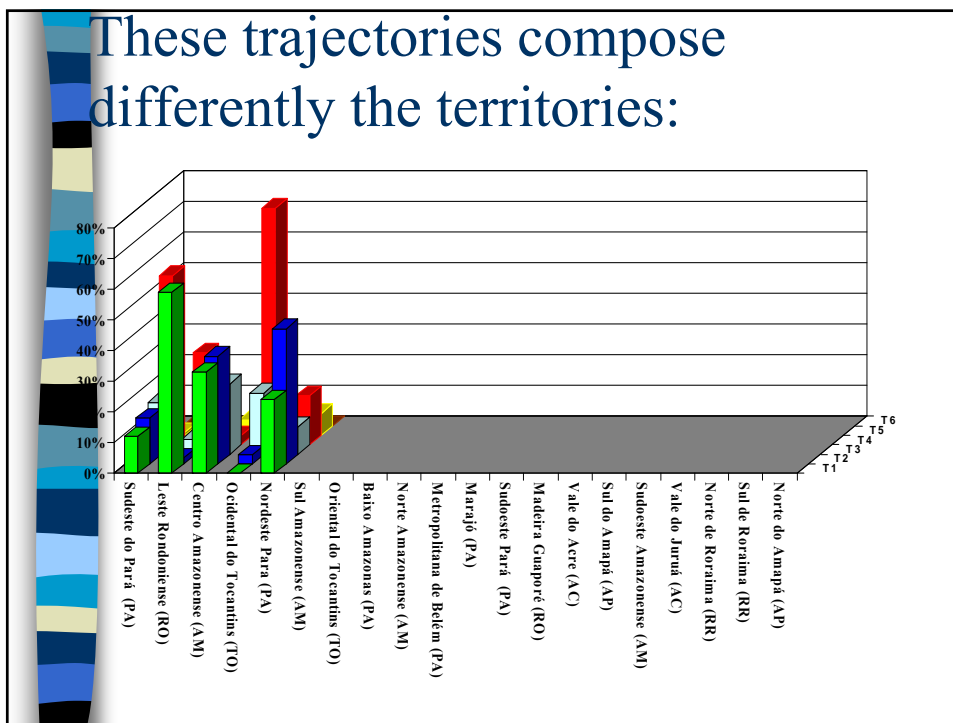
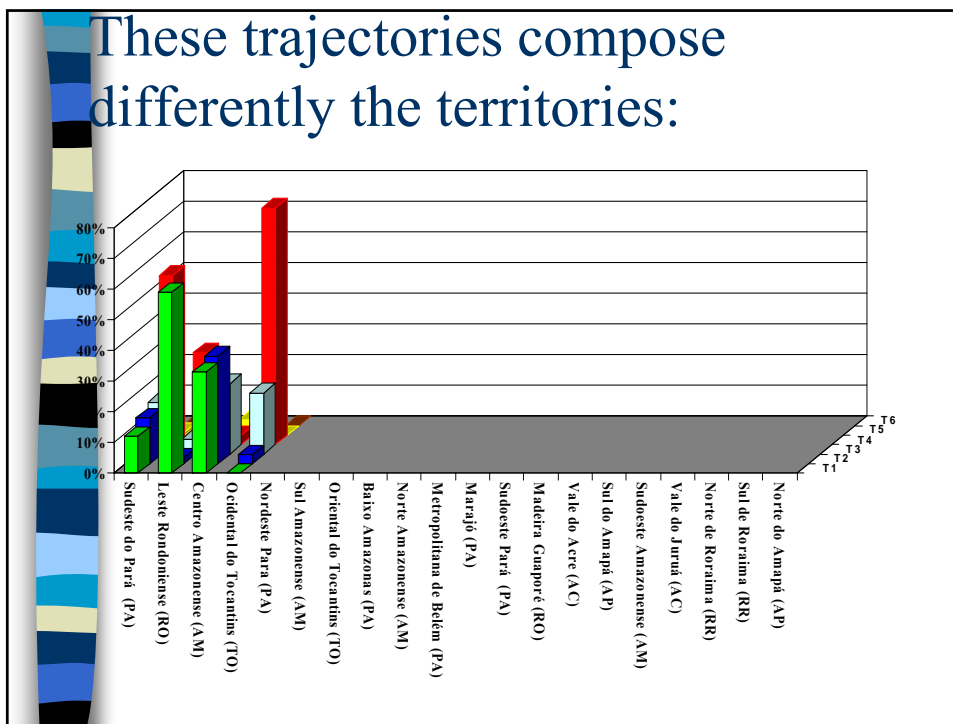
Technological trajectory:

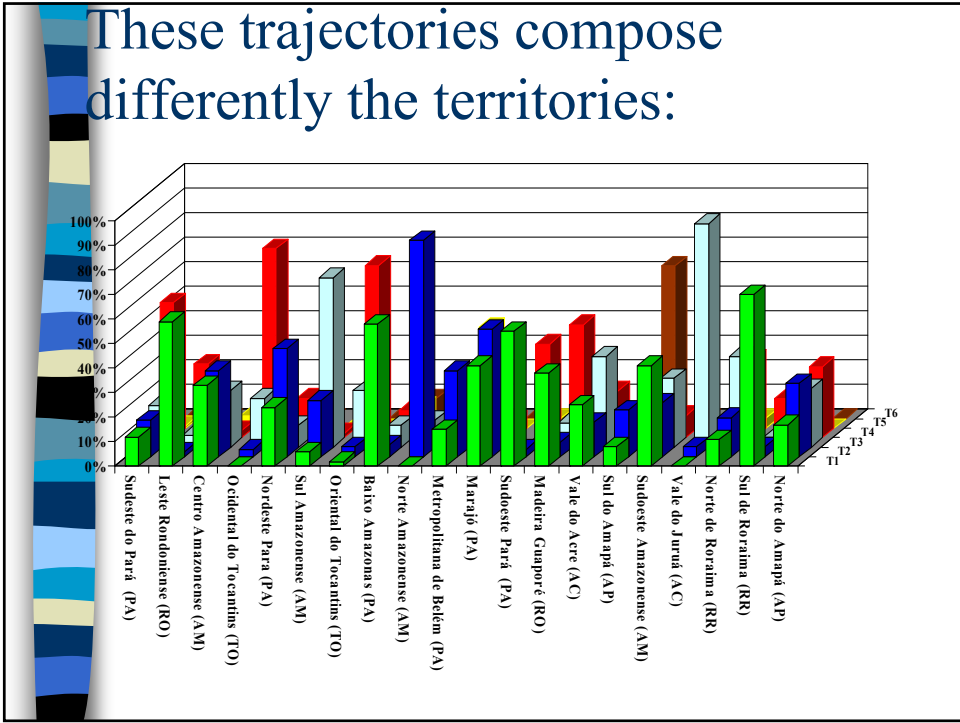
A socially determined pattern of technological solutions to cover specific necessity of the social division of labor in its evolving reproduction.

These trajectories compose differently the territories:









In such a context a policy based on generic agent and abstract production function is a obvious strategic error



In a country like Brazil, where:

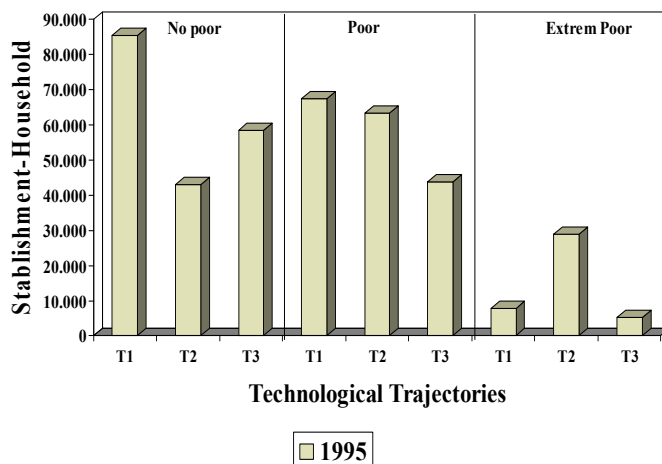
- Social inequality is structurally determined and
- Structural diversity is regionally defined

Regionally designed development policies are required to correct social inequalities.



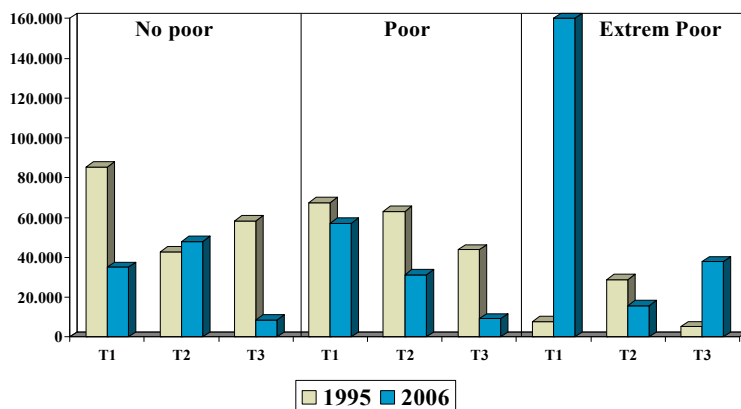
For example:

Poverty is regionally and structurally defined:

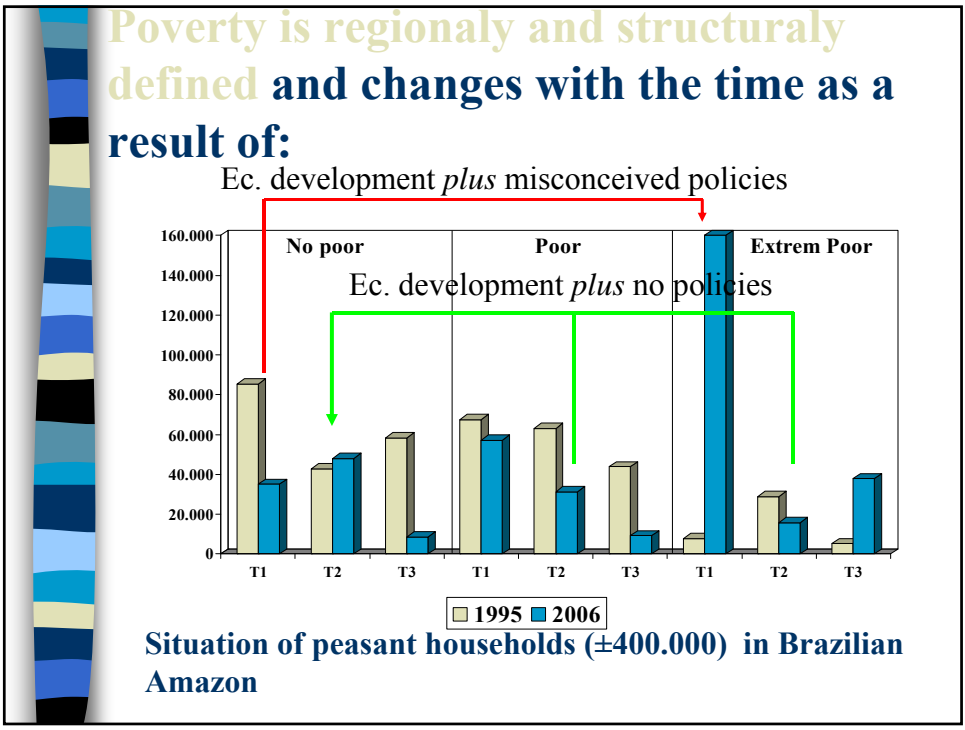
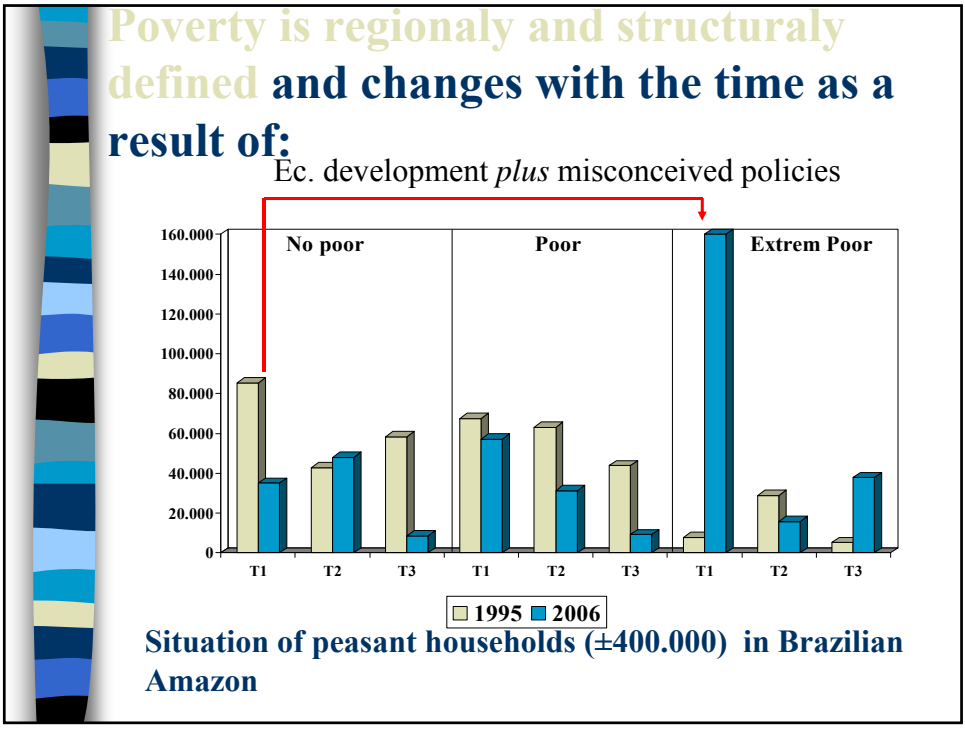



Situation of peasant households (±400.000) in Brazilian Amazon

Poverty is regionally and structurally defined and changes with the time:




Situation of peasant households (±400.000) in Brazilian Amazon






In such a context a social policy must be conceived as development policy




The first challenge we face relates to our capacity to understand adequately these complex realities (knowledge as science - *logo*):

- To have the tools
 - Theoretical,
 - Methodological and
 - Empirical
- to decode, to monitor and to foresee in a comprehensive way the interaction among the
 - natural specificities;
 - structural diversity and
 - territorial dissimilarities which
- differentiate the regions




Understanding the country as a “system of regions”, the second challenge we face relates to the adjusted knowledge to political action (knowledge as *techné* to conceive theory-based development planing). It means:

- To design development policies considering structural and regional diversity – *development is path and territory dependent; the history like the nature do matter.*
- To build the capacity to planing the development in its territorial diversity – *development is policy dependent; strategic and political will do matter.*




At the theoretical-methodological dimension of the knowledge we are:

- Exploring, as far as possible, the perspectives of endogenous and sustainable development theories (ESDT):
- Trying to give consistency to LIPS category
- Establishing its key-position in understanding the development following two paths:
 - one of generalization of it and
 - other of its integration to the evolving body of the ESDT' categories.
- Developing methodologies able to operate our theoretical results and
- To assess the dynamic of LIPS observing its role to development at a local, regional, national level.



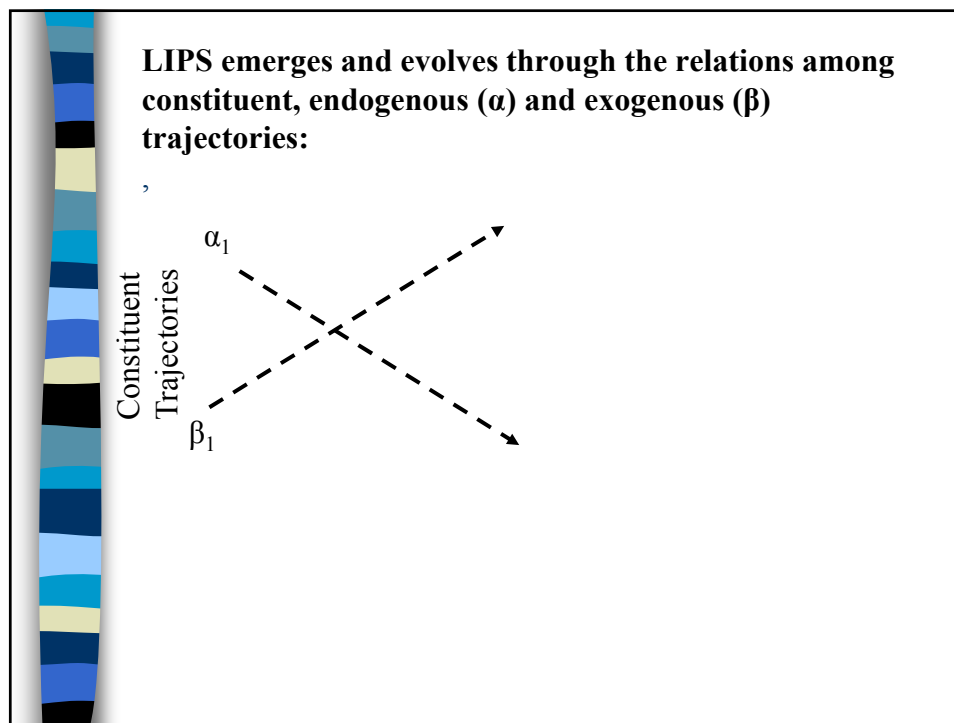
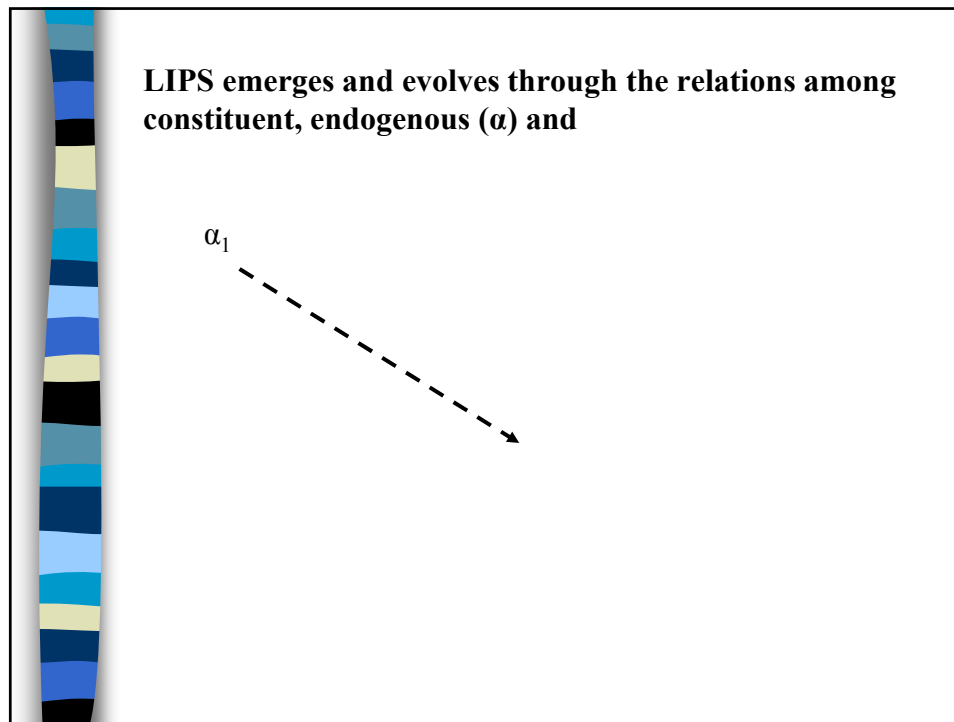
Local Innovation and Production Systems (LIPS) is a key-category in these efforts:

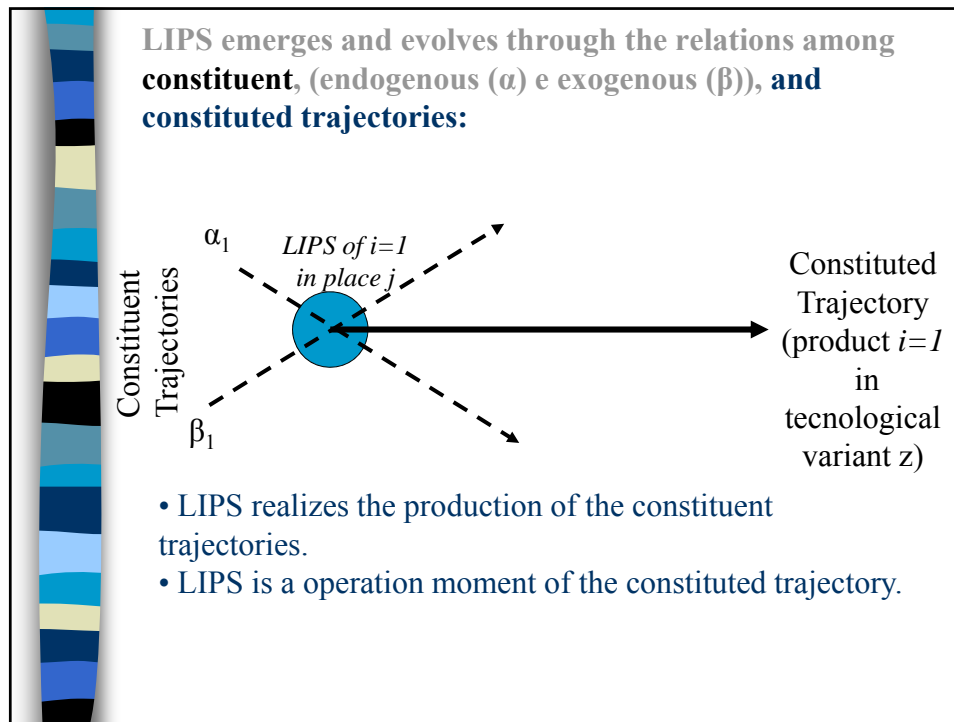
- Firstly, because it is a synthesis-category of the ESDT,
 - a very effective one regarding the before mentioned specificities of countries like Brazil.
- Secondly, because it seems to be very effective also regarding political actions (theory-based planing).



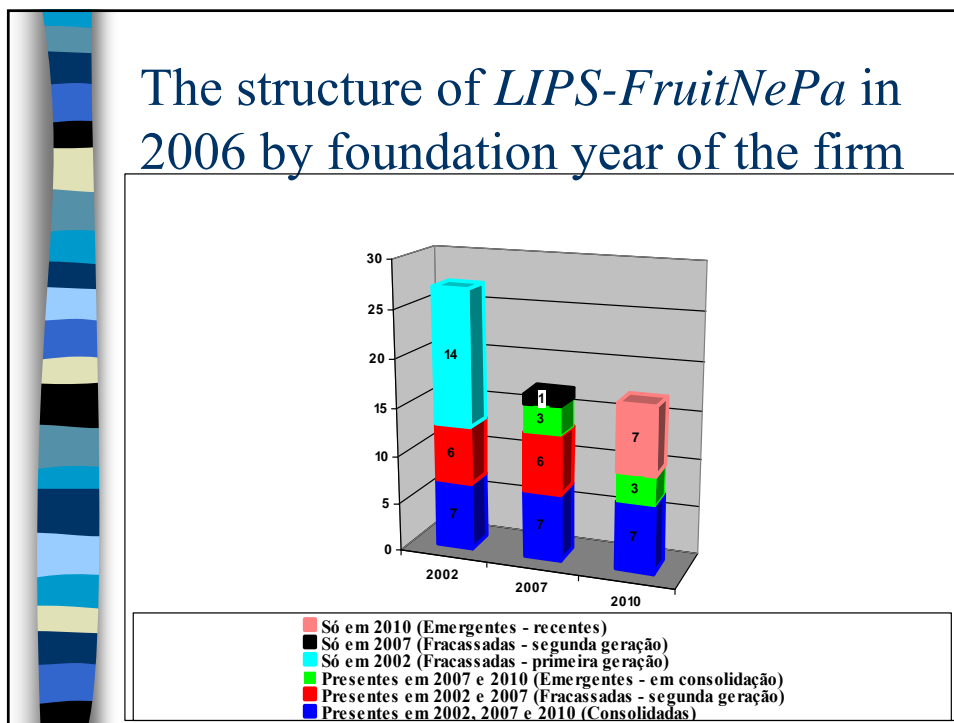
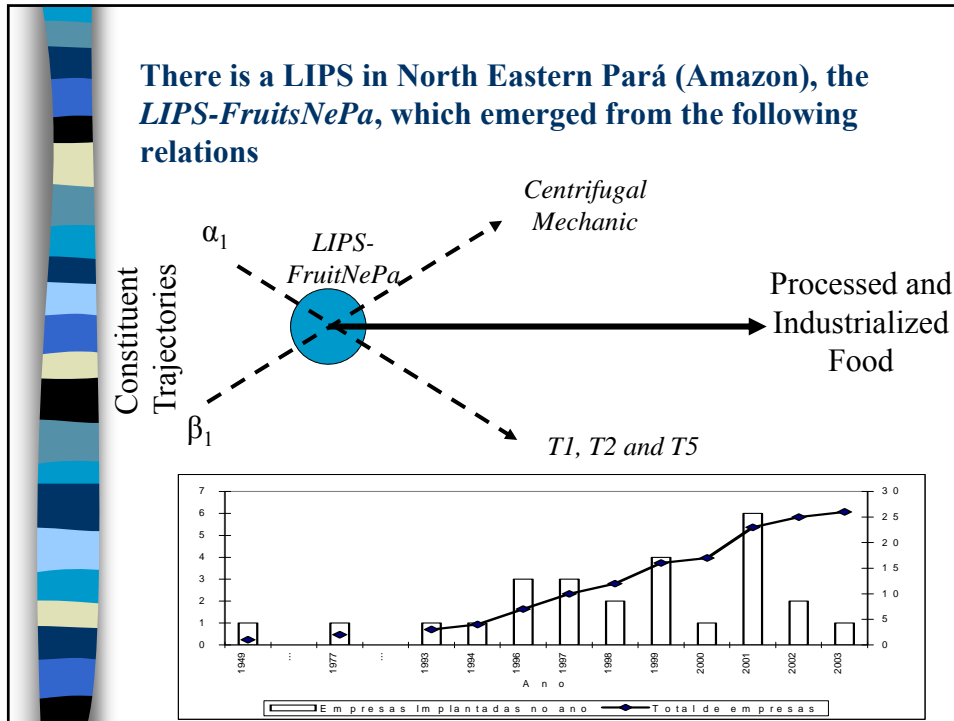
Local Innovation and Production Systems (LIPS), thought as unity of analyze, is a synthesis-category of the ESDT:

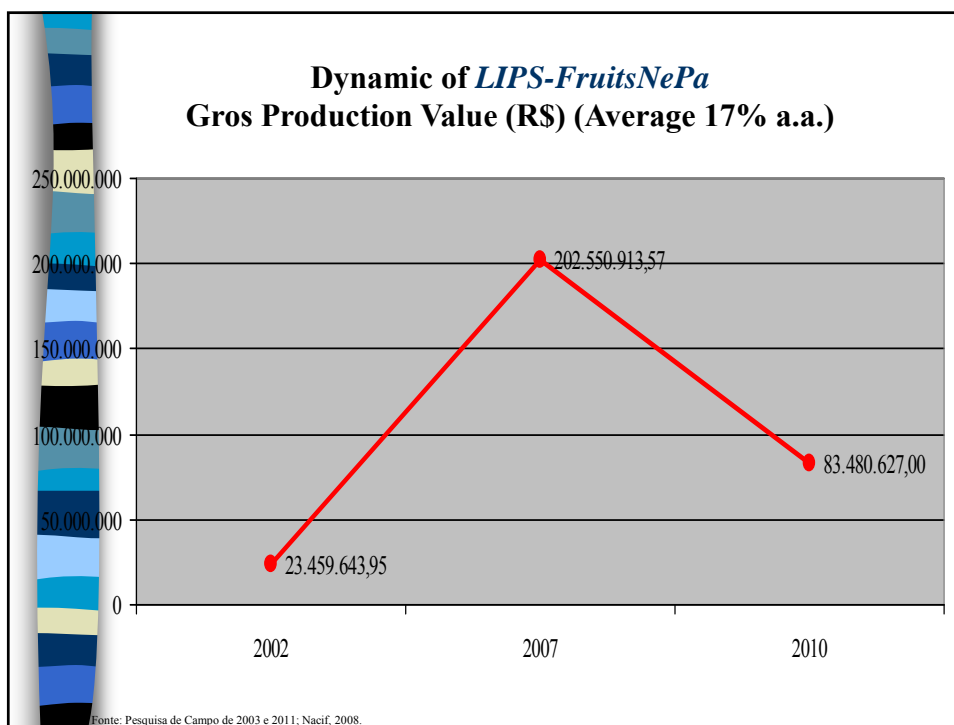
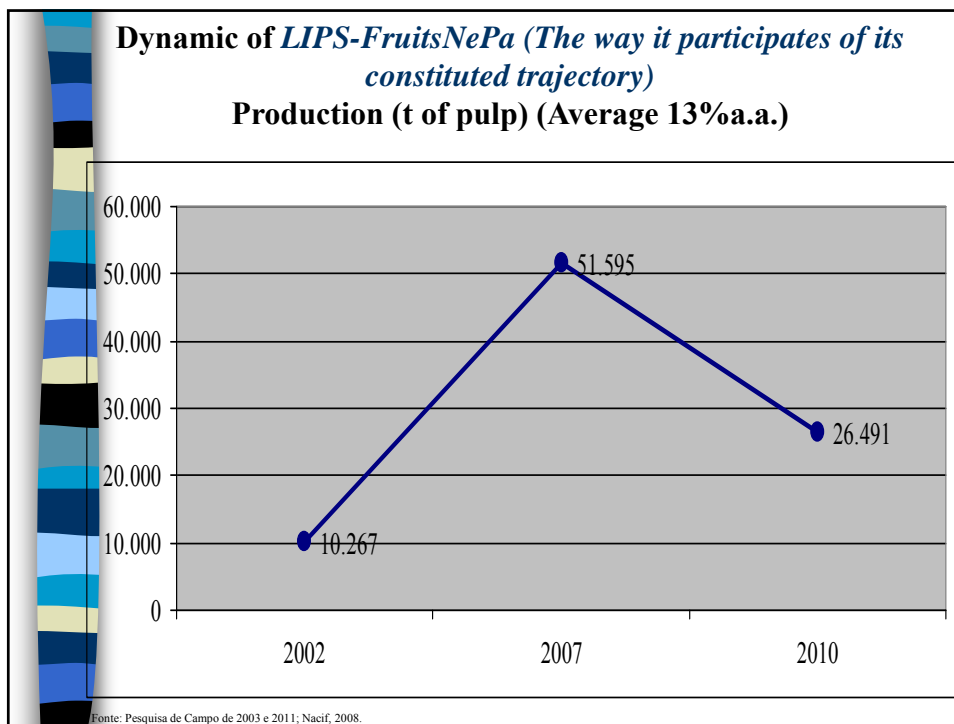
- A set of productions units, which, as open systems evolving in given territory, performing in the social division of labor supplying a certain good or service, mantain (directly or indirectly) systemic relations among them accessing natural, (natural capital), human (human capital) na institutional resources (social capital), either tangible (infrastructure, physical capital) or intangible ones (tacit, embodied in the culture, and laboratorial knowledge).



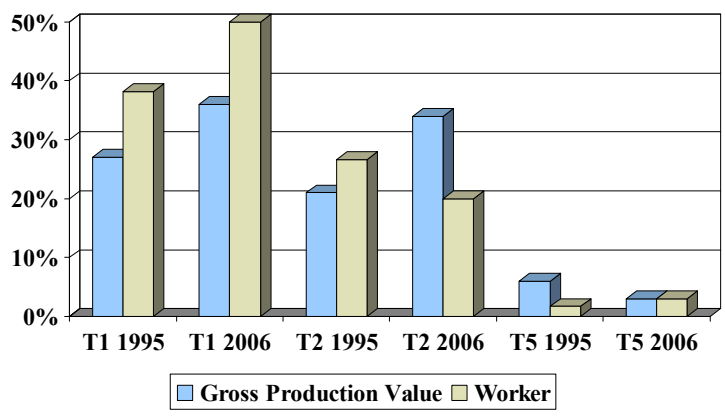


For exemple:

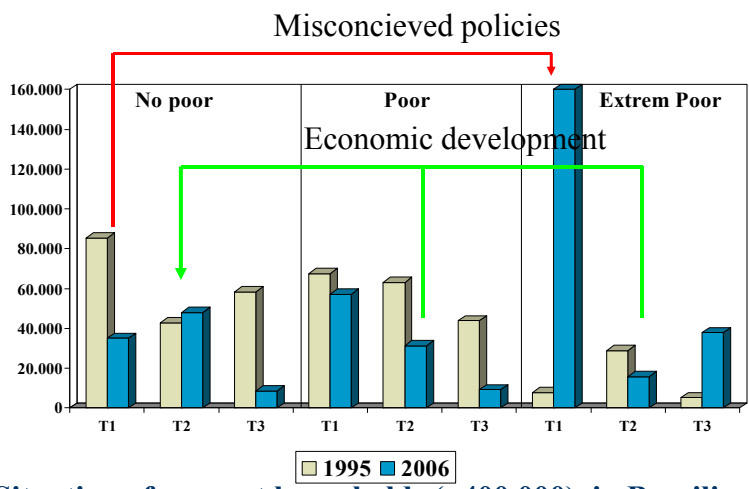




Dynamic of its constituent trajectories (1995-2006)



Related to structurally determined rural poverty:



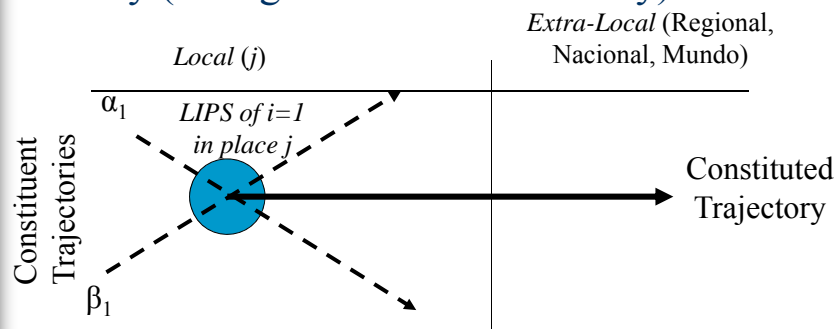
Situation of peasant households (±400.000) in Brazilian Amazon

So, what is going on about the *LIPS-FruitsNePa* has very much to do with:

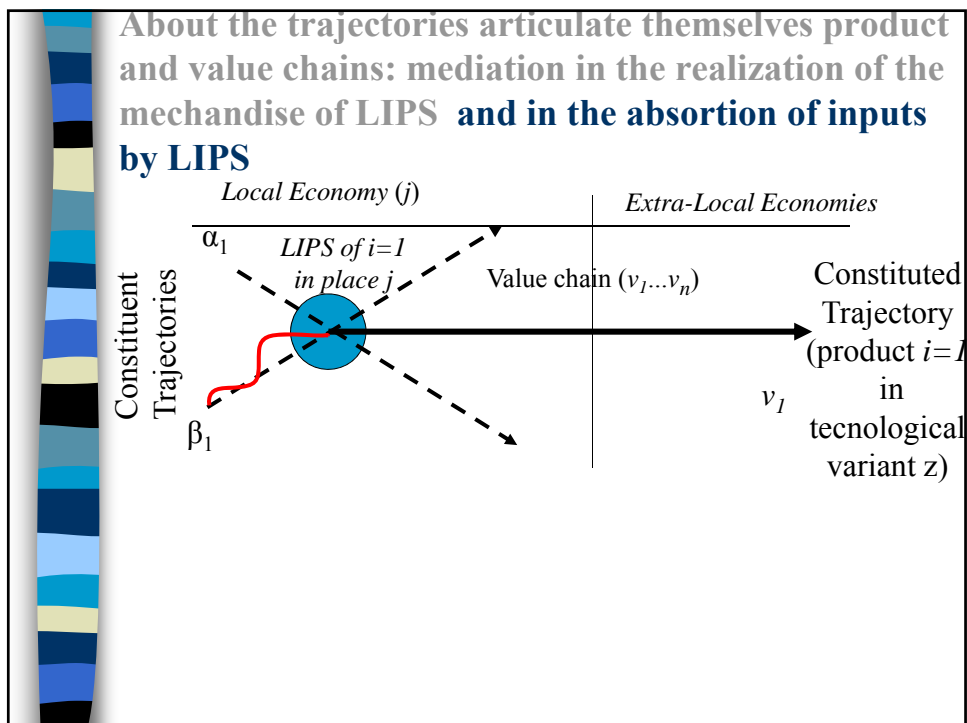
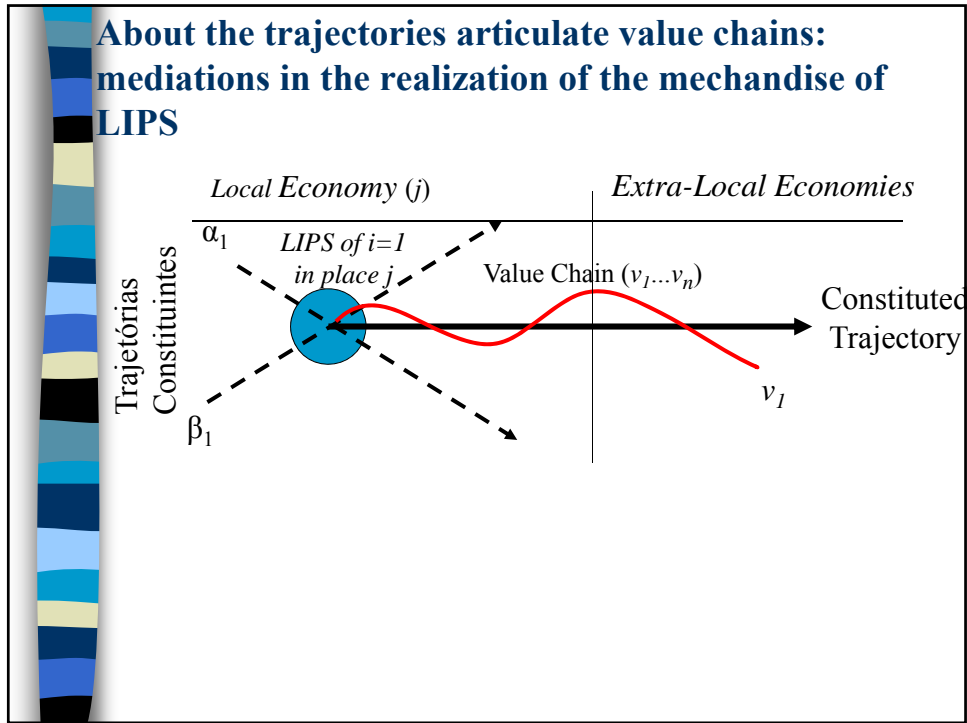
- Rural poverty reduction and
- Environmentally sustainable development

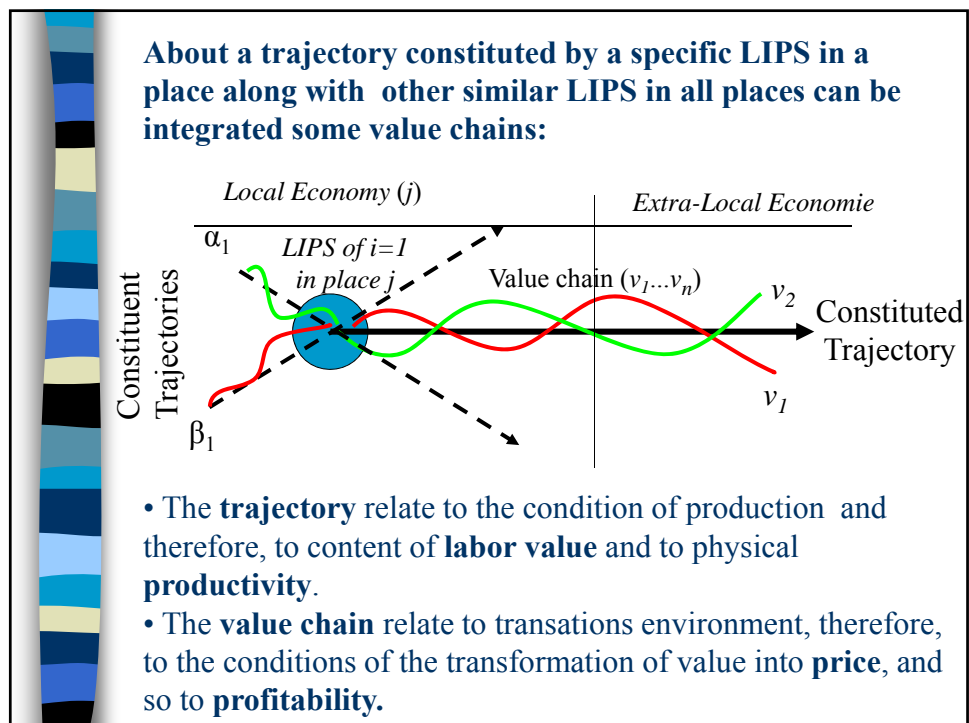
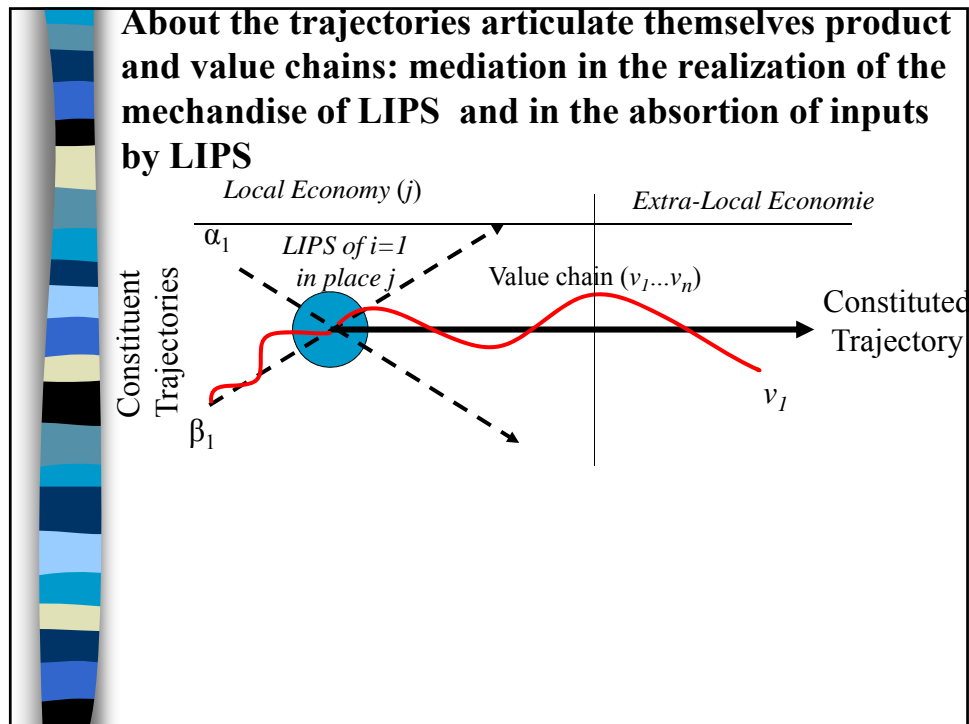
If there is a crisis, it must be assessed, so that solutions could be addressed. How to do that?

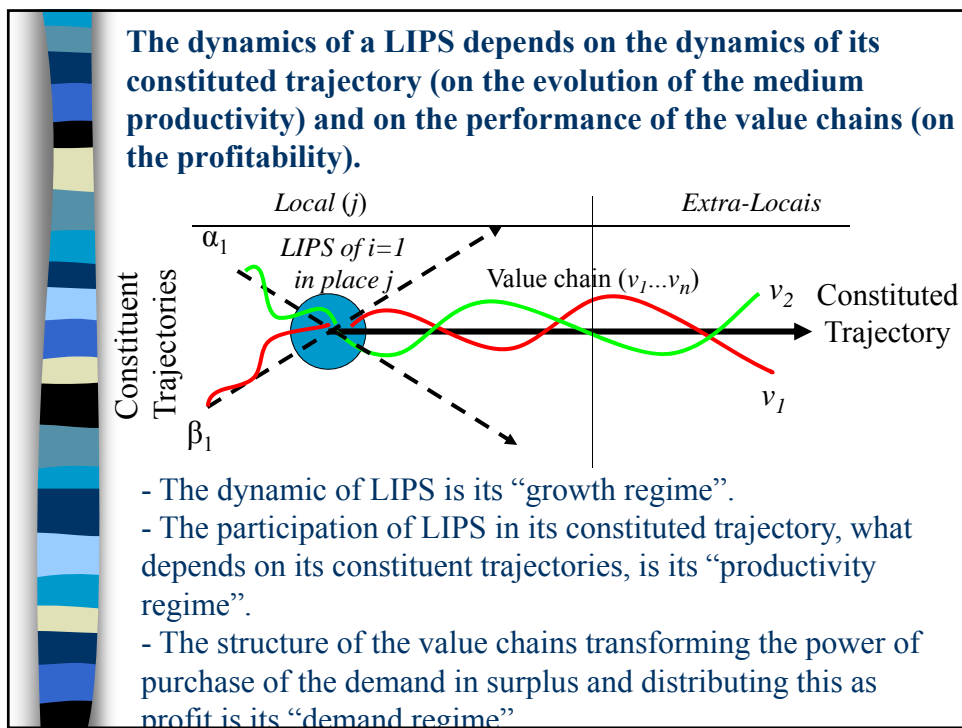
LIPS is an emergency conformed as local reality (emerges and evolves locally).



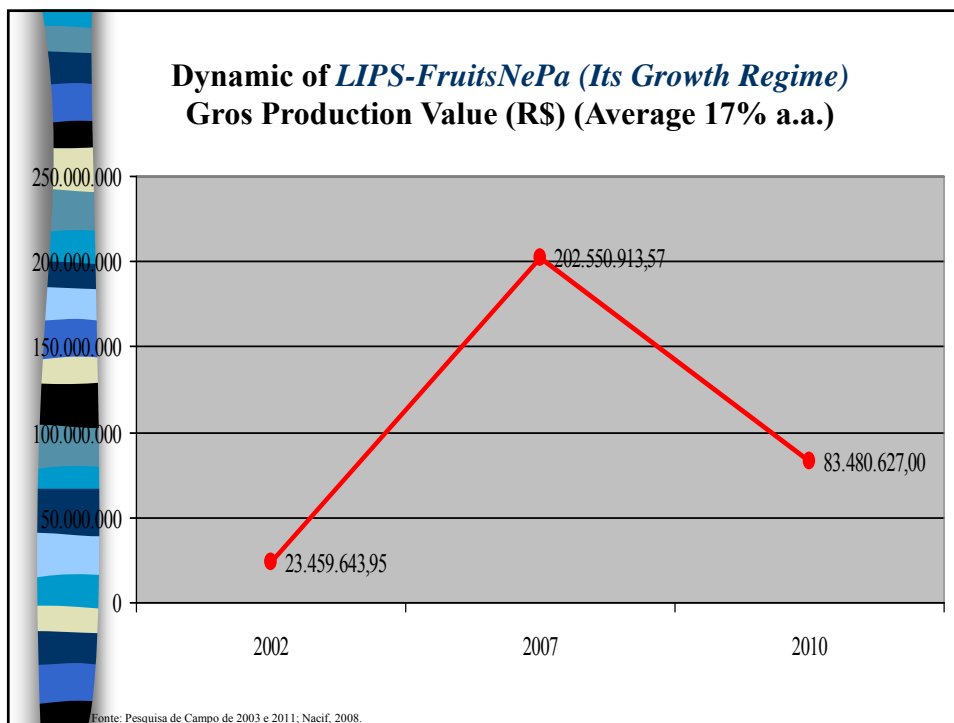
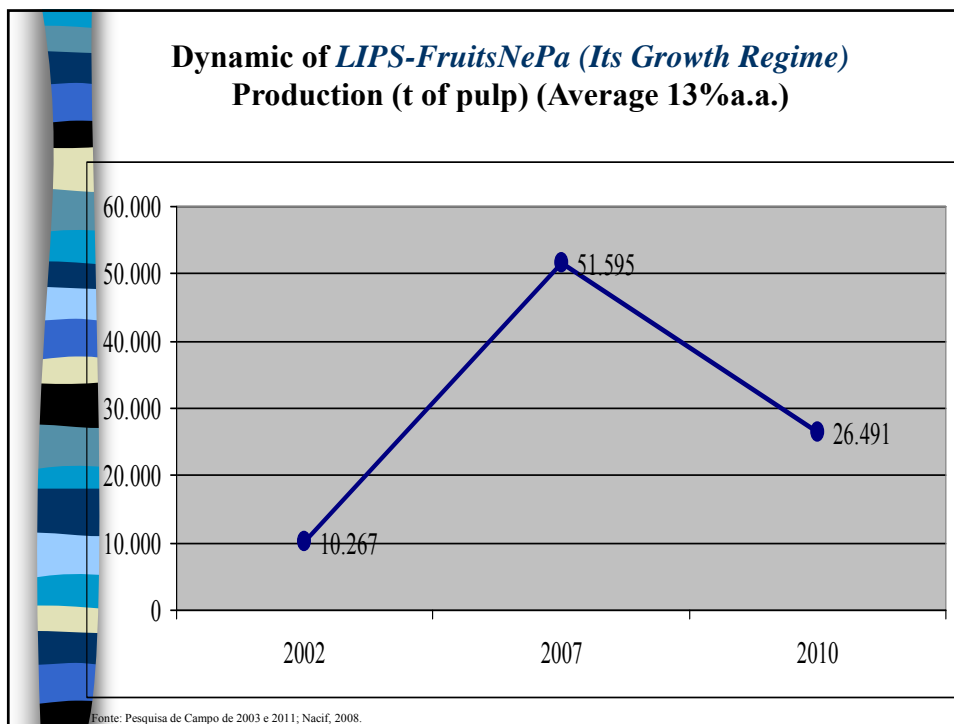
At the same time LIPS is part of a social division of labor organized nationally and globally.

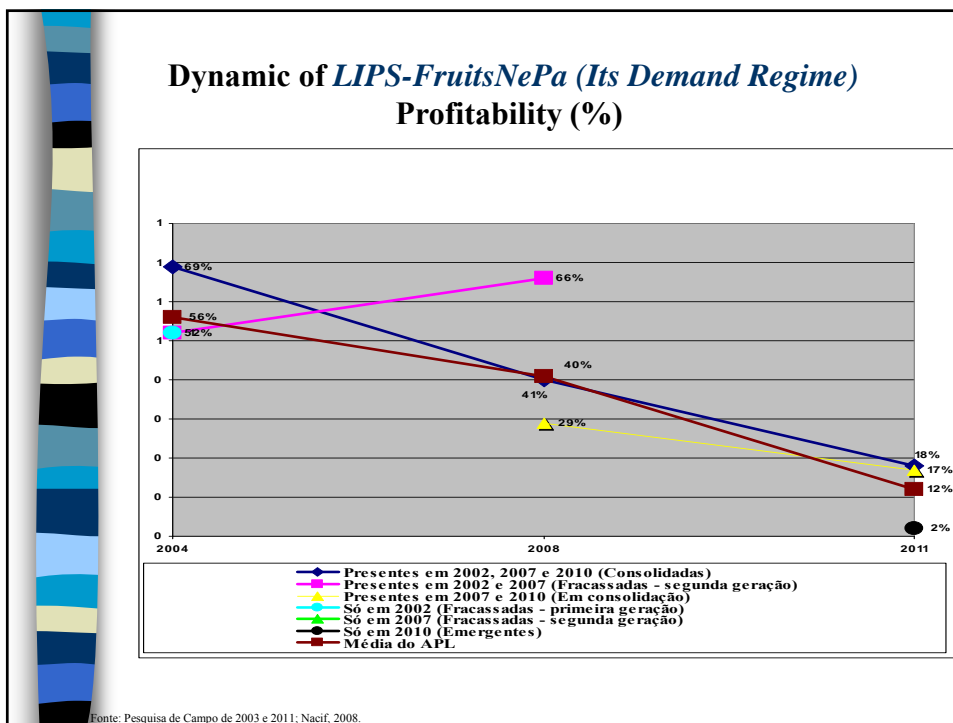
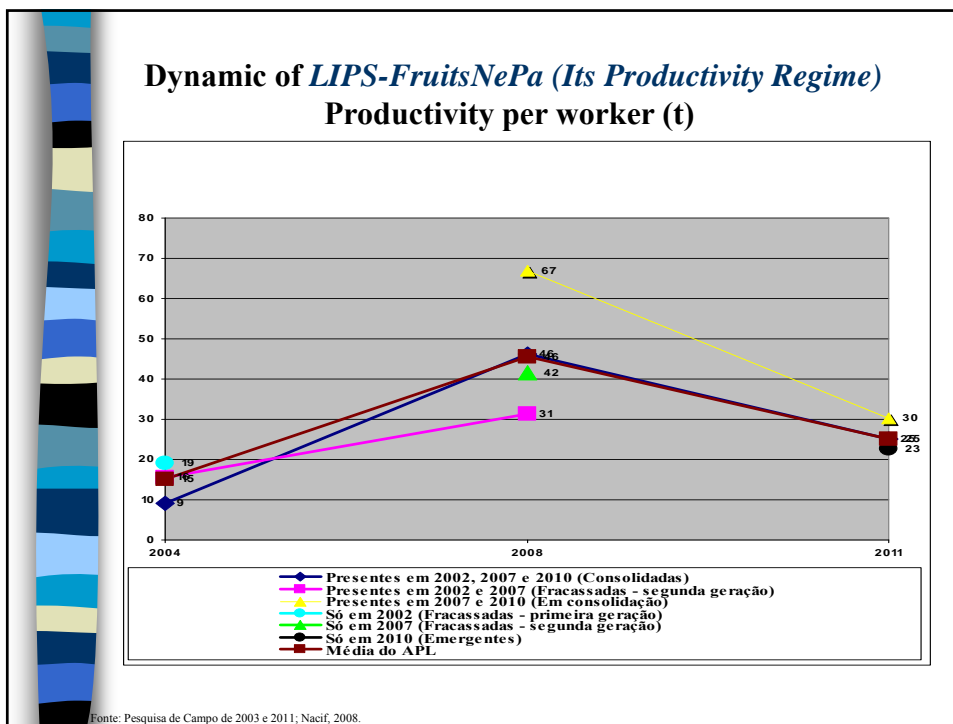




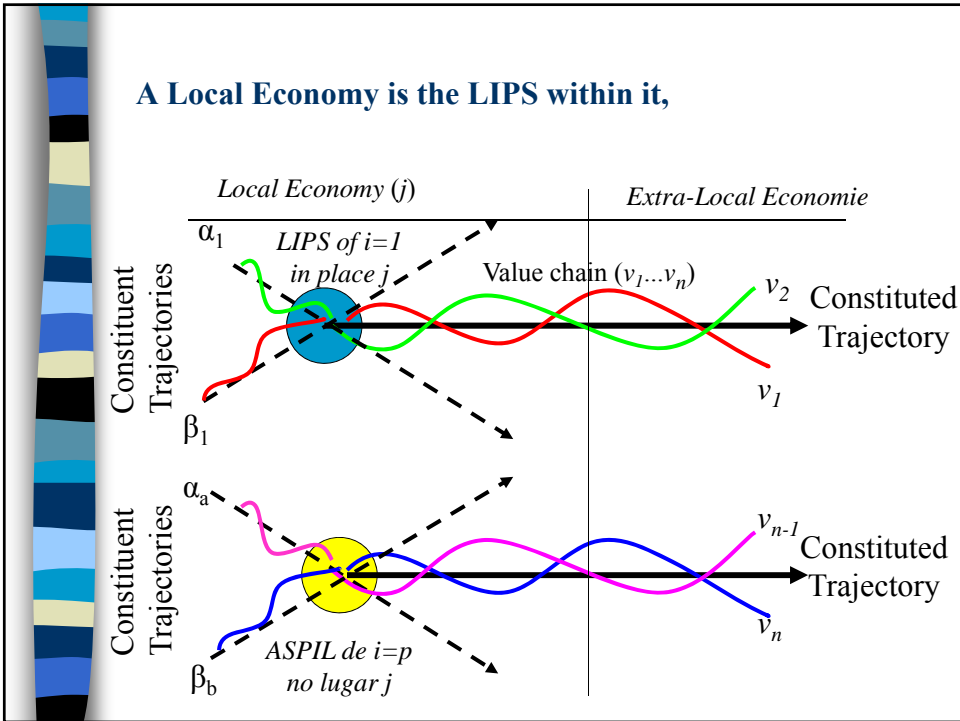


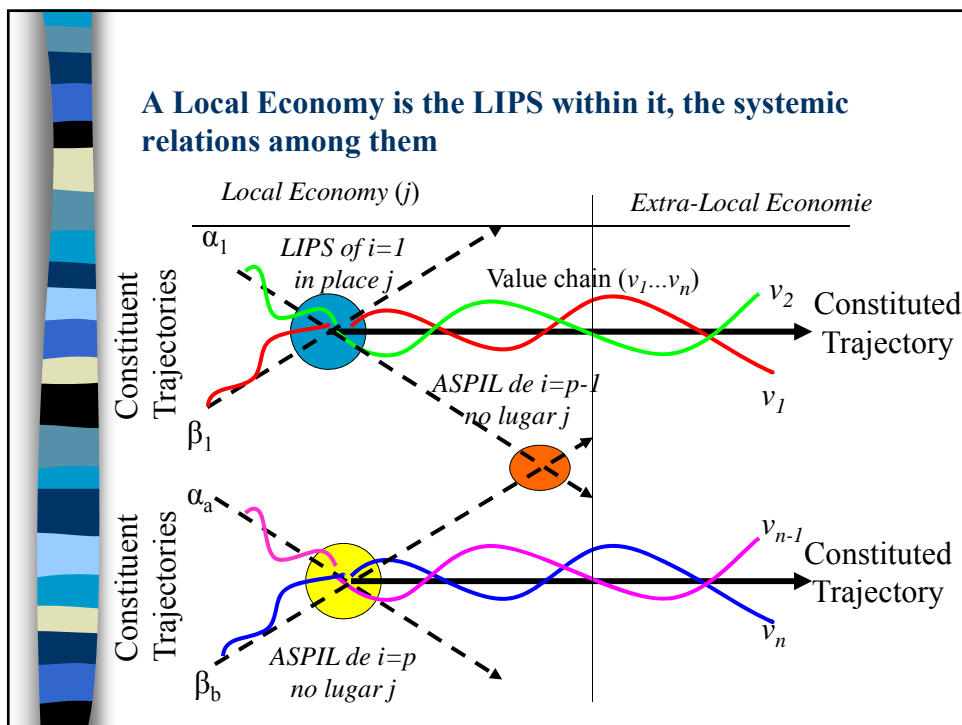
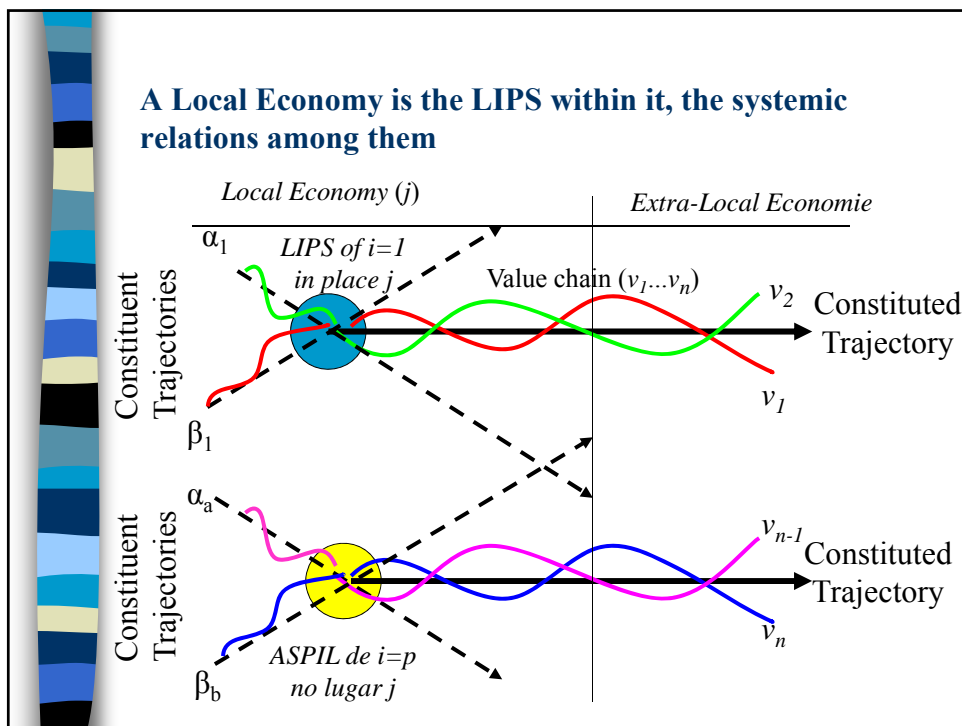
For exemple:

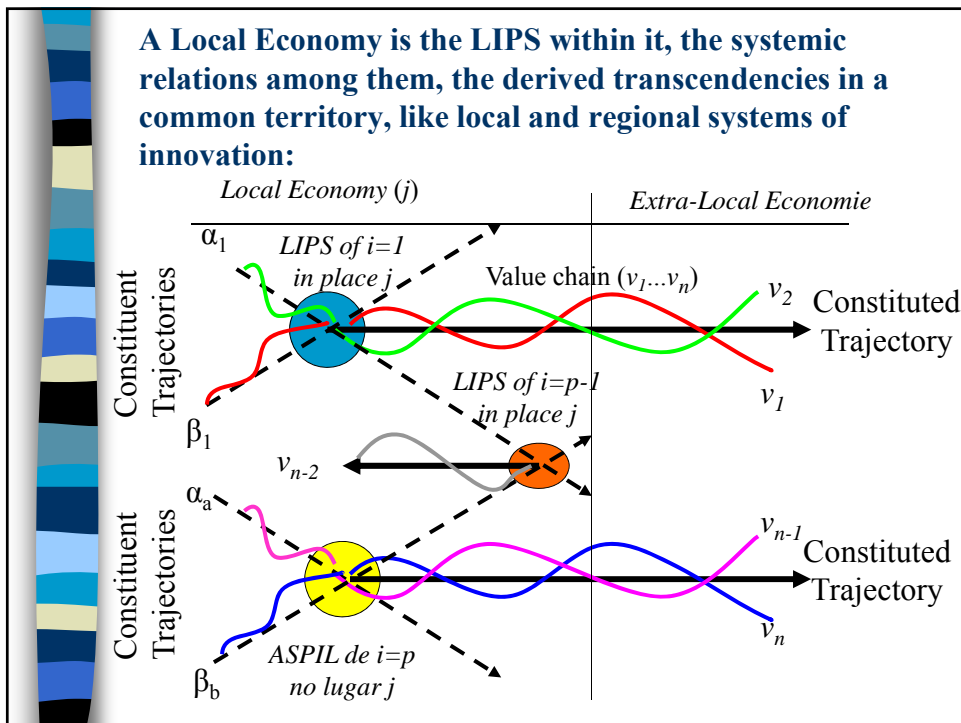
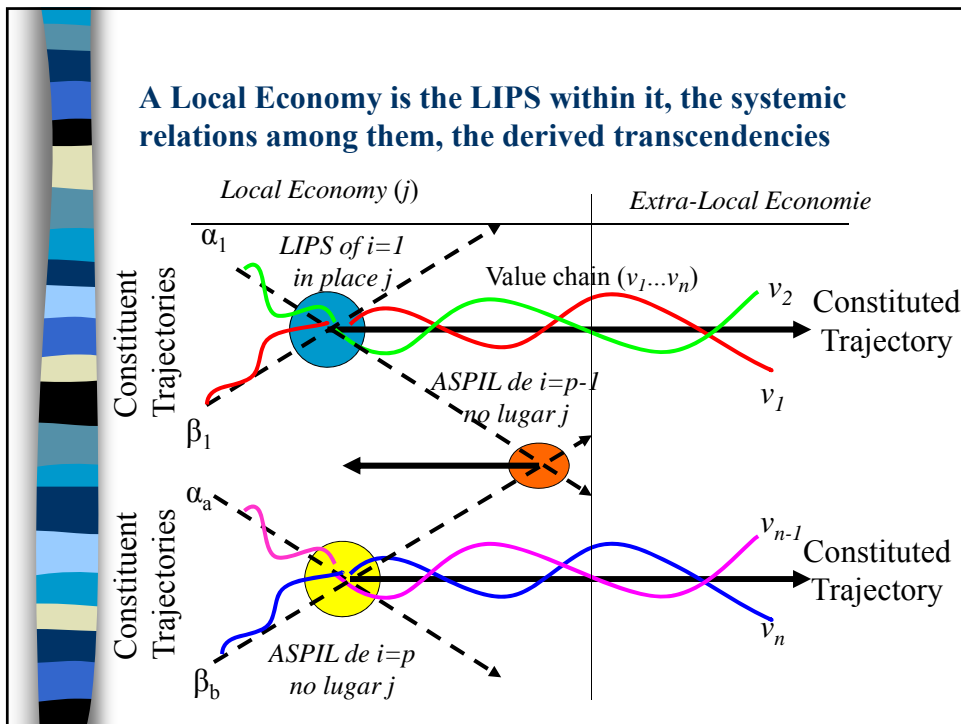


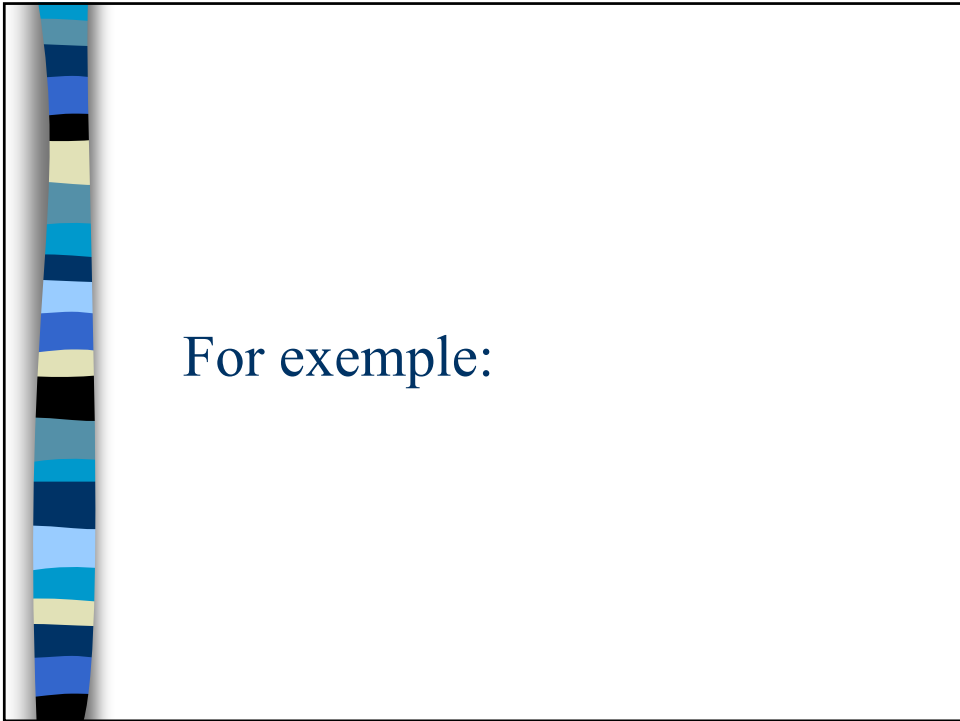


- The “Regime of Growth” of a LIPS is the form its participation in the development (in general);
-
- The first, more immediate expression, of the “Regime of Growth” of a LIPS is the way it participates in the local development









LIPS and Value Chains about the non-peasants trajectories in South Eastern Pará in 2005. Input-Output Matrix (R\$ 1.000.00 of 2004)

	Produção Intermediária														Demanda Final					VBP				
	Economia Local				Economia do resto do Pará				Economia do resto do Brasil				Local											
	Produção/Setores		Inter-medi-	Indústria	Comércio		Indústria	Comércio		Indústria	Comércio		Total	Famílias	Forma-ção de Capital ¹	Res-to do Pará	Res-to do Brasil ⁷	Total						
Fazendas	Camponeses	Mineração	Inter-medi- ação pri- mária	Bene- fici- ação ⁴	Trans- forma- ção ⁵	Ata- cado	Vare- jo e servi- ços ⁶	Bene- fici- ame- nto ³	Trans- forma- ção ¹	Ata- cado	Vare- jo e servi- ços ²	Bene- fici- ame- nto ³	Trans- forma- ção ¹	Ata- cado	Vare- jo e servi- ços ²	Total	Famílias	Forma- ção de Capital ¹	Res-to do Pará	Res-to do Brasil ⁷	Total	VBP		
1.Fazendas	5,11	-	8,98	184,59	17,60	39,86	70,34	0,17	-	0,59	-	-	-	1,56	0,00	333,92	263,20	277,17	-	-	-	540,36	869,18	
1b.Camponeses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1c.Mineração	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.Interméd. Prim.	-	-	0,00	33,02	-	1,87	56,66	-	-	0,25	0,02	-	-	0,00	-	91,82	0,28	-	0,03	-	0,32	92,14	-	
3.Ind.Benef.	-	-	-	14,95	43,31	1,83	68,43	-	5,18	31,77	141,02	-	34,44	24,55	66,03	431,51	0,46	-	2,77	-	3,23	434,74	-	
4.Ind.Transf./Transformação	-	-	0,26	-	-	-	96,87	-	-	-	2,69	-	58,21	-	16,10	174,14	-	-	-	-	-	174,14	-	
5.Atacado	2,28	-	0,00	0,28	13,30	4,65	50,12	18,03	5,13	16,26	0,00	1,09	-	8,15	0,00	119,30	0,94	-	-	-	0,94	120,24	-	
6.Var.c	218,08	-	0,00	7,25	-	0,29	0,00	-	0,00	0,07	0,00	0,00	-	-	0,00	225,69	398,04	76,42	0,00	-	-	474,47	700,16	
7.Ind.Benef.	-	-	-	-	-	-	0,35	-	24,83	19,78	-	-	-	-	-	44,96	-	-	-	-	-	44,96	-	
8.Ind.Transf.	-	-	-	-	-	-	4,75	-	-	17,42	56,49	-	-	-	-	84,35	-	-	-	-	-	84,35	-	
9.Atacado	1,67	-	0,33	14,74	17,31	26,69	93,51	1,52	2,34	0,75	20,55	0,20	-	5,70	-	179,59	-	-	-	-	-	179,59	-	
10.Var.c/Serv. Serviços	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,24	-	290,62	-	-	310,87	-	
11.Ind.Benef.	-	-	-	-	-	-	-	-	10,17	-	-	-	-	138,94	-	149,23	-	-	-	-	0,06	0,06	149,30	-
12.Ind.Transf.	-	-	-	-	13,30	4,75	20,92	-	-	78,68	7,70	-	-	104,26	125,94	355,56	-	-	-	-	0,02	0,02	355,57	-
13.Atacado	-	-	-	-	-	19,76	73,88	-	-	13,83	-	-	4,72	12,05	0,59	5,87	130,69	4,88	-	-	46,06	50,94	181,63	-
14.Var.c/Serv.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0,00	-	-	-	283,34	283,34	-	
15.Total dos usos	227,14	-	9,58	254,82	104,83	104,45	531,08	19,73	47,65	179,39	228,46	6,00	243,65	144,81	214,07	2.315,65	688,04	353,59	297,26	384,57	1.723,45	4.039,11	-	
16.Fazendas	642,03	-	82,56	179,92	69,31	15,79	169,08	25,24	36,74	59,08	82,41	143,29	111,93	36,82	69,27	1.723,45	-	-	-	-	-	-	-	-
17.Camponeses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.Mineração	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.Adicionado	642,03	-	82,56	179,92	69,31	15,79	169,08	25,24	36,74	59,08	82,41	143,29	111,93	36,82	69,27	1.723,45	-	-	-	-	-	-	-	-
20.Salários	172,74	-	3,96	27,57	12,27	5,17	58,82	1,93	5,95	10,25	26,12	5,05	27,66	11,87	34,59	403,95	-	-	-	-	-	-	-	-
21.Lucros	456,41	-	70,31	132,86	52,34	9,07	78,71	23,27	27,75	17,66	30,89	134,22	74,83	(0,74)	10,67	1.118,26	-	-	-	-	-	-	-	-
22.Impostos	12,87	-	8,29	19,48	4,69	1,55	31,54	0,03	3,04	31,17	25,40	4,02	9,44	25,69	24,01	201,24	-	-	-	-	-	-	-	-
23.Renda Bruta (+s)	869,18	-	92,14	434,74	174,14	120,24	700,16	44,96	84,39	238,47	310,87	149,30	355,57	181,63	283,34	4.039,11	-	-	-	-	-	-	-	-
24.Emprego (1.000)	51,63	-	0,71	4,65	1,76	0,93	8,30	0,25	0,77	1,71	3,13	0,67	2,35	1,52	3,20	81,58	-	-	-	-	-	-	-	-

LIPS and Value Chains about the peasants trajectories in South Eastern Pará in 2005. Input-Output Matrix (R\$ 1.000.000 of 2004)

	Produção Intermediária																Demanda Final					Total	VBP	
	Economia Local								Economia do resto do Pará				Economia do resto do Brasil				Local							
	Produção/Setores			Indústria		Comércio			Indústria		Comércio		Indústria		Comércio		Famílias	Formação de Capital	Resto do Pará	Resto do Brasil				
	Fazendas	Camponeses	Mineração	Intermediária	Beneficiamento	Transformação	Atacado	Varejo e serviços	Beneficiamento	Transformação	Atacado	Varejo e serviços	Beneficiamento	Transformação	Atacado	Varejo e serviços	Total	Famílias	Formação de Capital	Resto do Pará	Resto do Brasil			Total
1.Fazendas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1b.Camponeses	-2490	-	-	-1038	7773	4386	3213	4119	025	-	223	-	-	-	895	000	241.62	409.11	-	-	-	409.11	650.73	
1c.Mineração	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.Interm.Prím	-	-	-	000	963	-	855	2768	000	-	059	000	-	-	002	-	4648	005	-	000	-	005	4653	
3.Ind.Benef.	-	-	-	-	454	1315	197	9062	000	172	874	4283	000	1073	681	2008	201.20	2.17	-	084	-	3.01	204.20	
4.Ind.Transf.Transformação	-	-	-	003	-	-	7347	-	-	-	676	-	-	1768	-	4051	138.46	-	-	-	-	-	138.46	
5.Atac.	-	-	-	246	000	128	960	1809	4556	548	163	3433	001	341	-	2049	142.35	4.06	-	-	-	4.06	146.41	
6.Var.c	-	-	-	11759	000	220	-	061	000	-	000	010	000	000	-	000	120.51	341.05	45.77	000	-	386.82	507.33	
7.Ind.Benef.	-	-	-	-	-	-	-	049	-	-	890	1206	-	-	000	000	21.46	-	-	000	000	000	21.46	
8.Ind.Transf.	-	-	-	-	-	-	343	-	-	-	949	1716	-	-	288	-	32.96	-	-	000	035	036	33.31	
9.Atacado	-	-	-	140	017	692	1317	1686	5056	073	084	048	954	071	-	-	101.37	-	-	3487	1568	5054	151.91	
10.Var.cServ.Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.25	-	9709	-	10934	10934	
11.Ind.Benef.	-	-	-	-	-	-	-	-	-	558	-	-	-	7113	000	004	76.75	-	-	004	004	004	76.79	
12.Ind.Transf.	-	-	-	-	-	960	343	406	-	-	4376	421	-	-	5422	5366	172.95	-	-	080	080	173.75		
13.Atacado	-	-	-	-	-	1330	3338	-	-	-	928	-	-	241	589	041	205	66.73	23.26	-	32.41	55.67	122.40	
14.Var.cServ.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	000	-	-	16001	16002	16002	
1.Total de Insumos	-146.35	-	-	10.58	102.30	89.39	98.38	367.02	6.45	18.68	121.07	80.52	6.53	105.43	93.78	116.35	1.362.83	646.09	191.63	131.96	210.13	1179.81	2542.64	
2.Fazendas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.Camponeses	-504.38	-	-	35.95	101.90	49.07	48.02	140.31	15.01	14.63	30.85	28.83	70.26	68.32	28.62	43.67	1.179.81	-	-	-	-	-	-	
4.Mineração	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5.Agricultor	-504.38	-	-	35.95	101.90	49.07	48.02	140.31	15.01	14.63	30.85	28.83	70.26	68.32	28.62	43.67	1.179.81	-	-	-	-	-	-	
6.Salários	-	-	-	714.14	-	2.00	12.95	9.76	6.29	42.62	0.92	2.35	6.53	9.19	2.60	13.52	8.00	19.53	210.39	-	-	-	-	
7.Lucros	-	-	-	-29.34	-	30.34	78.04	35.59	35.97	67.97	14.06	11.15	(1.16)	11.11	66.29	48.89	(7.46)	10.12	830.26	-	-	-	-	
8.Impostos	-	-	-	0.90	-	3.61	10.91	3.72	5.76	29.71	0.03	1.13	25.48	8.53	1.37	5.91	28.08	14.01	139.15	-	-	-	-	
9.Renda Bruta (+/-)	-650.73	-	-	46.53	204.20	138.46	146.41	507.33	21.46	33.31	151.91	109.34	76.79	173.75	122.40	160.02	2.542.64	-	-	-	-	-	-	
10. Empresa (1.000)	-138.40	-	-	0.36	2.18	1.40	1.13	6.01	0.12	0.31	1.09	1.10	0.35	1.15	1.02	1.81	156.43	-	-	-	-	-	-	

LIPS and Value Chains about the mineral production in South Eastern Pará in 2005. Input-Output Matrix (R\$ 1.000.000 of 2004)

	Produção Intermediária																Demanda Final					Total	VBP
	Economia Local								Economia do resto do Pará				Economia do resto do Brasil				Local						
	Produção/Setores			Indústria		Comércio			Indústria		Comércio		Indústria		Comércio		Famílias	Formação de Capital	Resto do Pará	Resto do Brasil			
	Fazendas	Camponeses	Mineração	Intermediária	Beneficiamento	Transformação	Atacado	Varejo e serviços	Beneficiamento	Transformação	Atacado	Varejo e serviços	Beneficiamento	Transformação	Atacado	Varejo e serviços	Total	Famílias	Formação de Capital	Resto do Pará	Resto do Brasil		
1.Fazendas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1b.Camponeses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1c.Mineração	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.Interm.Prím	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.Ind.Benef.	-	-	-	-	-	064	-	-	-	-	-	-	-	-	-	-	064	-	-	-	-	-	-
4.Ind.Transf.Transformação	-	-	-	-	-	-	727.32	-	-	-	-	-	-	-	-	-	727.32	-	-	-	482.30	482.30	482.94
5.Atac.	-	-	-	32.44	-	-	184.8	-	489.00	-	-	-	-	-	-	-	706.30	-	-	-	-	-	706.30
6.Var.c	-	-	-	367.64	-	-	-	-	-	-	-	-	-	-	-	-	367.64	2.447.0	528.33	-	-	-	2.975.3
7.Ind.Benef.	-	-	-	-	-	-	-	-	-	103.1	226.91	-	-	-	-	-	330.04	-	-	-	-	-	330.04
8.Ind.Transf.	-	-	-	-	-	-	30.59	-	-	-	143.20	-	-	-	61.34	-	235.13	-	-	-	-	-	235.13
9.Atacado	-	-	-	5.56	000	16.37	98.08	297.5	619.57	11.19	5.08	3.85	88.67	-	-	-	1.145.94	-	-	-	-	-	1.145.94
10.Var.cServ.Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54.21	244.71	-	-	-	-	244.71
11.Ind.Benef.	-	-	-	-	-	-	-	-	-	56.20	-	-	-	2.493.7	-	-	2.549.94	-	-	-	-	-	2.549.94
12.Ind.Transf.	-	-	-	-	-	85.66	61.36	378.86	-	-	535.88	125.2	-	-	1.509.1	-	2.096.15	-	-	-	476.58	476.58	3172.74
13.Atacado	-	-	-	526.55	-	-	266.4	688.67	-	-	134.80	2.22	84.54	107.56	5.77	-	1.786.59	12.75	-	-	-	-	12.75
14.Var.cServ.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.Total de Insumos	-986.41	-	-	0.00	427.0	368.5	686.6	2873.4	11.19	164.4	1044.6	216.1	419.22	2.601.3	1.576.2	-	11.345.3	2.704.4	528.33	-	505.76	8.200.4	19.635.5
2.Fazendas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.Camponeses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.Mineração	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.Agricultor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.Salários	-	-	-	3857.4	0.24	55.86	358.7	49.65	469.57	318.8	70.72	101.29	82.82	2130.7	571.44	223.06	8.290.44	-	-	-	-	-	-
7.Lucros	-	-	-	-272.04	-	0.01	30.63	51.24	30.36	280.86	14.16	16.57	49.26	25.11	86.23	246.81	117.58	-	-	-	-	-	-
8.Impostos	-	-	-	2.942.2	0.21	10.00	303.0	17.47	135.29	300.6	53.90	51.41	54.42	1951.7	191.65	100.15	6112.29	-	-	-	-	-	-
9.Renda Bruta (+/-)	-643.18	-	-	0.02	15.24	4.41	1.82	53.41	4.00	0.26	0.62	3.29	92.72	132.97	5.34	-	957.28	-	-	-	-	-	-
10. Empresa (1.000)	-4843.39	-	-	0.24	482.9	727.3	706.3	3342.9	330.0	235.1	1145.9	298.9	2549.9	3172.7	1799.3	-	19635.7	-	-	-	-	-	-
11. Empresa (1.000)	-1325	-	-	0.00	5.17	7.33	5.45	39.61	1.81	2.16	8.23	3.01	11.51	20.96	15.06	-	134.25	-	-	-	-	-	-

Estruture of the Local Economy of South Eastern Pará in year 2005. Input-Output Matriz (R\$ 1.000.000 of 2004)

	Produção Intermediária														Demanda Final					VBP					
	Economia Local							Economia do resto do Pará				Economia do resto do Brasil			Local			Total	VBP						
	Produção Setores			Inter- medi- ação primária	Indústria	Comércio	Ata- cado	Vare- jo e servi- ços ³	Bene- fici- ame- nto ³	Trans- - forma- ção ⁴	Ata- cado	Vare- jo e servi- ços ³	Bene- fici- ame- nto ³	Trans- - forma- ção ⁴	Ata- cado	Vare- jo e servi- ços ³	Total				Famí- lias	Forma- ção de Capit- al ⁵	Res- to do Pará	Res- to do Brasil ⁷	Total
	Faze- ndas	Cam- pone- ses	Mine- ração																						
1.Fazendas	5.11	-	-	8.98	184.59	17.60	39.86	70.34	0.17	-	0.59	-	-	-	1.56	0.00	328.81	263.20	277.17	-	-	-	540.36	869.18	
1b.Camponeses	-	24.90	-	10.38	77.73	43.86	32.13	41.19	0.25	-	2.23	-	-	-	8.95	0.00	241.62	263.25	145.86	-	-	-	409.11	650.73	
1c.Mineeração	-	-	-	-	410.47	-	-	-	-	-	-	-	-	334.68	-	-	745.15	-	-	-	-	4.098.7	4.098.75	4.843.90	
2. Intermed. Prim.	-	-	-	0.00	42.89	-	10.43	84.35	0.00	-	0.84	0.02	-	-	0.02	-	138.54	0.33	-	0.04	-	-	0.37	138.91	
3. Ind.Benef.	-	-	-	-	19.49	56.46	4.44	159.05	0.00	6.91	40.51	183.8	0.00	45.17	31.36	86.10	633.35	2.62	-	485.91	-	-	488.53	1.121.88	
4. Ind. Transf. e Transformac	-	-	-	0.29	-	-	-	897.66	-	-	9.45	-	-	75.89	-	56.61	1.039.91	-	-	-	-	-	-	1.039.91	
5. Atacado	2.28	2.46	32.44	0.00	1.56	207.77	22.74	584.68	23.50	6.76	50.59	0.02	4.50	-	28.64	0.00	967.95	5.00	-	-	-	-	5.00	972.95	
6. Varejo	218.0	117.5	367.64	0.00	9.45	-	0.91	0.00	0.00	0.17	0.00	0.00	0.00	-	0.00	0.00	713.84	3.186,1	650,52	0,00	-	-	3.836,63	4.550,47	
7. Ind.Benef.	-	-	-	-	-	-	-	0.84	-	136.8	258.76	-	-	-	0.00	0.00	396.46	-	-	0.00	0.00	0.00	0.00	396.46	
8. Ind. Transf	-	-	-	-	-	-	38.77	-	-	170.11	73.64	-	-	-	69.91	-	352.44	-	-	0.00	0.39	0.39	352.83	352.83	
9. Atacado	1.67	1.40	5.56	0.50	38.03	128.55	341.1	763.64	13.44	8.27	5.08	118.7	0.90	-	-	-	1.426.90	-	-	41.47	67.96	109.42	1.536.33	1.536.33	
10. Varejo e Serv. Servicos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54.21	-	-	387.7	-	-	664.92	719.13	
11. Ind.Benef.	-	-	-	-	-	-	-	-	-	71.95	-	-	-	-	2.703.8	0.00	0.17	2.775.92	-	-	-	0.10	0.10	2.776.02	
12. Ind. Transf.	-	-	-	-	108.56	69.54	403.84	-	-	-	658.32	137.1	-	-	1.667.6	179.6	3.224.66	-	-	-	477.40	477.40	3.702.06	3.702.06	
13. Atacado	-	-	526.55	-	-	-	299.5	765.93	-	-	157.91	2.22	-	-	91.67	125.50	6.76	7.92	1.984.02	40.89	-	78.47	119.36	2.103.37	
14. Varejo e Serv.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	-	-	443.35	443.35	443.35	
15. Total da economia	227.1	146.1	986.41	20.16	784.20	562.81	859.4	3.771.5	37.36	230.7	1.345.1	575.0	431.25	2.950.3	1.814.8	330.4	15.023.7	4.038.6	1.073.5	429.2	5.652.3	11.193.7	26.217.4	26.217.4	
16. Fazendas	642.0	-	-	82.56	179.92	69.31	15.79	169.08	25.24	36.74	59.08	82.41	143.29	111.93	36.82	69.27	1.723.45	-	-	-	-	-	-	1.723.45	
17. Camponeses	-	504.3	-	35.95	101.90	49.07	48.02	140.31	15.01	14.63	30.85	28.83	70.26	68.32	28.62	43.67	1.179.81	-	-	-	-	-	-	1.179.81	
18. Mineeração	-	-	-	3.857.4	0.24	55.86	358.73	49.65	469.57	318.8	70.72	101.29	82.82	2.130.7	571.44	223.06	8.290.44	-	-	-	-	-	-	8.290.44	
19. Adicionado	642.0	504.3	3.857.4	118.7	337.68	477.10	113.4	778.95	359.1	122.0	191.22	194.0	2.344.2	751.68	288.50	112.0	11.193.7	4.038.6	1.073.5	429.2	5.652.3	11.193.7	26.217.4	26.217.4	
20. Salários	172.7	74.14	272.04	5.97	71.16	73.27	41.82	382.31	17.01	24.86	66.04	60.42	93.87	287.99	137.44	54.12	1.835.20	-	-	-	-	-	-	1.835.20	
21. Lucros	456.4	429.3	2.942.2	100.8	220.90	391.01	62.51	281.98	338.0	92.80	67.91	96.42	2.152.2	315.37	91.95	20.79	8.060.82	-	-	-	-	-	-	8.060.82	
22. Impostos	12.87	0.90	643.18	11.92	45.63	12.82	9.13	114.66	4.06	4.43	57.27	37.23	98.12	148.33	59.11	38.02	1.297.68	-	-	-	-	-	-	1.297.68	
23. Renda Bruta (+s)	869.1	650.7	4.843.9	138.9	1.121.8	1.039.9	972.9	4.550.4	396.4	352.8	1.536.3	719.1	2.776.0	3.702.0	2.103.3	443.3	26.217.4	-	-	-	-	-	-	26.217.4	
24. Emprego (1.000)	51.63	138.4	13.95	1.07	12.00	10.49	7.51	53.92	2.17	3.24	11.03	7.25	12.53	24.45	17.60	5.01	372.26	-	-	-	-	-	-	372.26	

Final Remarks:

- We can think of a broad theory-based planing system supported by the LIPS concept:
 - "Local Economy" and "Poles" could be thought as a composition of LIPS of different nature (supplying different items of the social division of labor) and their related value chains, the whole system confined in a defined territory.
 - "National Sector" could be thought as a composition of LIPS and related Value Chains producing and distributing a item of the social labor division at national level.
 - The internal elements of the LIP could be easily addressed and monitored in their structural heterogeneity (peasant could visualized in relation to corporation, for example).
 - Through LIPS we could transpose different scale and visualize nets.
 - Through LIPS we could go to their constituent and constituted trajectories and value chains
 - Related to these structures we can derive national, regional and local innovation systems.



Muito obrigado!



Trajetórias Tecnológicas:

Um padrão de soluções técnicas na obtenção de uma necessidade social. Procedimentos técnicos e configurações sociais associados a estruturas em movimento que combinam de modo similar trabalho direto e recursos tangíveis (capital físico e natural) e intangíveis (capital humano e instituições) no atendimento de um conjunto particular de necessidades sociais (definidas na divisão social do trabalho), cujo equacionamento, seja na esfera da produção, seja na esfera do consumo, segue as mesmas regras (lucro e eficiência reprodutiva).