

Yearbooks:

Some findings and recommendations

- ToR: To analyze and discuss the content and structure of the yearbook(s)
- ... and to give recommendations on the new yearbooks

Some findings

The Anuário is now about 15 years old and more or less the same – but with more tables. **It needs a revision!**

My view of the Anuário

I see at least **five problems** with today's yearbook:

Problem no. 1: The tables are very often too ***detailed***.

Some examples:

Table 4.2.1: *Value of exports* is today 4 ½ page.

By only giving values for the main groups and by ranking by value, we get a much nicer table.

Presenting the numbers as millions (one decimal) instead of 1 000, also makes the figures easier to read

Grupo de produtos / <i>Group of products</i>	Valor / <i>Value</i>		Estr. (%) /
	10 ⁶ MT	10 ⁶ US\$	<i>Percent</i>
TOTAL	57 344.1	2 147.2	100.0
Metais comuns e suas obras / <i>Metal and products</i>	23 987.8	898.2	41.8
Produtos minerais / <i>Mineral products</i>	11 738.7	439.5	20.5
Produtos alimentares, bebidas e tabacos / <i>Food products, beverages and tobacco</i>	7 138.3	267.3	12.4
Produtos do reino vegetal / <i>Vegetal products</i>	4 257.5	159.4	7.4
Máquinas e aparelhos, Material eléctrico / <i>Machinery equipment, electrical machinery</i>	2 357.3	88.3	4.1
Material de transporte / <i>Transport equipment</i>	2 268.9	85.0	4.0
Animais vivos e produtos do reino animal / <i>Live animals and products</i>	1 777.6	66.6	3.1
Madeira e as suas obras, Carvão vegetal; Cortiça / <i>Wood and products</i>	1 100.0	41.2	1.9
Materias texteis e as suas obras / <i>Textil products</i>	893.1	33.4	1.6
Pasta de madeira, Papel, Cartão e as suas obras / <i>Paper and products, printing and publishing</i>	799.2	29.9	1.4
Instrum. e aparelhos de óptica, Fotografia, Relógios / <i>Optical instruments, photos inst, watches</i>	273.4	10.2	0.5
Pérolas, Pedras preciosas, e semi; Metais preciosos / <i>Pearls, precious stones and precious metals</i>	179.1	6.7	0.3
Gorduras e óleos animais ou vegetais / <i>Animal and vegetal fat</i>	167.2	6.3	0.3
Prod das Ind. Químicas ou das conexas / <i>Chemical industry product</i>	148.3	5.6	0.3
Calçado, chapéus, guarda-sóis, bengalas, etc / <i>Footwear industry and other products</i>	100.5	3.8	0.2
Plásticos e as suas obras; Borracha e as suas obras / <i>Rubber and plastic products</i>	78.0	2.9	0.1
Mercadorias e prod diversos / <i>Merchandise and various products</i>	64.2	2.4	0.1
Obras de pedra, gesso, cerâmica; Vidros e as suas obras / <i>Pottery, earthenware, glass and products</i>	6.4	0.2	0.0
Peles, Couros, etc, Artigos de Viagem, Bolsas, etc./ <i>Leather products</i>	4.7	0.2	0.0
Objectos de arte, colecção ou antiguidade / <i>Art and antiquy</i>	4.0	0.2	0.0

In the same way:

Table 4.2.2: *Value of exports by countries* is today 2 ½ page.

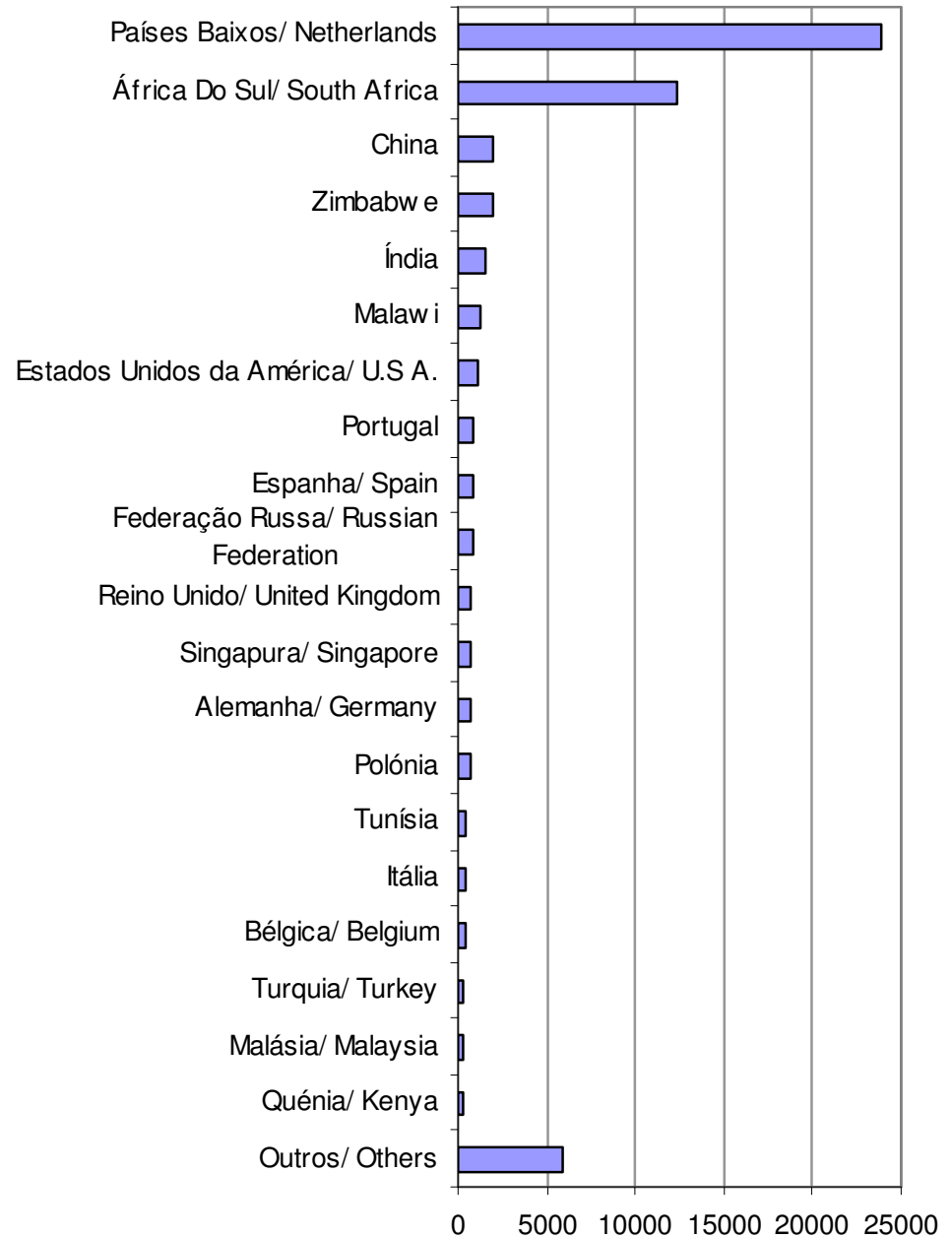
By only giving values for the "top twenty" we cover 90% of the export – and we get a much nicer table

País de destino / <i>Country of destination</i>	Valor / <i>Value</i>		Estrutura (%) / <i>Percent</i>
	10 ⁶ MT	10 ⁶ US\$	
TOTAL	57344.1	2147.2	100.0
Países Baixos/ <i>Netherlands</i>	23874.0	893.9	41.6
África Do Sul/ <i>South Africa</i>	12293.7	460.3	21.4
China	1989.0	74.5	3.5
Zimbabwe	1970.9	73.8	3.4
Índia	1509.2	56.5	2.6
Malawi	1247.4	46.7	2.2
Estados Unidos da América/ <i>U.S.A.</i>	1106.2	41.4	1.9
Portugal	859.7	32.2	1.5
Espanha/ <i>Spain</i>	839.7	31.4	1.5
Federação Russa/ <i>Russian Federation</i>	787.9	29.5	1.4
	0.0	0.0	
Reino Unido/ <i>United Kingdom</i>	767.1	28.7	1.3
Singapura/ <i>Singapore</i>	757.8	28.4	1.3
Alemanha/ <i>Germany</i>	662.7	24.8	1.2
Polónia	648.2	24.3	1.1
Tunísia	448.5	16.8	0.8
Itália	418.7	15.7	0.7
Bélgica/ <i>Belgium</i>	402.0	15.1	0.7
Turquia/ <i>Turkey</i>	329.1	12.3	0.6
Malásia/ <i>Malaysia</i>	312.6	11.7	0.5
Quênia/ <i>Kenya</i>	270.5	10.1	0.5
Outros/ <i>Others</i>	5849.0	219.0	10.2

OR:

This could alternatively be presented in a graph:

Here, we see at once that the export goes mainly to Netherlands and South Africa



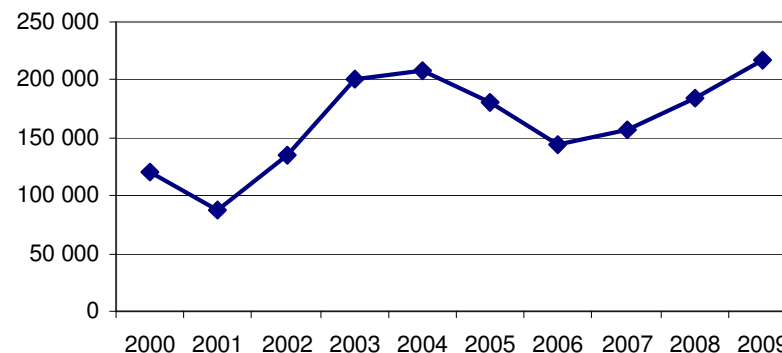
Another example of too much details, is the practice of giving all the **figures for 2 (or sometimes 3 or 4) years:**

Examples: Almost all the tables about education, tables on divorce, culture,...

Q 2.6.8 NÚMERO DE VISITANTES SEGUNDO SEXO, POR MUSEUS, 2007 - 2008
Number of recorded visitors by Province, and sex 2007 - 2008

Museus / Museums	Visitantes Nacionais / National Visitors						Variação (%)
	2007			2008			Percent change
	Total	Homens / Male	Mulheres / Female	Total	Homens / Male	Mulheres / Female	2007/06
Total	125 135	50 508	74 627	163 364	74 457	90 619	30.6
Museu da Cultura de Niassa / Museum of culture - Niassa	1 933	1 146	787	566	325	241	-70.7
Museu de Etnologia de Nampula / Museum of ethnology - Nampula	397	266	131	7 205	5 471	1 734	1714.9
Museu da Ilha de Moçambique / Mozambique Island Museum	2 862	1 572	1 290	3 501	1 910	1 591	22.3
Museu de Geologia de Manica / Museum of geology - Manica	---	---	---	11 972	6 895	5 077	..
Museu de Inhambane	5 444	3 170	2 274	7 208	3 911	3 297	32.4

Instead: Present time series for the key figures and give details only for the last year



A third example of too much details, is the practice of calculating the percentage change (“variacao (%)”).

Except for population growth and some economic figures, this is not necessary. Dropping the change will make tables much more user-friendly

Q. 3.1.5 PRINCIPAIS ESPÉCIES PECUÁRIAS, 2005 - 2008

Main cattle products 2005 - 2008

(10³)

Pecuária / Livestock	Produção/ Production				Variação %
	2005	2006	2007	2008a)	2008/2007
Bovino / Cattle	1 243	1 055	1 308	1 181	-10
Burros / DonKeys	24	46	46	46	..
Caprinos / Goats	4 929	4 255	4 395	4 325	-2
Coelhos / Rabbits	187	141	146	143	-2
Galinhas / Chickens	14 217	18 080	17 503	17 792	2
Gansos / Geese	2	2	19	3	-84
Ovinos / Sheep	197	145	200	173	-14
Patos / Ducks	1 505	1 251	1 668	..	..

Ano			1980	1981	1982	1983	1984	1985	1986	1987
Ensino Primário	1º Grau 1-5	Total	1387192	1376865	1333050	1220139	1303650	1311014	1305582	1286961
		Var %	0.00	-0.74	-3.18	-8.47	6.84	0.56	-0.41	-1.43
	2º Grau 6-7	Total	79899	78215	80746	91044	103970	111283	113948	75877
		Var %	0.00	-2.11	3.24	12.75	14.20	7.03	2.39	-33.41

Cont.

Ano			1988	1989	1990	1991	1992	1993	1994	1995
Ensino Primário	1º Grau 1-5	Total	1199669	1210671	1260218	1217364	1199847	1222814	1301833	1415428
		Var %	-6.78	0.92	4.09	-3.40	-1.44	1.91	6.46	8.73
	2º Grau 6-7	Total	78380	96907	116718	118775	114504	114158	116648	127294
		Var %	3.30	23.64	20.44	1.76	-3.60	-0.30	2.18	9.13

Cont.

Ano			1996	1997	1998	1999	2000	2001	2002	2003
Ensino Primário	1º Grau 1-5	Total	1573957	1745049	1876154	2074708	2271265	2508611	2644405	2826362
		Var %	11.20	10.87	7.51	10.58	9.47	10.45	5.41	6.88
	2º Grau 6-7	Total	136773	154482	168777	185979	209230	262134	302912	351224
		Var %	7.45	12.95	9.25	10.19	12.50	25.29	15.56	15.95

Cont

Ano			2004	2005	2006	2007	2008	2009
Ensino Primário	1º Grau 1-5	Total	3071564	3597392	3866906	4109298	4233454	3597392
		Var %	8.68	10.49	6.00	7.49	6.27	3.02
	2º Grau 6-7	Total	452888	496031	616091	704506	752884	452888
		Var %	10.66	9.53	24.20	14.35	6.87	10.66

Often, fewer numbers/smaller tables is best

- too many numbers makes it difficult to know what is important
- fewer numbers \Rightarrow fewer errors \Rightarrow better quality
- fewer numbers \Rightarrow more user-friendly (easier to compare)
- ...and: fewer numbers \Rightarrow smaller publications \Rightarrow reduced costs

Problem no. 2: Lack of **metadata** often makes it difficult or impossible to understand the figures:

What does this index mean? Is a value of 3.2 better than 2.2 or...?

Q.2.4.18 ÍNDICE DE INEQUIDADE, 2004 - 2008

Inequality Index 2004 - 2008

Províncias / Provinces	Ano / Year				
	2004	2005	2006	2007	2008
País / Country	4.1	4.1	4.1	3.3	3.4
Níassa	2.5	2.6	2.2	2.2	2.1
Cabo Delgado	2.8	2.9	3.1	2.6	2.5
Nampula	2.7	2.8	3.3	4.0	1.5
Zambézia	2.9	3.3	2.5	2.2	2.5
Tete	3.2	3.7	3.2	3.3	3.9
Manica	2.9	2.3	2.6	2.5	2.4
Sofala	1.6	1.5	2.6	2.1	2.4
Inhambane	2.3	2.3	2.9	2.8	2.8
Gaza	1.9	2.1	2.1	2.0	2.5
Maputo P. / Province	2.7	1.5	1.5	1.8	1.5
Maputo C./ City	2.2	1.5	...	...	...
Média Interprovincial	2.2	2.2	1.5	2.5	...

Fonte: Ministério da Saúde, Direção Nacional de Saúde.

Source: Ministry of Health, National Directorate of Health.

NOTA: A "Equidade" é entendida como distribuição de recursos e melhorar o acesso, privilegiando grupos vulneráveis. Isso significa reconhecer necessidades diferentes dos potenciais utentes./The "Justness" is understood as distribution of resources and to improve the access, privileging vulnerable groups. That means to recognize needs different from the potentials users

Problem no. 3: There are too many errors

There are *different kinds of errors*:

- 1) wrong figures

Different kinds of errors:

- 2) wrong calculations
 - calculating the average or the total with missing data

Q. 1.3.1 TEMPERATURAS MÍNIMA, MÉDIA E MÁXIMA MENSAL, SEGUNDO PROVÍNCIA, 2008
Monthly minimum, average and maximum temperature, by province, 2008

(°C)

Estação Station	Designação Item	Jan	Fev	Mar	Abr	Mai	Jun	Jul	Ago	Set	Out	Nov	Dez	Média/Average, Máx e Mín/Max. and Min
Pemba	TMED	27.4	26.7	26.6	26.0	24.8	23.1	23.2	23.3	...	...	...	...	25.1
	TXMED	31.1	30.8	30.6	30.5	29.4	28.0	27.7	27.9	...	...	...	...	31.1
	TNMED	23.8	22.6	22.7	21.6	20.3	18.3	18.7	19.0	...	...	...	...	18.3
	TXABS	32.9	33.5	32.4	32.4	30.7	29.1	29.4	29.5	...	...	...	...	33.5
	TNABS	21.1	20.1	20.5	19.9	18.2	16.1	17.2	17.2	...	...	...	...	16.1
Lichinga	TMED	20.5	20.3	20.0	18.9	17.6	15.0	15.6	16.8	20.0	-	-	20.8	18.6
	TXMED	24.6	24.9	25.1	24.2	23.1	20.7	21.4	22.9	26.8	-	-	25.2	26.8
	TNMED	16.3	15.6	15.0	13.7	12.0	9.3	9.8	22.9	13.2	-	-	16.5	9.3
	TXABS	28.3	27.7	27.2	26.9	27.4	23.8	26.7	10.8	29.6	-	-	27.7	29.6
	TNABS	14.9	13.8	12.5	9.2	10.0	6.9	7.0	27.5	7.6	-	-	15.0	6.9

Different kinds of errors:

- 3) wrong calculations
 - total is not the sum of the parts

Q 2.6.7 DURAÇÃO DAS TRANSMISSÕES DAS TELEVISÕES PRIVADAS, SEGUNDO TIPOS DE PROGRAMAS, 2006 - 2008
 Private Television transmission time by type of programmes, 2006 - 2008

Programas / TV programmes	Tempo de transmissão (horas) Broadcasting time (hours)			Estrutura Percentual / Percent			Variação (%) / Percent change	
	2006	2007	2008	2006	2007	2008	2007 / 06	2008 / 07
Total	23 760	31 689	31 797	100.00	100.00	100.00	33.4	0.3
Noticiários / News	4 006	4 518	2 666	16.9	14.3	8.4	12.8	-41.0
Cultural / Cultural programmes	934	933	688	3.9	2.9	2.2	-0.1	-26.3
Infância Juvenil / Children and Youth	1 417	1 041	1 569	6.0	3.3	4.9	-26.5	50.7
Divulgação Científica / Scientific	79	78	43	0.3	0.2	0.1	-1.3	-44.9
Desportivo / Sport programmes	1 244	1 158	1 262	5.2	3.7	4.0	-3.9	9.0
Recreativo / Recreational programmes	2 552	4 041	3 886	10.7	12.8	12.2	58.6	-3.8
Publicidade / Advertising	685	2 571	2 689	2.9	8.1	8.5	275.3	4.6
Educativo / Educational	179	988	502	0.8	3.1	1.6	452.0	-49.2
Mulher / Women's programmes	1 129	409	120	4.8	1.3	0.4	-63.8	-70.7
Religioso / Religious	9 609	9 200	6 762	40.4	29.0	21.3	-4.3	-26.5
Música Variada / Varied music	293	1 378	1 960	1.2	4.3	6.2	370.3	42.2
Música Africana / African music	...	563	281	0.0	1.8	0.9	0.0	-50.1
Música Moçambicana / Moz. Music	28	731	769	0.1	2.3	2.4	2510.7	5.2
Filmes / Films	518	1 677	2 338	2.2	5.3	7.4	223.7	39.4
Outros / Others	1 087	2 403	6 262	4.6	7.6	19.7	121.1	160.6
Origem dos Programas / Programme Origin	23 760	44 636	43 820	149.2	149.2	137.8	87.9	-1.8
Programas Nacionais / National Programmes	10 510	29 614	29 314	44.2	93.5	92.2	181.8	-1.0
Programas Estrangeiros / Foreign Programmes	13 250	15 022	14 506	47.4	55.8	45.6	13.4	-3.4

Fonte / Source: INE. Inquérito Mensal às Rádios / Monthly Radio Survey

Problem no. 4: Layout & readability

Some of the tables are almost impossible to read: Try reading table 3.4.2!!

Q. 3.4.2 QUANTIDADES E VALORES DE UMA AMOSTRA DE PRODUÇÃO DA INDÚSTRIA EXTRACTIVA E TRANSFORMADORA, 2007 - 2008
Amount, price and value of selected products, 2007 - 2008

Código/ Code CNBS	Principais produtos/Main products	Unidade de Medida/ Unit	Quantidade/Amount		Preços/Prices (MT)		Valores (10 ³ MT)			Variação (%)	
							Preços Correntes / At current price		Preços Constantes a At constant prices	Percent change (2008/07)	
							2007	2008		2007	2008	2007	Preços/P rices
	TOTAL1 Incluindo a produção de metais não ferrosos/Including the not ferrous metal production b/						64 802 979	65 405 051	63 644 275	-1.8	2.8
	TOTAL1 Excluindo a produção de metais não ferrosos /Excluding the not ferrous metal production						25 918 567	29 254 871	26 333 889	1.6	11.1
11	Petróleo bruto e gás natural, serviços relacionados com a extração de petróleo e gás, excepto prospecção/Crude petroleum and natural gas, services activities incidental to petroleum and gas extraction , except prospection						3 420 340	4 133 507	3 783 037	10.6	9.3
11102100	Gás natural, liquefeito ou no estado gasoso/Natural gas, liquefied or gaseous state	m3	2 460 525 149	2 721 442 306	1.4	1.5	3 420 340	4 133 507	3 783 037	10.6	9.3
14	Produtos de outras indústrias extractivas/Products of other extractives industries						93 451	107 259	104 118	11.4	3.0
14112150	Outras pedras de construção, n.e./Other building stone, n.e.c	m3	277 442	355 287	224	231	62 057	81 961	79 469	28.1	3.1
14140131	Bentonite, terras descolorantes e terras de piso (terras de fuller)/Bentonite, lands bleaches and linds of fuller	kg	8 179 000	5 739 875	2	2	13 662	9 542	9 587	-29.8	-0.5
14221110	Sal marinho, não refinado/Sea salt, not refined	kg	13 729 710	11 661 792	1.3	1.4	17 733	15 757	15 062	-15.1	4.6
15	Produtos alimentares e bebidas/ Food products and beverages						12 116 633	13 604 656	11 842 636	-2.3	14.9
15111333	Outras peças de suíno n.e., frescos ou refrigerados/Other cuts of pork ne, fresh or chilled	kg	37 907	37 907	50	50	1 895	1 895	1 895	0.0	0.0
15112110	Frescos e salchichas inteiros, frescos ou refrigerados/Chickens and whole chickens, fresh or chilled	kg	3 144 854	3 354 850	53	58	164 813	192 545	177 378	7.8	17.7

This table is 7 pages!

Problem no. 4: Layout & readability

This problem is partly caused by the many details and because the tables are too large.

The consultant on design and layout will surely be able to improve the visual identity of INE, but unless the tables become simpler, this could be a "mission impossible"

Problem no. 5: Lack of consistency

This is not a specific problem of the yearbook, but affects many INE publications. Many figures are published in various publications – but they are often not the same figures!

Example: **Population figures for 2009:**

Moambique in Figures 2009:	21 350 000	?
Yearbook 2009 (Manuscript):.....	21 803 000	
35 ANOS DE INDEPENDÊNCIA		
NACIONAL(manuscript):	21 742 300	?

So what is the correct figure?

Lack of consistency: More examples

In "Mozambique in Figures" the no. of "registred unemployment" (2009) is 105 216 (table 6.1). In the yearbook (manuscript; table 2.5.29) the figure is 159 000.

In "Mozambique in Figures" the no. of "Beneficiários" in table 8.1 is 35 511 (2008). In the yearbook (manuscript; table 2.8.6) the figure is: 731 762

Be sceptical!

Q.2.8.7 CASOS SUBSIDIADOS PELO SISTEMA DE SEGURANÇA SOCIAL, 2007 - 2008

Social Security Benefits paid, 2007- 2008

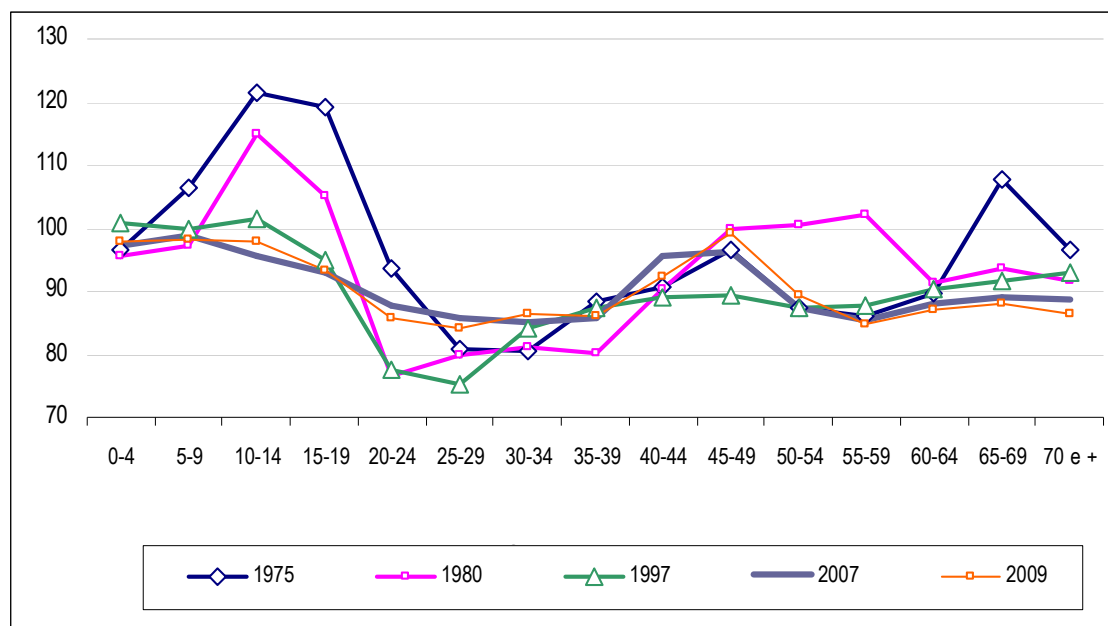
Descrição / Item	Casos / Cases		Valores / Amounts (10 ³ MT) a)		Varição (%) de Valores Change (%) in Amounts
	2007	2008	2007	2008	2008/2007
Subsídio por Doença/ <i>Sickness benefit</i>	7 261	6 021	15 352	2 081 022	13 455.0
Subsídio por Morte/ <i>Death payments</i>	6 264	1 989	56 244	5 499 889	9 678.7
Subsídio de Funeral/ <i>Hospital benefit</i>	2 237	1 916	6 493	576 024	8 770.9
Subsídio de Internamento/ <i>Hospital benefit</i>	47	33	7	5	29.7
Abono de Sobrevivência/ <i>Subsistence Allowance</i>	602	522	3 043	205 929	6 667.4
Abono de Velhice/ <i>Old age allowance</i>	155	259	4 003	308 642	7 609.5
Pensão de Velhice a)/ <i>Old age Pension</i>	11 798	12 861	194 267	28 926 410	14 790.1
Pensão de Invalidez a)/ <i>Disability Pension</i>	1 359	1 434	19 632	2 528 316	12 778.6
Pensão de Sobrevivência a)/ <i>Subsistence Pension</i>	10 708	12 142	123 196	17 714 590	14 279.2
Pais (Total)	40 431	37 177	422 237	57 840 827	13 598.7

Fonte: Ministério do Trabalho, Estatística do Mercado de Trabalho, 2008 / Source: Ministry of Labour - Labour Market Statistics, 2008

a) Valores acumulados nas pensões / Accumulated pension figures

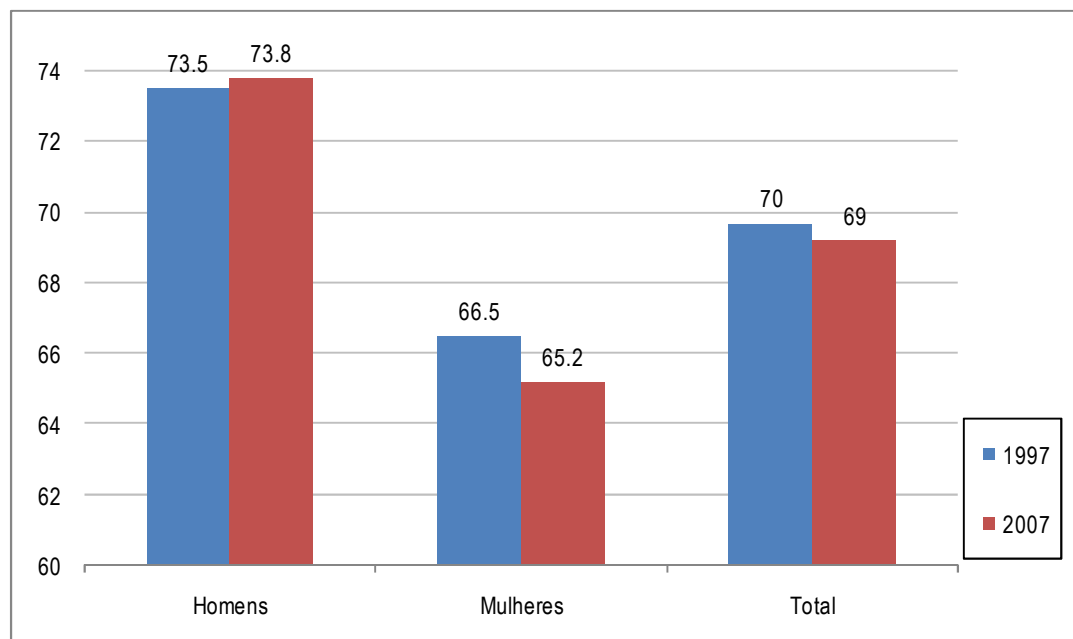
In addition to the problems mentioned, there are some other aspects that could be improved:

- More (and longer) time series
- Use more graphs (do not use logarithmic scale!) and maps.
- But also some of the graphs are too detailed:



Simplify titles of tables and graphs:

GRÁFICO 1.2.1 DISTRIBUIÇÃO PERCENTUAL DA POPULAÇÃO ECONOMICAMENTE ACTIVA 1997 – 2007



Que Fazer?

On *Avenida Vladimir Lenine*, I remembered the title of Lenin's book: **Que Fazer?** ("What is to be done?")

His question is still very relevant for INE and the quality of the publications and statistics that is published.

But it's not easy to give an answer to this question. Lenin's answer was "**revolution**" and in a sense, this is what seems necessary in INE as well.

Of the 5 problems mentioned, the most serious is probably errors and lack of consistency: The other problems (details, metadata, layout) can probably be more easily solved.

But the many errors reflect a lack of quality control, that is serious and could be very serious to the reputation of INE.

Que Fazer?

Some measures to increase the quality of publications in INE:

- **A critical approach to statistics**

Encourage the staff not to take the numbers for granted, but to evaluate their quality and look for errors

- **Better cooperation with the ministries on the selection and quality of tables**

INE must decide either to have an active role in the quality control of the data or reserve the right not to publish tables that appear to contain information that is not correct (or useful)