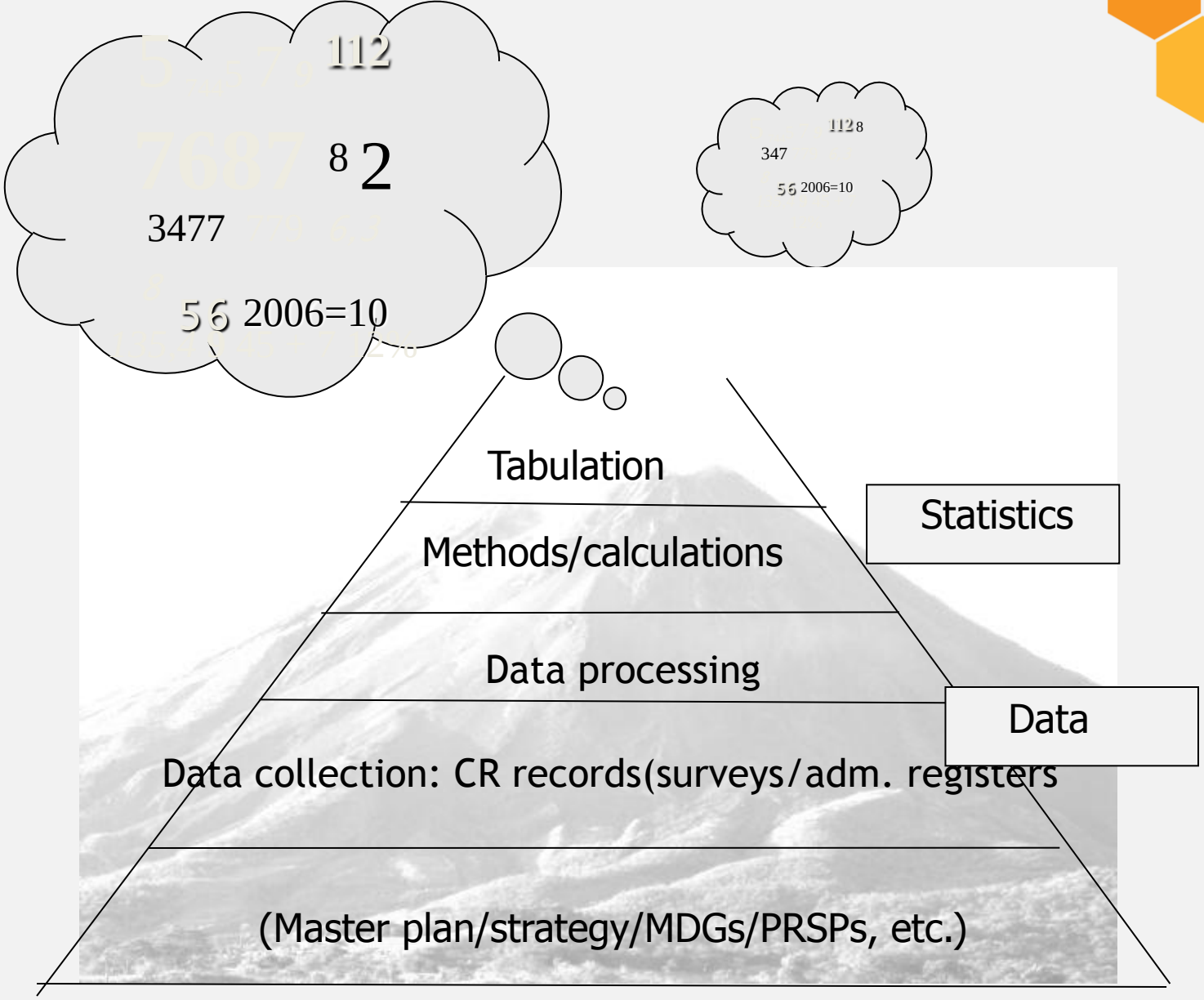
Get every one in the picture

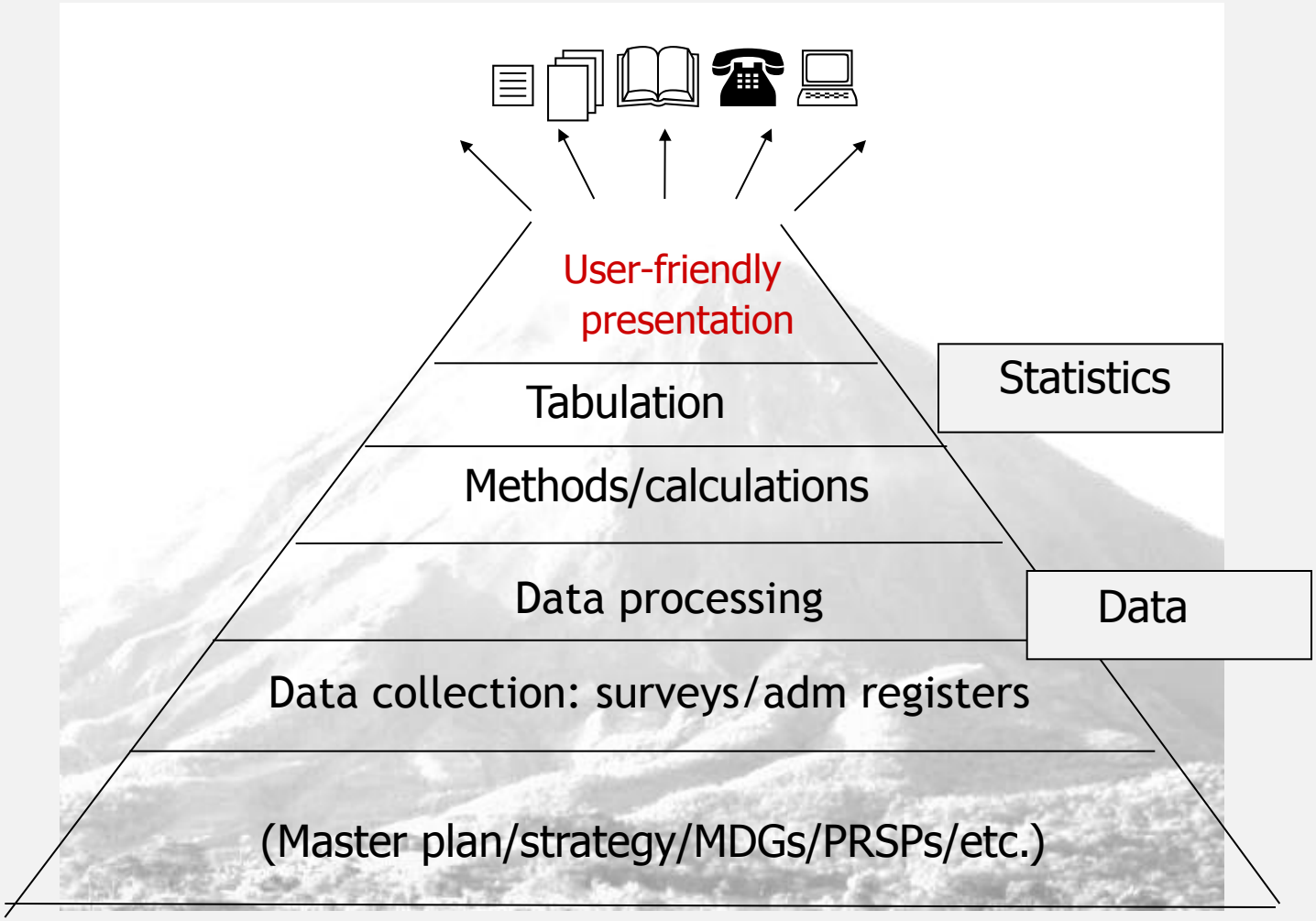
National capacity in CRVS
2nd workshop
Session 8
Preparing for dissemination

Workshop for national CRVS focal points

6-10 March 2017



VS = numerical vuolcanos?


User-friendly presentation
Tabulation
Methods/calculations
Data processing
Data collection: surveys/adm registers
(Master plan/strategy/MDGs/PRSPs/etc.)
Statistics
Data

Dissemination is not always very user-friendly, because…

- Focus on data collection and processing
- Lack of central dissemination unit
- Lack of experience (and coordination)
- Lack of dissemination strategy
- ”Fear of dissemination”?

Dissemination – some important issues

- The role of users
- The role of media
- Printed publications – electronic dissemination?
- Numbers or analysis?

Users?

- Media
- Government organizations
- NGOs
- The informed public
- Students/teachers
- ”Experts”

The role of users

User-friendly = “let’s ask the users”?

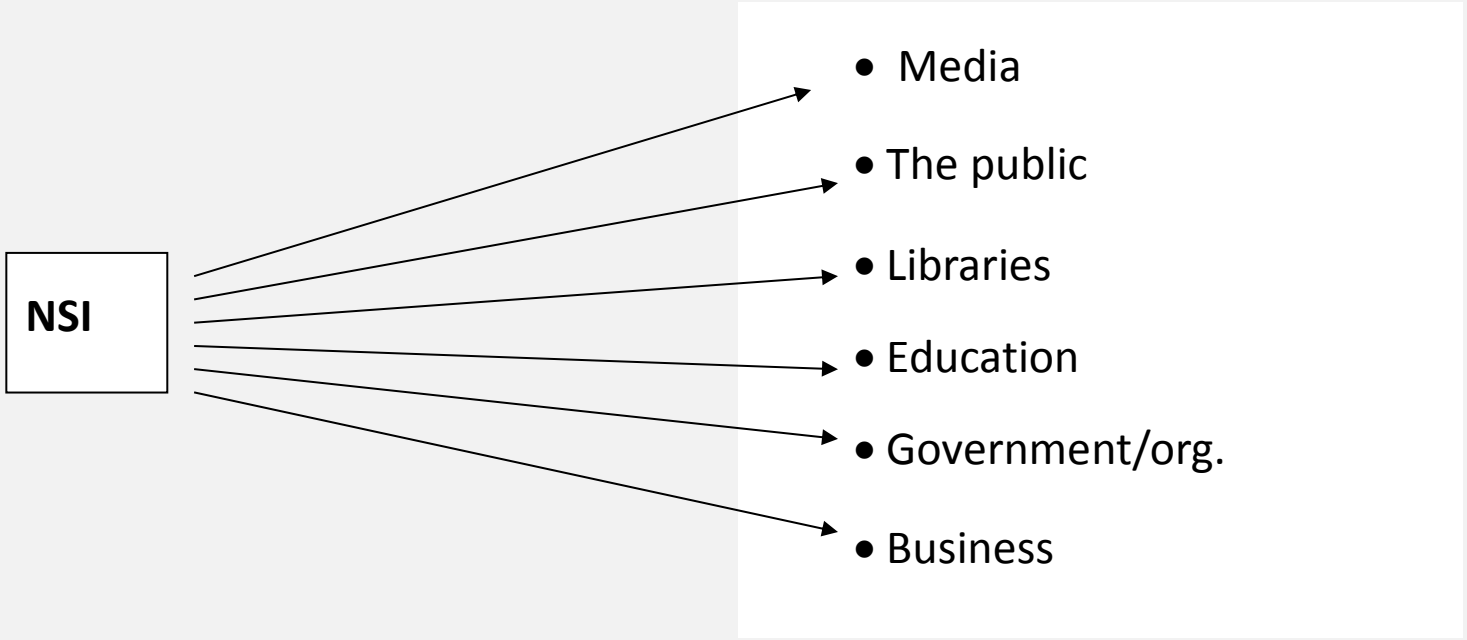
But many users do not know what they want!

And: We also want to attract new users!

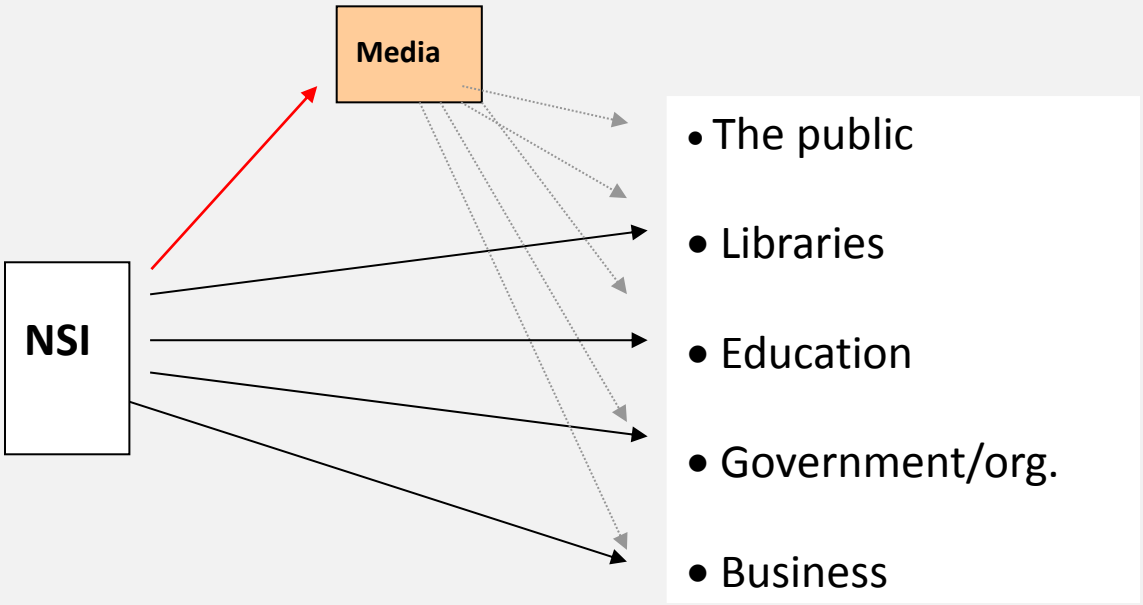
So….

The role of the media

Traditional dissemination model



“New” dissemination model



The role of the media

The media is not only important for dissemination.

Equally important: Media attention will contribute to increased visibility of and trust in the VS

Statistician and journalist:
Like cat and dog?

But: We must co-operate:

Journalists are our best friends!

Equal treatment and a release calendar will contribute to the VS's independence.

And independence is important to create confidence in the statistics

Print or electronic?

- ***Yesterday***: Printed publication first, then electronic/ Internet

- ***Today***: Parallel publishing: Paper *and* Internet simultaneously

- ***Tomorrow***: First on the Internet, then printed version.

(In Statistics Norway, an "Internet first"-policy has been implemented. Statistics are – since June 1999 – released daily on the Internet.).

Numbers or analysis?

Numbers to the experts?

Analysis/comments to the media & the public?

The future?

	Electronic	Paper
Numbers/ Tables	**1**	(x)
Text/ Analysis	(x)	**2**

1. Numbers/tables: On Internet
2. Text/analysis: Printed publications and Internet

In the shadow of Internet:
Printed publications

Two trends?

Reference publications:

"Raw material" as quick and cheap as possible. Large tables, absolute numbers, databases, self-service...

(Yearbooks) ↑↓??

Presentations:

Value added: "Analysis": Text, tables, graphs, maps, illustrations.

Colours, nice design.

Micro data

- Data for research
- Administrative use
- Tabulating micro data online
- Data protection
- Metadata

To increase user-friendly dissemination:

- To develop a dissemination strategy should be considered – to make the organization concious of the importance of dissemination
- Strategy = plans for the day after tomorrow = road map. A choise between diffrent paths.
- But more important than plans, is the will and ability to implement and carry out the plans
- Dissemination policy → dissemination guide(lines): ”This is how we do it”
- A centralized dissemination unit

Assignment: Outline a dissemination strategy, suggesting issues to address

- Relating to general strategy
- Relating to users (the media)
- Paper or by electronic media
- User friendlines
- Pricing policy
- Dissemenation of micro data

Writing about numbers

User-friendly analysis

Analysis for whom?

- Media
- Government organizations
- NGOs
- The informed public
- Students/teachers
- But also the (so called) experts

Why analysis?

- In a complex and changing society, readers need to be guided through the numerical jungel: “What does the numbers really mean”?
- Unlike experts, the informed users and the general public need explanations, interpretations and comments

Why analysis?

- Analysis forces us to look closer at the data: concepts, definitions, measurements, sampling, etc.
- Analysis therefore provides a necessary feedback into the production process and helps increase the quality of the statistics, by uncovering errors and mistakes

Analysis is: Some synonyms:

- Comment
- Interpretation
- Study
- Breakdown
- Explanation
- Research

Analysis is …

- To select among all the possible numbers

- What is…
  - Important?
  - Interesting?
  - Relevant?
  - New…?

To select means …

- … to focus: two or three main findings
- Don’t try to comment on everything
- Avoid “table reading”: to describe every cell in a table

General motto: KISS!

- **Keep It Short and Simple**
  - **Tables**
  - **Graphs**
  - **Text**
  - **Titles**

Analysis is …

- **To *compare*:** point out differences, trends and tendencies
  - Over time/time series
  - Between groups
  - Or both

- And to make the figures comparable

Analysis is …

Percentage Distribution of Jordanian Females Aged 15 Years and above by Education Level and Urban / Rural (2006)

Educational Level	Total	Urban	Rural
Percent	100	100	100
Illitrate	13.7	11.9	22.1
Literate	4.4	4.4	4.3
Primary	10.2	10.1	10.7
Preparatory	16.3	16.7	14.7
Basic	18.1	17.6	20.4
Vocational Apprenticeship	0.1	0.1	0.0
Secondary	18.8	19.7	14.9
Intermediate Diploma	9.8	10.6	6.2
B.A	7.9	8.3	6.3
High Diploma	0.1	0.1	0.1
Master	0.4	0.4	0.2
Doctorate	0.0	0.0	0.0

Table from: “Woman statistics”, Department of Statistics, Jordan

Here, the most important and relevant comparison is, however, missing – the comparison of men and women

Analysis is …

- to put into context
- to explain (the unexpected)
- What do the figures changes/differences mean?
- Are the changes part of a more general pattern?
- In short: To make statistics informative and meaningful to the reader

In analysis…

- Use relative rather than absolute numbers: per cent, ratios, per capita, per 1 000 pop., …
- Use rounded numbers

Types of analysis?

- News releases = comments → media
- Popular presentations = descriptive → Posters/brochures
- Thematic analysis = ”interpretation” → Social reports/Women & men)
- In depth analysis/research = ”explanation” → Research report

Constructing tables is the first step of analysis:

- When constructing a table; we implicitly start analysing:
  - What is the dependent variable (indicator)?
  - What are the (most important) background (classification) variable(s) (and why)?
- A table is always (or should be) constructed on basis of certain ideas about relations between variables, which is also the basis of analysis

Titles are important!

Titles should…

- attract the attention of the readers
- create curiosity
- give a representative summary of the content
- be maximum one line

Titles

Use a substantial title:

Not: ”Results from the Labour Force Survey”

But: ”More women working”

News releases:

Structure:

- Name of statistics
- Heading/title
- Lead (the first paragraph)
- Short paragraphs…
- … with sub-headings
- small tables/graphs?
- date of release
- contact/more information:
  telephone no./e-mail address

News releases: Name and title

Labour Force Survey, 2007

More women in the labour force

Maximum one line.
No numbers

News releases: Lead/first paragraph

After being stable for some years, the labour force participation rate for women in 2007 reached 69 per cent, compared to 76 per cent for men. Weekly working hours are also increasing.

Maximum two or three sentences

Labour Force Survey Q3 2007

Higher participation rate among elderly

From the third quarter of 2006 to the third quarter of 2007, the labour force participation rate increased by 2.3 percentage points among people aged 55-66 years. For the population aged 15-74, the labour force participation rate rose by 0.7 percentage points.

From the third quarter of 2006 to the third quarter of 2007, employment rose by 78 000. The number of people in full-time employment increased by 90 000, while the number of people in part-time employment fell by 13 000. Average settled working hours were 34.7 hours per week, compared with 34.5 in the third quarter of 2006. Average settled working hours for men were 37.7 hours per week, compared with 31.3 hours for women.

Higher labour force participation for the elderly

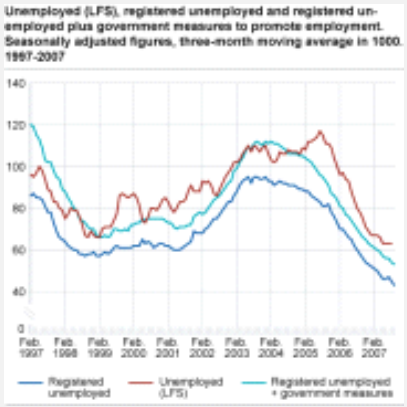
The labour force (the sum of employment and unemployment) increased by 58 000 people from the third quarter of 2006 to the third quarter of 2007. In the same period, the working-age population (aged 15-74) rose by 48 000. The proportion of 55-66 year-olds in the labour force increased from 63.3 to 65.6 per cent. The labour force participation rate for women rose by 1.0 percentage point, compared with 0.4 percentage points for men.

Number of employees on temporary contracts unchanged

238 000 were on temporary contracts in the third quarter of 2007. This was more or less unchanged from the third quarter of 2006. Hotels and restaurants have the highest share of employees on temporary contracts, with 21.3 per cent. Education and health and social work are also industries with a high share of employees on temporary contracts with 14.9 per cent. Transport and communication (5.6 per cent) and manufacturing (6.6 per cent) had the lowest shares of temporary employees.

Unemployment fell by 20 000

According to the LFS, the number of unemployed fell by 20 000 from the third quarter of 2006 to the third quarter of 2007. The decline mainly took place in the age group 25-54 years, where the unemployment fell by 15 000. The unemployment rate stood at 2.5 per cent.



The proportion of long-term unemployed - defined as persons who have been unemployed for at least six consecutive months - was 25 per cent in the third quarter of 2007, down 6 percentage points from the third quarter of 2006. The reduction in unemployment has come both among people who have been unemployed for shorter periods as well as the long-term unemployed. However, the relative reduction was largest among the long-tem unemployed.

Contact:

E-mail	Telephone (+47)
bnbnb.mnmnm@ssb.no	21 09 xx xx

Published 31 October 2007

Name of statistics

Short title

Lead

Short paragraph

Graph

Sub-heading

Short paragraph

•
•
•
•
•
•
•
•
•
•
•

More information

Date of publishing

Analysis / report =

A good mix of: Text + tables + graphs (+ metadata)

Good tables and graphs should support and complement the text

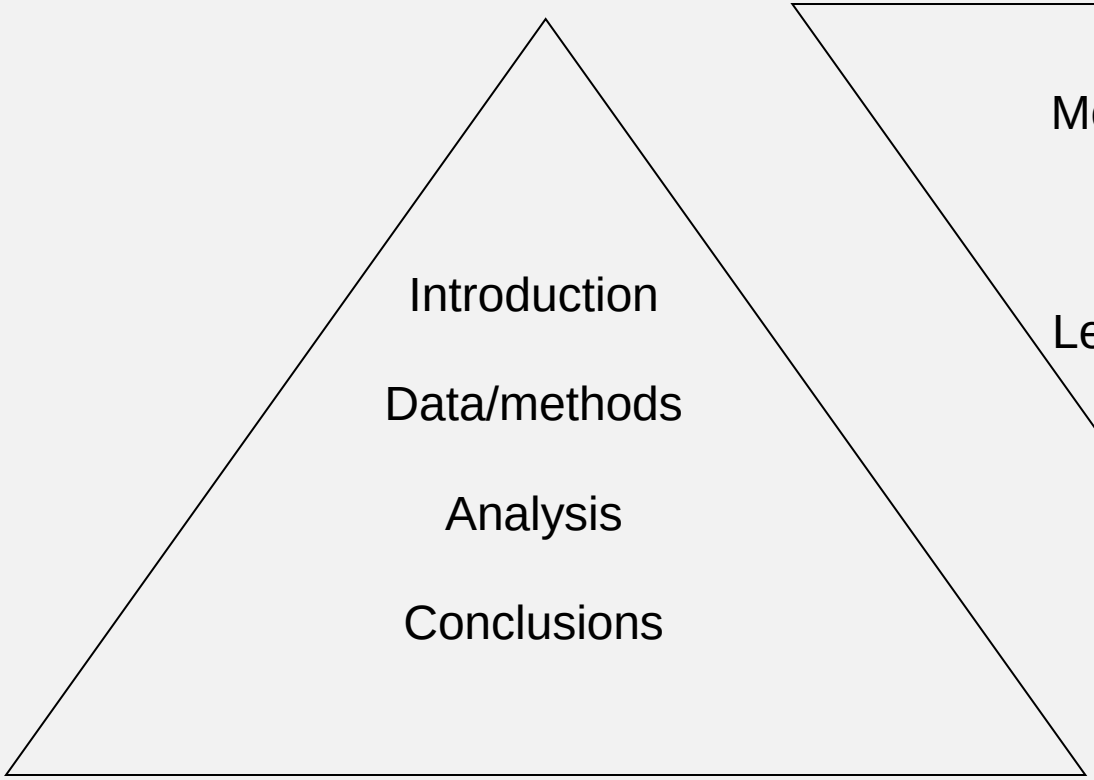
Guidelines for writing:

- **Use a simple language**
- **Short sentences and paragraphs**

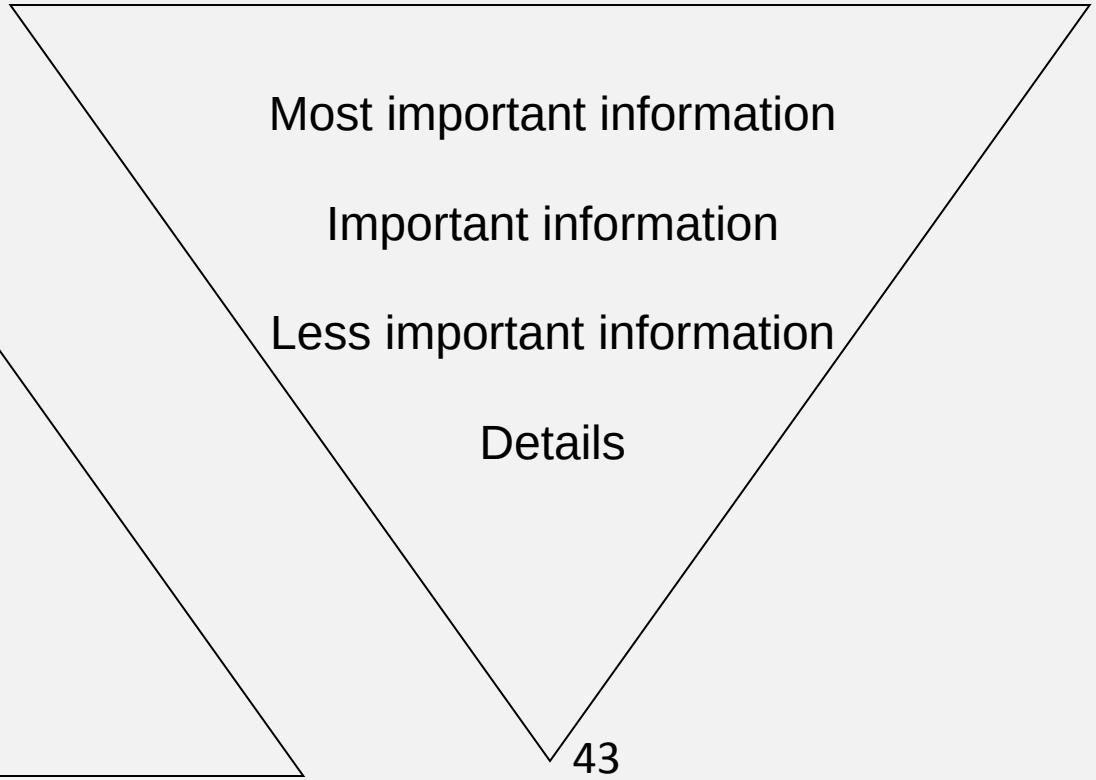
Guidelines for writing:

Start with the conclusions/most important points

“Academic writing”:



“Journalistic writing”:



Guidelines for writing:

Use time series

But: Be careful not to focus to much on short-term changes, without looking at the more long-term trend

Rounding:

“From 1995 to 2005 the number of female students increased from 32 765 to 65 756, while the number of male students increased from 28 435 to 43 567”.

“From 1995 to 2005 the number of female students increased from 32 800 to 65 800, while the number of male students increased from 28 400 to 43 600”.

In columns and rows:

Constructing
user-friendly tables

Two types of tables:

- Reference tables (”library”/ ”documentation” tables
- Presentation tables (”summary”/ ”demonstration” tables)

Reference tables

- for future reference or documentation purposes
- often big (typically: One page or more)
- detailed (many indicators/classifications).
- often present exact, absolute numbers
- often have a standardised structure
- are increasingly being replaced by data warehouses and data banks, where users can construct their own tables

Example: Typical reference table

3. Percentage of people by number of holiday trips and average number of holiday trips per person in different population groups. 2005

	Number of holiday trips					Average number of holiday trips per person	
	Total	0	1	2	3 or more	Among all	Among people with holiday trips
	Per cent						
1992	100	27	38	19	16	1,4	1,9
1993	100	27	33	20	20	1,5	2,1
1994	100	28	38	18	16	1,3	1,9
1997	100	26	39	19	16	1,4	1,8
1998	100	28	37	18	17	1,4	1,9
1999	100	24	34	20	22	1,6	2,1
2000	100	25	35	20	20	1,5	2,0
2001	100	23	37	20	19	1,5	2,0
2002	100	25	33	20	22	1,6	2,1
2003	100	22	35	20	23	1,7	2,1
2004	100	25	30	21	24	1,7	2,2
2005	**100**	**24**	**33**	**18**	**25**	**1,7**	**2,2**
Sex							
Males	100	25	34	20	21	1,6	2,1
Females	100	23	31	17	29	1,9	2,4
Age							
16-24 years	100	26	36	18	19	1,4	1,9
25-44 years	100	19	36	20	25	1,7	2,2
45-64 years	100	22	30	18	30	1,9	2,5
65-79 years	100	39	24	15	21	1,4	2,3
Household income. 1 000 NOK							
-99	100	24	33	24	20	1,4	1,9
100-199	100	41	27	16	17	1,3	2,2
200-299	100	36	32	16	16	1,2	2,0
300-399	100	33	31	16	20	1,4	2,1

Presentation tables

- smaller and simpler (extract from or summary of a reference table)
- main function is to present the numbers in a user-friendly way
- Presentation of “indicators” (percentages, rates, indices, averages) rather than absolute numbers
- Numbers are often rounded
- Focused (few variables; often only two) (in this respect, presentation tables can be compared to graphs)
- Used in press releases, presentations/analyses to illustrate some specific point

Example: Typical presentation tables

Life expectancy at birth in selected countries. 2003

	Women	Men
Japan	84.3	77.6
Spain	83.6	76.9
Switzerland	83.1	78.0
France	82.9	75.9
Iceland	82.7	79.7
Sweden	82.5	77.9
Italy	82.5	76.8
Norway	**82.0**	**77.1**
Finland	81.8	75.1
Belgium	81.7	75.9
Austria	81.6	75.9
Germany	81.4	75.7
United Kingdom	80.7	76.2
Portugal	80.5	74.2
Denmark	79.9	75.1

Source: Eurostat.

Private cars per 1 000 inhabitants in selected countries. 2003

Italy	591
Germany	546
France	489
USA	464
Spain	464
Sweden	454
Finland	433
Norway	**423**
Portugal	377
Greece	365
Denmark	347

Source: Information Council for Road Traffic.

Basic formatting of tables

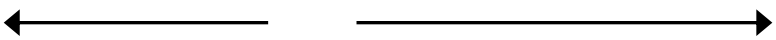
Total population in selected African countries

	1995	2005
Angola	12279700	15941400
Eritrea	3097300	4401400
Kenya	27225900	34255700
Madagascar	13945500	18605900
Malawi	10110500	12883000
Mozambique	15853700	19792300
South Africa	41894000	47431800
Uganda	20893300	28816200
Zambia	9559400	11668500

Basic formatting

Total population in selected African countries

	1995	2005
Angola	12279700	15941400
Eritrea	3097300	4401400
Kenya	27225900	34255700
Madagascar	13945500	18605900
Malawi	10110500	12883000
Mozambique	15853700	19792300
South Africa	41894000	47431800
Uganda	20893300	28816200
Zambia	9559400	11668500



Align to the left Align to the right

Drop all vertical and most of the horisontal lines

Basic formatting

Total population in selected African countries

	1995	2005
Angola	12,279,700	15,941,400
Eritrea	3,097,300	4,401,400
Kenya	27,225,900	34,255,700
Madagascar	13,945,500	18,605,900
Malawi	10,110,500	12,883,000
Mozambique	15,853,700	19,792,300
South Africa	41,894,000	47,431,800
Uganda	20,893,300	28,816,200
Zambia	9,559,400	11,668,500

Or:

Total population i selected African countries

	1995	2005
Angola	12 279 700	15 941 400
Eritrea	3 097 300	4 401 400
Kenya	27 225 900	34 255 700
Madagascar	13 945 500	18 605 900
Malawi	10 110 500	12 883 000
Mozambique	15 853 700	19 792 300
South Africa	41 894 000	47 431 800
Uganda	20 893 300	28 816 200
Zambia	9 559 400	11 668 500

Group the digits: Use comma or blank before every third digit

Basic formatting

Total population in selected African countries. Millions

	1995	2005
Angola	12.3	15.9
Eritrea	3.1	4.4
Kenya	27.2	34.3
Madagascar	13.9	18.6
Malawi	10.1	12.9
Mozambique	15.9	19.8
South Africa	41.9	47.4
Uganda	20.9	28.8
Zambia	9.6	11.7

Round to millions
– with one decimal

Basic formatting

Total population in selected African countries. Millions

	1995	2005	% growth
South Africa	41.9	47.4	13.2
Kenya	27.2	34.3	25.8
Uganda	20.9	28.8	37.9
Mozambique	15.9	19.8	24.8
Madagascar	13.9	18.6	33.4
Angola	12.3	15.9	29.8
Malawi	10.1	12.9	27.4
Zambia	9.6	11.7	22.1
Eritrea	3.1	4.4	42.1

Add % growth

Sort by population size

Columns and rows

Production of Food Crops in Tanzania Mainland
1994-2002 (Quantities in 000 tonnes)

Food crops	1994	1995	1996	1997	1998	1999	2000	2001	2002
Maize	1,458	2,875	2,822	2,386	2,073	2,848	2,870	3,348	3,495
Paddy	192	517	495	413	847	439	443	1,010	1,054
Wheat	44	47	49	51	53	68	61	65	68
Millet	295	222	269	195	50	76	72	74	77
Sorghum	258	443	360	449	249	363	365	364	380
Cassava	1,697	1,812	1,873	1,936	2,048	2,187	2,118	2,007	2,095
Source: Ministry of Agriculture/National Bureau of Statistics									

NBS, Tanzania

Columns and rows

Production of Food Crops in Tanzania Mainland 1994-2002

(Quantities in 000 tonnes)

	Maize	Paddy	Wheat	Millet	Sorghum	Cassava
1994	1,458	192	44	295	258	1,697
1995	2,875	517	47	222	443	1,812
1996	2,822	495	49	269	360	1,873
1997	2,386	413	51	195	449	1,936
1998	2,073	847	53	50	249	2,048
1999	2,848	439	68	76	363	2,187
2000	2,870	443	61	72	365	2,118
2001	3,348	1,010	65	74	364	2,007
2002	3,495	1,054	68	77	380	2,095

Source: Ministry of Agriculture/National Bureau of Statistics

Tables with absolute *and* relative numbers

3.11 Okuryazarlık ve cinsiyete göre nüfus
Population by literacy and sex
[6 ≥ yaş - age]

Okuryazarlık - Literacy		1975	1980	1985	1990	2000
Erkek - Males						
Okuma yazma bilmeyen - Illiterate		4 096 110	3 802 455	2 932 964	2 779 172	1 857 132
	(%)	23.79	20.02	13.48	11.19	6.14
Okuma yazma bilen - Literate		13 118 658	15 188 078	18 824 697	22 066 860	28 384 266
	(%)	76.21	79.98	86.52	88.81	93.86
Bilinmeyen - Unknown		41 645	8 568	43 193	10 496	4 047
Kadın - Females						
Okuma yazma bilmeyen - Illiterate		8 048 078	8 394 868	6 770 698	6 808 809	5 732 525
	(%)	49.49	45.33	31.84	28.02	19.36
Okuma yazma bilen - Literate		8 212 708	10 123 133	14 497 065	17 488 623	23 875 115
	(%)	50.51	54.67	68.16	71.98	80.64
Bilinmeyen - Unknown		13 406	6 521	43 720	9 150	6 158

Not. Oranlar hesaplanırken bilinmeyen kapsanmamıştır.

Note. Proportions are calculated by excluding unknown.

Statistical Yearbook of Turkey, 2005

Tables with absolute *and* relative numbers

	1975	1980	1985	1990	2000
Males			*Number*		
Illiterate	4 096 110	3 802 455	2 932 964	2 779 172	1 857 132
Literate	13 118 658	15 188 076	18 824 697	22 066 860	28 384 266
Unknown	41 645	8 568	43 193	10 496	4 047
Females					
Illiterate	8 048 078	8 394 868	6 770 698	6 808 809	5 732 525
Literate	8 212 708	10 123 133	14 497 065	17 488 623	23 875 115
Unknown	13 406	6 521	43 720	9 150	6 158
Males			*Per cent*		
Illiterate	23,8	20,0	13,5	11,2	6,1
Literate	76,2	80,0	86,5	88,8	93,9
Females					
Illiterate	49,5	45,3	31,8	28,0	19,4
Literate	50,5	54,7	68,2	72,0	80,6

Tables with absolute *and* relative numbers

Tableau N° 09 :
Répartition des chômeurs par Sexe et Strate

	URBAIN	RURAL	ENSEMBLE
MASCULIN	588 196	400 093	988 288
% en ligne	59,5	40,5	100
% en colonne	75,7	86,3	79,6
FÉMININ	189 170	63 383	252 553
% en ligne	74,9	25,1	100
% en colonne	24,3	13,7	20,4
TOTAL	777 366	463 475	1 240 841
% en ligne	62,6	37,4	100
% en colonne	100	100	100

From: www.ons.dz

This table is not very user-friendly

Tables with absolute *and* relative numbers

9. Chômeurs par sexe et strate

	Urbain	Rural	Ensemble
Masculin	588 196	400 093	988 288
Féminin	189 170	63 383	252 553
Total	**777 366**	**463 475**	**1 240 841**
		Pour cent	
Masculin	75,7	86,3	79,6
Féminin	24,3	13,7	20,4
Total	**100,0**	**100,0**	**100,0**

Percentages in tables: No of decimals

4.9 Yaş grubuna göre intiharlar - Suicides by age groups

Yaş grubu - Age group	1999	2000	2001	2002	2003*
Toplam - Total	1 853	1 802	2 584	2 301	2 705
(%)					
-15	2.38	3.16	2.32	3.17	2.96
15-24	32.60	34.46	32.55	32.42	34.08
25-34	24.39	22.14	22.99	22.99	21.22
35-44	15.70	14.60	16.18	16.47	14.12
45-54	9.98	10.32	10.99	11.95	11.13
55-64	6.31	7.49	7.04	6.00	7.06
65-74	5.83	5.33	5.53	4.39	5.66
75+	2.81	2.50	2.40	2.61	3.77

One decimal is enough!

Percentages in tables: Which way?

Example: Number of employees with different working hours	
Full time	2,706,300
Part-time	1,746,800
Total	4,453,100

Example: Employees with different working hours. Per cent	
Full time	60.8
Part-time	39.2
Total	100.0

Percentages in tables: Which way?

Example: Number of employees by working hours and gender

	Men	Women	Total
Full time	1,734,600	971,700	2,706,300
Part-time	721,700	1,025,100	1,746,800
Total	**2,456,300**	**1,996,800**	**4,453,100**

Example: Employees by working hours and gender. Per cent

	Men	Women	Total
Full time	70.6	48.7	60.8
Part-time	29.4	51.3	39.2
Total	**100.0**	**100.0**	**100.0**

Calculate percentage

Compare

General rule: Calculate percentages on basis of the independent (classification) variable – here: gender

Employed men and women working part-time. Per cent

Men	29.4
Women	51.3

Example: Employees by working hours and gender. Per cent

	Men	Women	Total
Full time	64.1	35.9	100.0
Part-time	41.3	58.7	100.0
Total	**55.2**	**44.8**	**100.0**

Simplify tables

1.12 Yetişkin nüfusun cinsiyete göre okuryazarlık oranı(%)

Adult population literacy rate by sex

[15 ve daha yukarı yaştaki nüfus -Population 15 years of age and over]

A. Toplam - Total B. Erkek - Male C. Kadın - Female

%

Sayım yılı Census year		Okuma yazma bilen oranı Literate	Okuma yazma bilmeyen oranı Illiterate
1935	A	18.7	81.3
	B	30.8	69.2
	C	8.0	92.0
1945	A	28.5	71.5
	B	44.3	55.7
	C	13.5	86.5
1950	A	31.9	68.1
	B	47.7	52.3
	C	16.7	83.3
1955	A	38.8	61.2
	B	56.3	43.7
	C	21.3	78.7
1960	A	38.1	61.9
	B	54.8	45.2
	C	21.1	78.9
1965	A	46.2	53.8
	B	64.7	35.3
	C	27.6	72.4
1970	A	53.6	46.4
	B	71.0	29.0
	C	36.2	63.8
1975	A	61.6	38.4
	B	77.5	22.5
	C	45.1	54.9

Simplify tables

Literacy rate. Adult men an women

	Men	Women
1935	30,8	8,0
1945	44,3	13,5
1950	47,7	16,7
1955	56,3	21,3
1960	54,8	21,1
1965	64,7	27,6
1970	71,0	38,2
1975	77,5	45,1
etc.	:	:

STATISTIQUES ALGERIE

PARC AUTOMOBILE 2006

RÉPARTITION DU PARC NATIONAL AUTOMOBILE SELON LE GENRE ET LES TRANCHES D'AGES

DES VEHICULES AU 31/12/2006

GENRE	*TRANCHES D'AGE*										*TOTAL*
	Moins de 5 ans		*de 5 à 9 ans*		*de 10 à 14 ans*		*de 15 à 19 ans*		*20 ans et plus*		
	Nombre	%	Nombre	%	Nombre	%	Nombre	%	Nombre	%	
Véhicule de Tourisme	253 143	12,39	129 216	6,33	148 844	7,29	363 835	17,81	1 147 786	56,19	2 042 824
Camion	18 868	5,85	9 203	2,85	11 143	3,45	44 578	13,81	238 906	74,03	322 698
Camionnette	54 712	7,96	27 914	4,06	62 799	9,14	91 025	13,24	450 941	65,60	687 391
Autocar / Autobus	8 861	16,18	15 836	28,91	3 927	7,17	5 078	9,27	21 067	38,47	54 769
Tracteur Routier	3 916	7,37	1 690	3,18	3 134	5,90	10 658	20,07	33 716	63,48	53 114
Tracteur Agricole	4 834	3,84	4 051	3,22	14 788	11,75	25 315	20,11	76 904	61,09	125 892
Véhicule Spécial	142	4,62	108	3,52	199	6,48	403	13,12	2 219	72,26	3 071
Remorque	6 245	6,06	4 924	4,78	15 145	14,70	25 017	24,28	51 697	50,18	103 028
Moto	186	1,96	333	3,50	235	2,47	1 138	11,97	7 615	80,10	9 507
TOTAL	350 907	10,31	193 275	5,68	260 214	7,65	567 047	16,67	2 030 851	59,69	3 402 294

PARC NATIONAL AUTOMOBILE SELON LE GENRE ET LES TRANCHES D'AGES DES VEHICULES AU 31/12/2006

GENRE	TRANCHES D'AGE										TOTAL
	Moins de 5 ans		de 5 à 9 ans		de 10 à 14 ans		de 15 à 19 ans		20 ans et plus		
	Nombre	%	Nombre	%	Nombre	%	Nombre	%	Nombre	%	= 100%
Véhicule de Tourisme	253 143	12,4	129 216	6,3	148 844	7,3	363 835	17,8	1 147 786	56,2	2 042 824
Camion	18 868	5,9	9 203	2,9	11 143	3,5	44 578	13,8	238 906	74,0	322 698
Camionnette	54 712	8,0	27 914	4,1	62 799	9,1	91 025	13,2	450 941	65,6	687 391
Autocar / Autobus	8 861	16,2	15 836	28,9	3 927	7,2	5 078	9,3	21 067	38,5	54 769
Tracteur Routier	3 916	7,4	1 690	3,2	3 134	5,9	10 658	20,1	33 716	63,5	53 114
Tracteur Agricole	4 834	3,8	4 051	3,2	14 788	11,8	25 315	20,1	76 904	61,1	125 892
Véhicule Spécial	142	4,6	108	3,5	199	6,5	403	13,1	2 219	72,3	3 071
Remorque	6 245	6,2	4 924	4,8	15 145	14,7	25 017	24,3	51 697	50,2	103 028
Moto	186	2,0	333	3,5	235	2,5	1 138	12,0	7 615	80,1	9 507
TOTAL	350 907	10,3	193 275	5,7	260 214	7,7	567 047	16,7	2 030 851	59,7	3 402 294

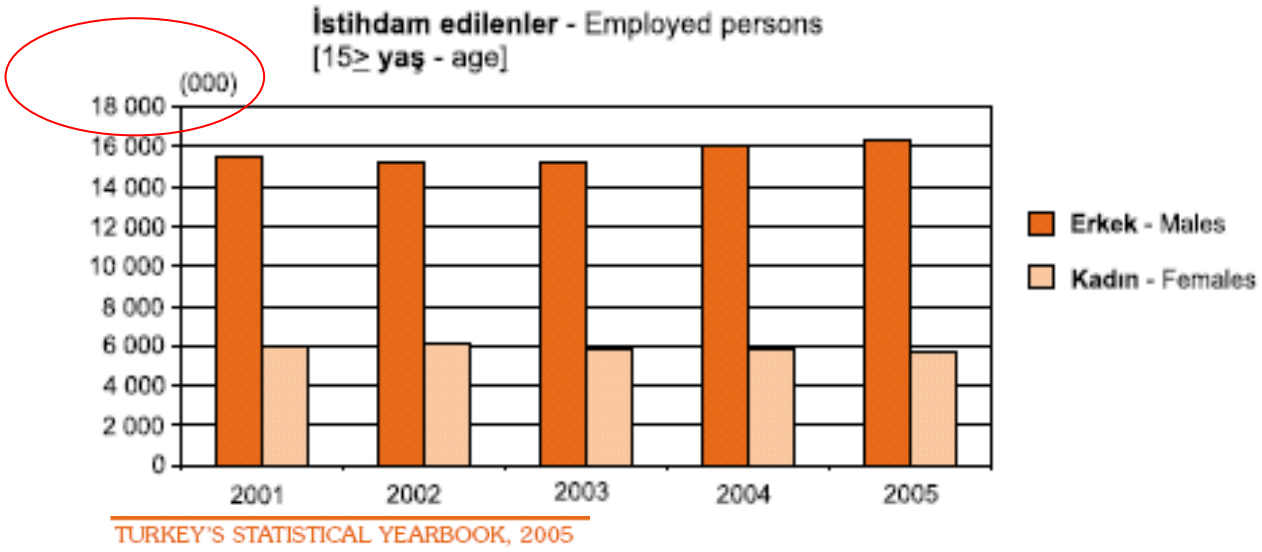
Rounding in tables

Indicator	2006	2005	2004	2003
Number of Registered Births (000)	163.0	152.3	150.2	148.3
Number of Registered Deaths (000)	20.4	17.9	17.0	16.9
Number of Registered Marriages (000)	59.3	56.4	53.8	48.8
Number of Registered Divorces (000)	11.4	10.2	9.8	9.0

From: Jordan in Figures. 2006

Indicator	2006	2005	2004	2003
Births	163,000	152,300	150,200	148,300
Deaths	20,400	17,900	17,000	16,900
Marriages	59,300	56,400	53,800	48,800
Divorces	11,400	10,200	9,800	9,000

… and graphs


İstihdam edilenler - Employed persons
[15≥ yaş - age]
(000)
18 000
16 000
14 000
12 000
10 000
8 000
6 000
4 000
2 000
0
2001
2002
2003
2004
2005
Erkek - Males
Kadın - Females
TURKEY'S STATISTICAL YEARBOOK, 2005

Titles of tables/graphs: Clear and simple

Distribution des résidents par activité de loisirs

Résidents par activité de loisirs. Per cent

Percentage Distribution of Jordanian Females Aged 15 Years and above by Education Level and Urban/Rural (2006)

Educational level of women 15 years + in urban and rural areas. Per cent. 2006

Titles of tables/graphs

Instead of: *Percentage distribution of households by type of household*

write: *Household types. Per cent.*

Not: *Pupil to teacher ratio*

but: *Pupils per teacher.*

From tables to graphs

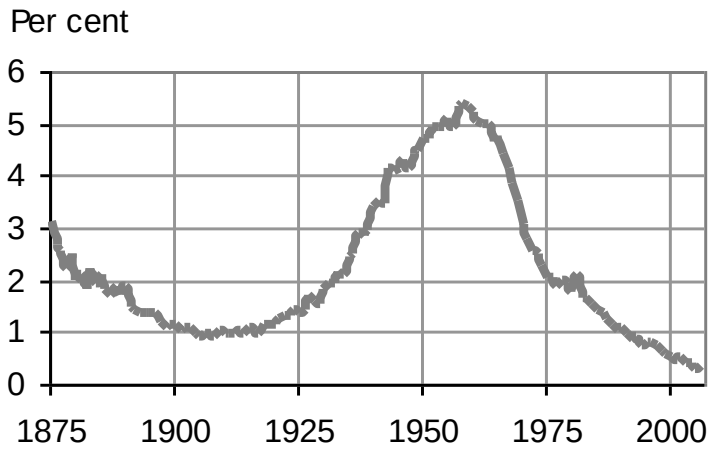
Why graphs?

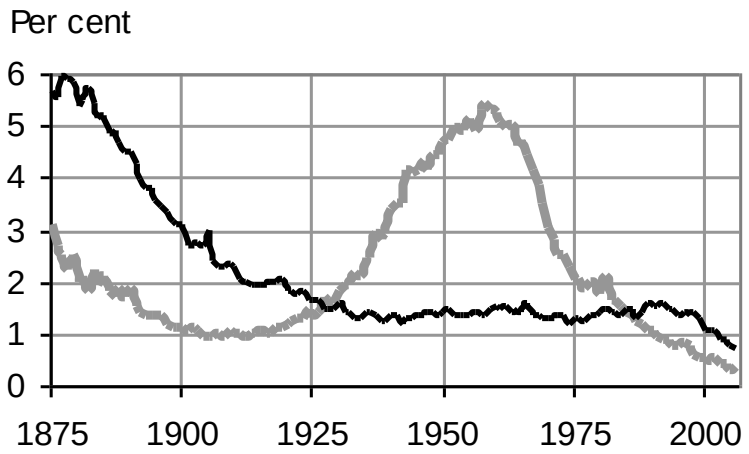
- Graphs encourage comparison of trends and analysis of differences and relationships
- In addition, graphs compress data; they have high data density
- Graphs are pedagogical, because they are easier to remember
- Graphs are ”eye catchers”

Example:

Per cent girls given the first name *Anne* each year

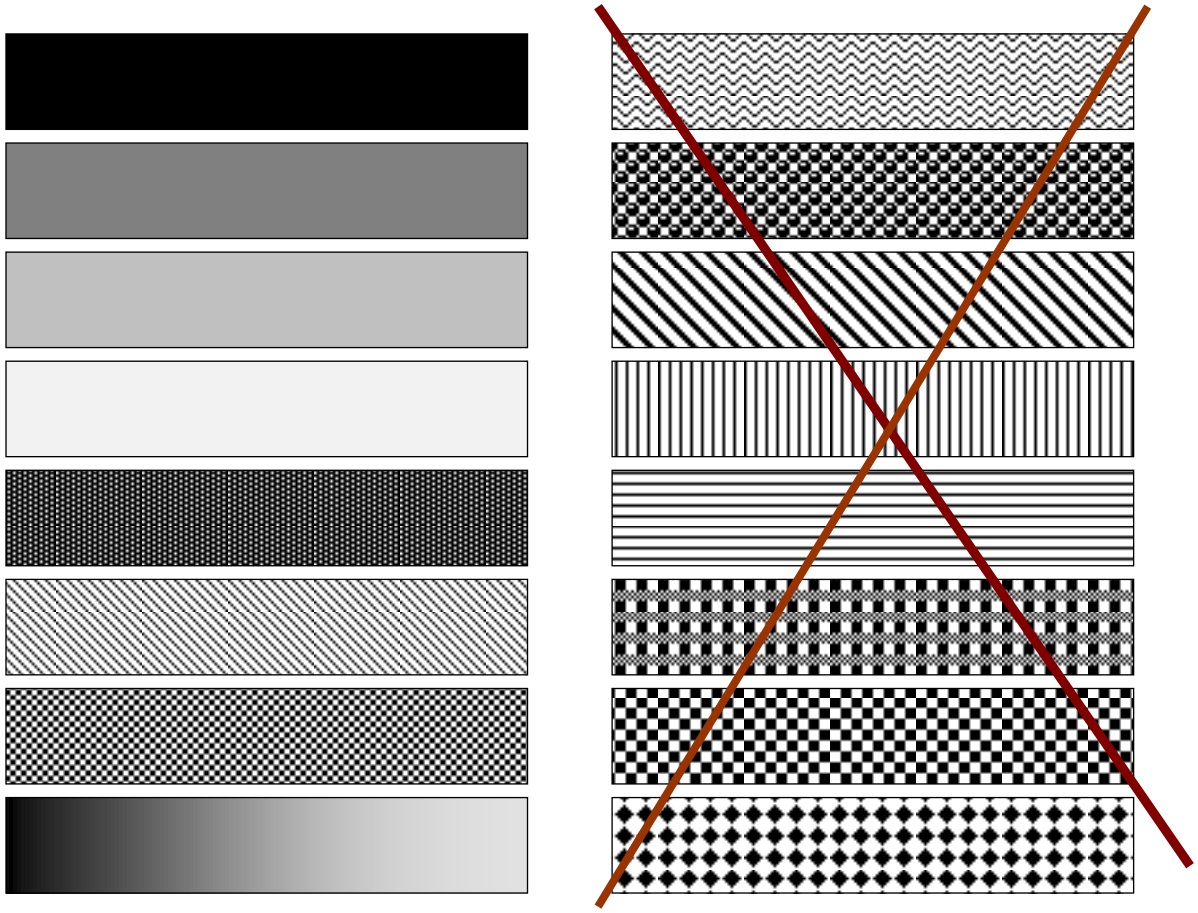
Year:	Pct.:	Year:	Pct.:	Year:	Pct.:	Year:	Pct.:	Year:	Pct.:	Year:	Pct.:
1875	3,11	**1897**	1,17	**1919**	1,12	**1941**	3,52	**1963**	4,99	**1985**	1,39
1876	2,67	**1898**	1,10	**1920**	1,16	**1942**	3,47	**1964**	4,63	**1986**	1,36
1877	2,53	**1899**	1,13	**1921**	1,24	**1943**	4,14	**1965**	4,74	**1987**	1,23
1878	2,20	**1900**	1,11	**1922**	1,31	**1944**	4,06	**1966**	4,44	**1988**	1,14
1879	2,48	**1901**	1,03	**1923**	1,31	**1945**	4,15	**1967**	4,16	**1989**	1,03
1880	1,97	**1902**	1,09	**1924**	1,43	**1946**	4,29	**1968**	3,83	**1990**	1,05
1881	2,07	**1903**	1,05	**1925**	1,36	**1947**	4,13	**1969**	3,49	**1991**	0,96
1882	1,80	**1904**	0,96	**1926**	1,41	**1948**	4,41	**1970**	3,05	**1992**	0,85
1883	2,22	**1905**	0,93	**1927**	1,70	**1949**	4,45	**1971**	2,77	**1993**	0,88
1884	1,95	**1906**	0,94	**1928**	1,61	**1950**	4,68	**1972**	2,52	**1994**	0,76
1885	2,12	**1907**	0,97	**1929**	1,55	**1951**	4,72	**1973**	2,49	**1995**	0,78
1886	1,82	**1908**	0,91	**1930**	1,81	**1952**	4,95	**1974**	2,29	**1996**	0,81
1887	1,70	**1909**	1,04	**1931**	1,91	**1953**	4,95	**1975**	2,06	**1997**	0,73
1888	1,84	**1910**	0,99	**1932**	1,95	**1954**	4,90	**1976**	2,04	**1998**	0,61
1889	1,70	**1911**	0,97	**1933**	2,16	**1955**	5,12	**1977**	1,88	**1999**	0,54
1890	1,85	**1912**	0,94	**1934**	2,10	**1956**	4,91	**1978**	1,99	**2000**	0,52
1891	1,50	**1913**	1,01	**1935**	2,42	**1957**	5,30	**1979**	1,94	**2001**	0,45
1892	1,39	**1914**	0,98	**1936**	2,47	**1958**	5,40	**1980**	1,77	**2002**	0,51
1893	1,36	**1915**	1,06	**1937**	2,91	**1959**	5,33	**1981**	2,07	**2003**	0,42
1894	1,36	**1916**	1,01	**1938**	2,81	**1960**	5,23	**1982**	1,66	**2004**	0,38
1895	1,36	**1917**	0,98	**1939**	2,93	**1961**	5,04	**1983**	1,65	**2005**	0,29
1896	1,36	**1918**	1,13	**1940**	3,40	**1962**	4,97	**1984**	1,53	**2006**	0,36





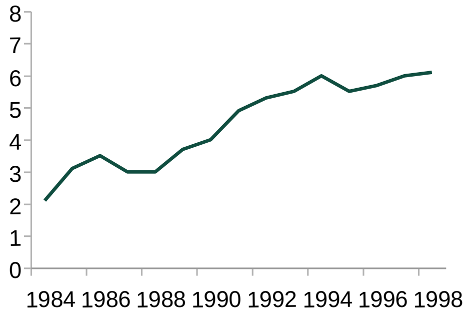
Charts speak directly to the eye!

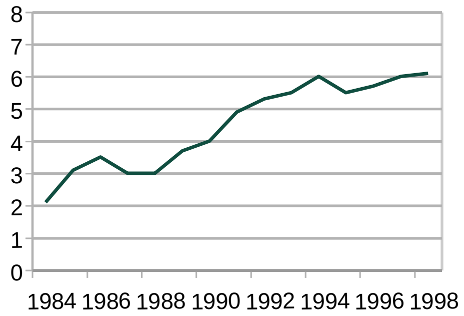
Graphs: Use of patterns

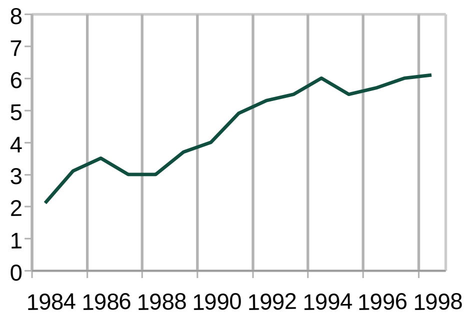


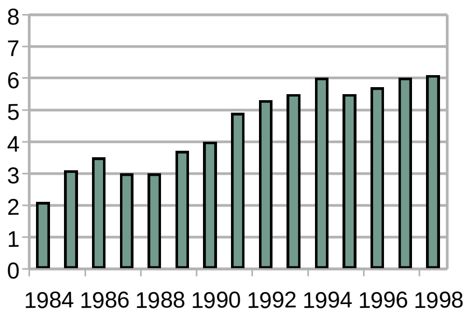
Graphs: Use of gridlines

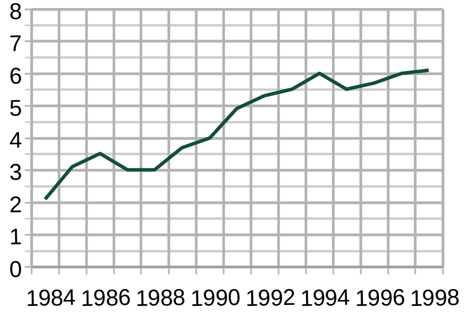
But how many?

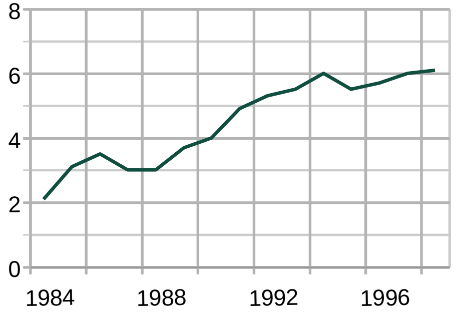




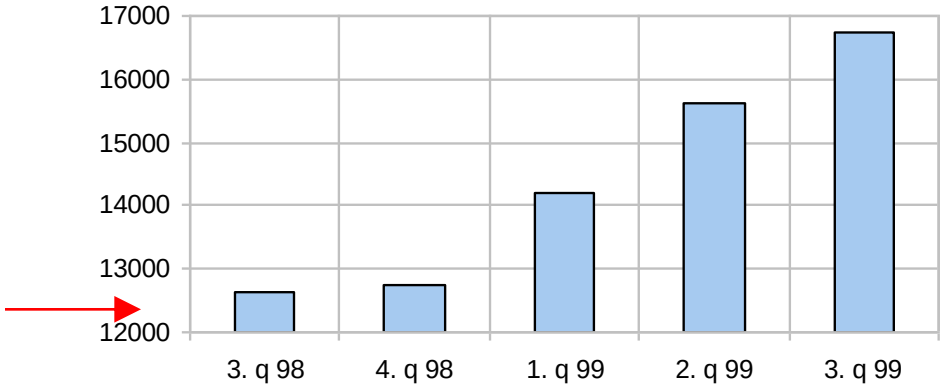




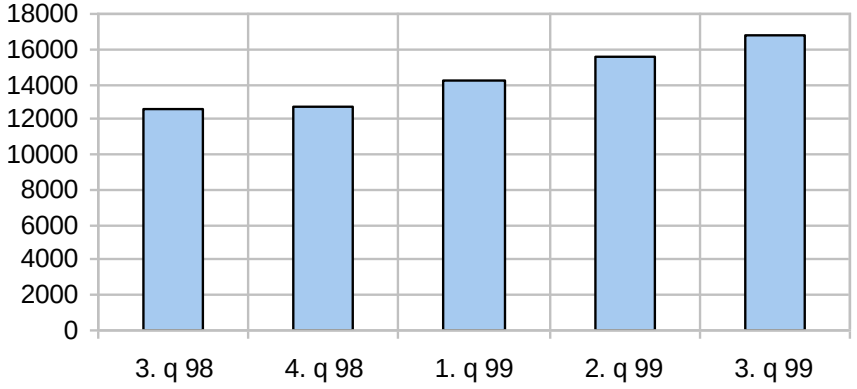




How to lie with graphs

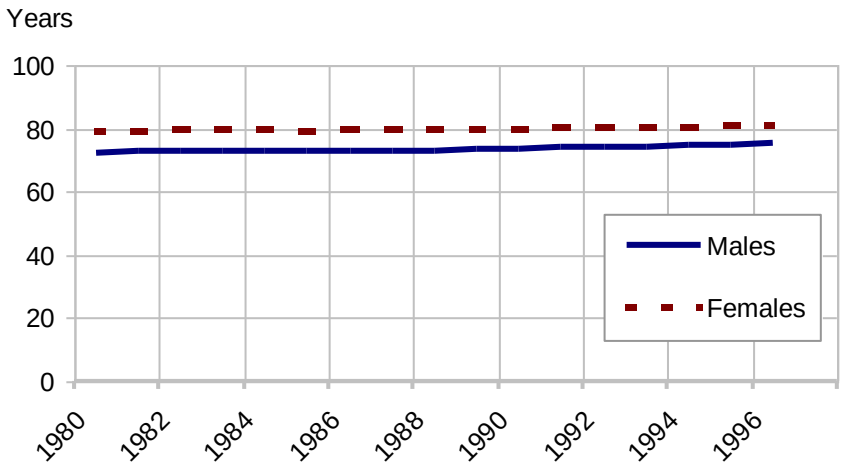


Increase of 600 % ?!

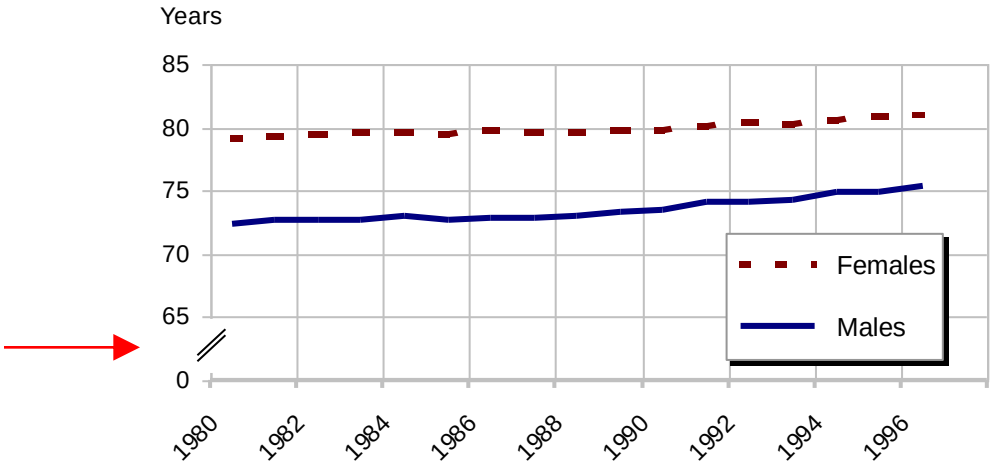


No, only 35%!

But:



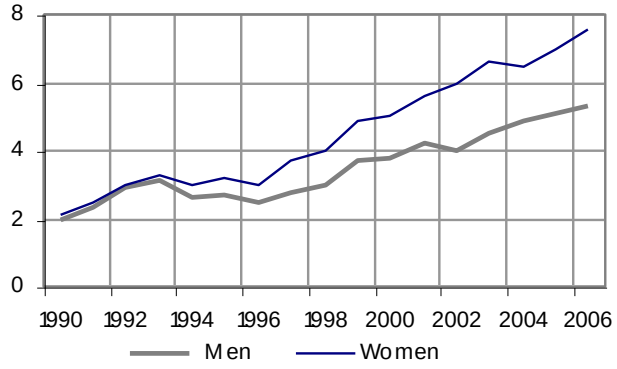
When you compare groups…

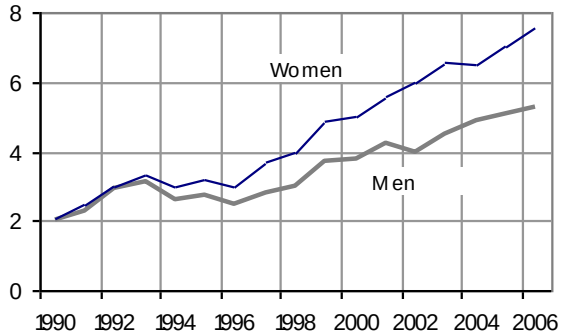


…its OK to break the value axis

Graphs: Issues and solutions

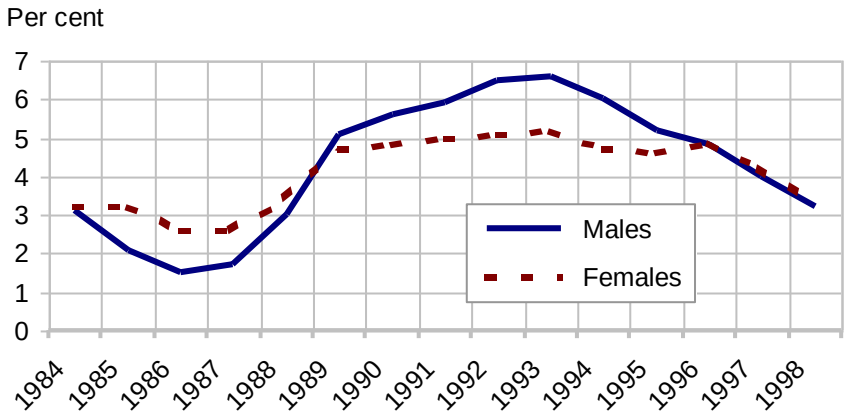
Legend: Where to place it?



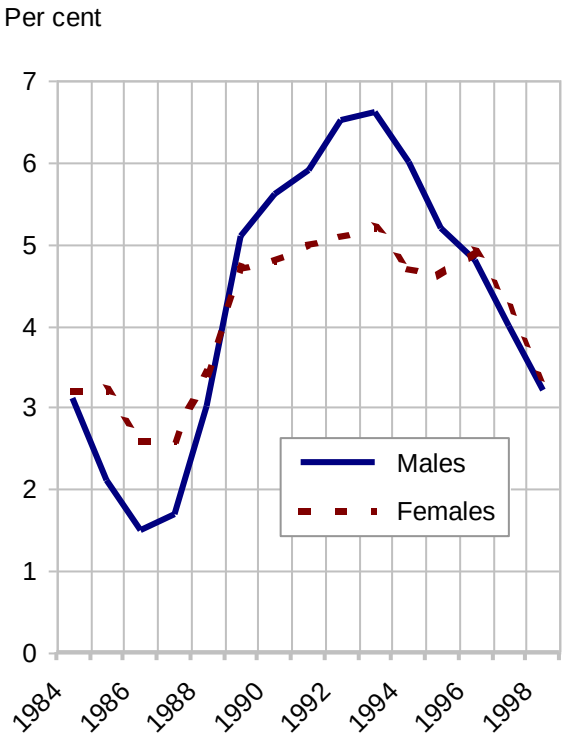


Graphs: Issues and solutions (cont.)

Format/proportions



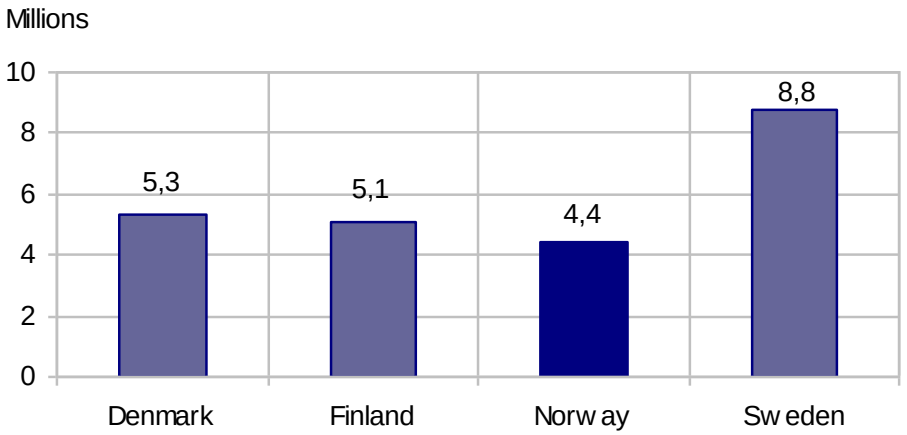
Landscape

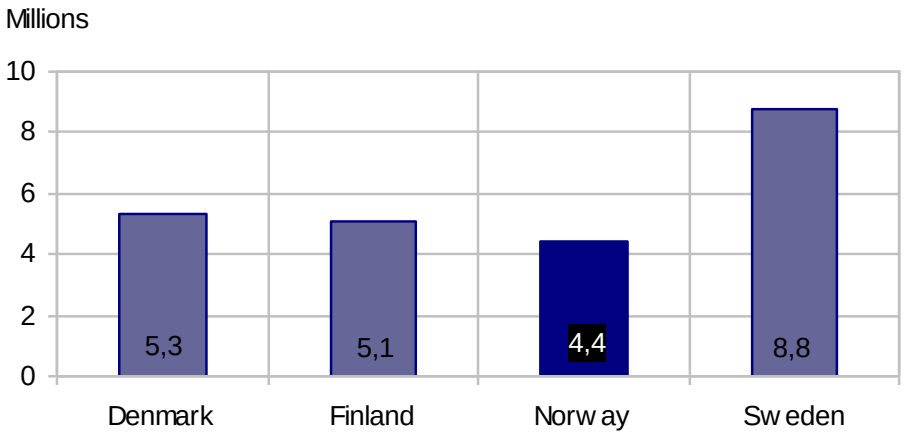


Portrait

Graphs: Issues and solutions (cont.)

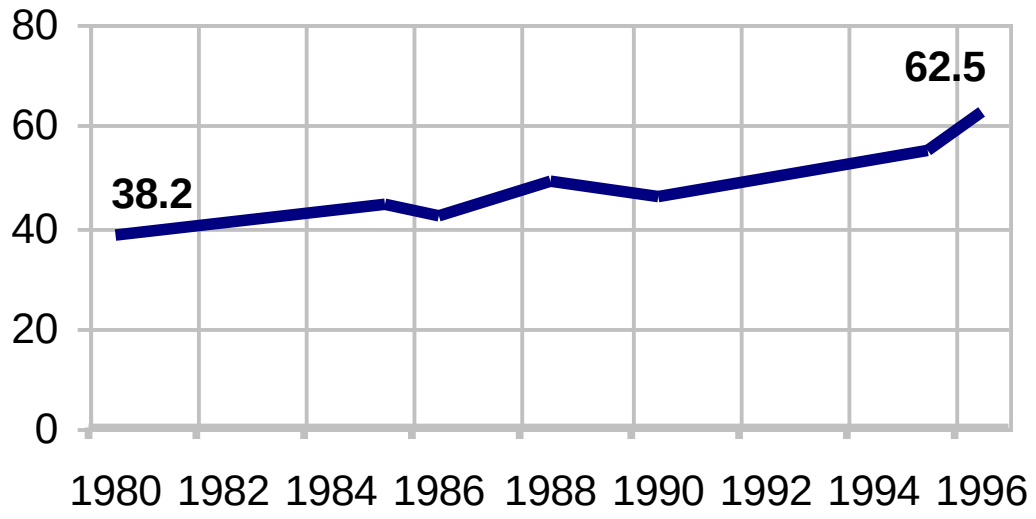
Should values be given in the graph?





Graphs: Issues and solutions (cont.)

In line charts, it is often useful to give the first and the latest value:



Main types of graphs:

- Bar charts (vertical)
  - Grouped
  - Stacked
- Bar charts (horisontal)
  - Grouped & stacked
- Line charts + area charts
- Pie charts
- Other types/ combinations

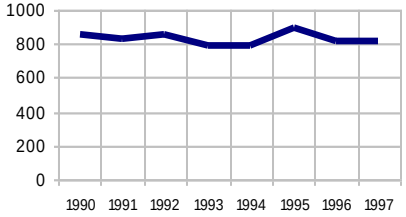
Which type of graph to use?:

Number of adopted children 1990-1997

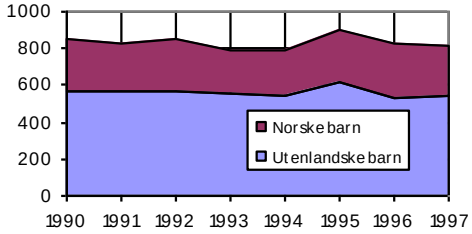
	Total				Norwegian			Foreign		
	Total	Under 3 years	3 - 11 years	12 years and over	Total	Boys	Girls	Total	Boys	Girls
1990	**855**	397	303	155	283	137	146	572	309	263
1991	**833**	418	263	152	271	131	140	562	309	253
1992	**851**	442	251	158	279	149	130	572	284	287
1993	**786**	397	246	143	236	125	111	550	312	238
1994	**788**	426	231	131	239	115	124	549	273	276
1995	**898**	490	257	151	284	141	143	614	272	342
1996	**822**	418	206	198	295	134	161	527	240	287
1997	**814**	469	189	156	272	126	146	542	244	298

Possible charts from the above table:

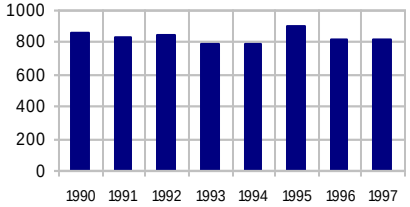
No. of adopted children 1990-1997

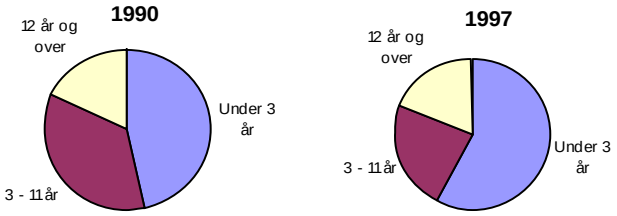


No. of adopted children. Norwegian and foreign 1990-1997

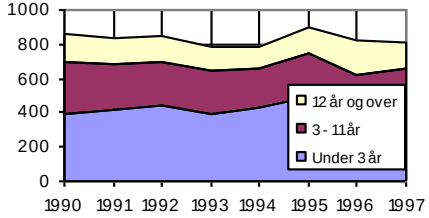


No. of adopted children 1990-1997

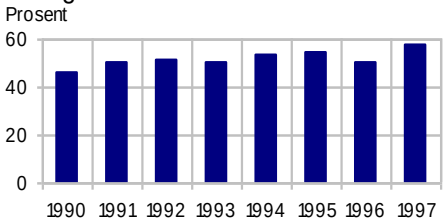




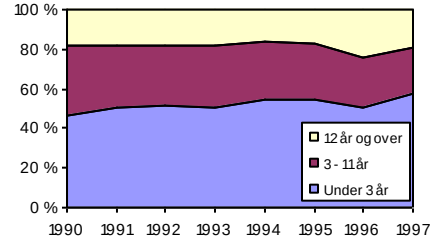
No. of adopted children by age 1990-1997



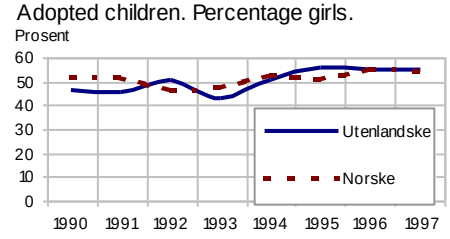
Adopted children. Percentage under the age of 3. 1990-1997



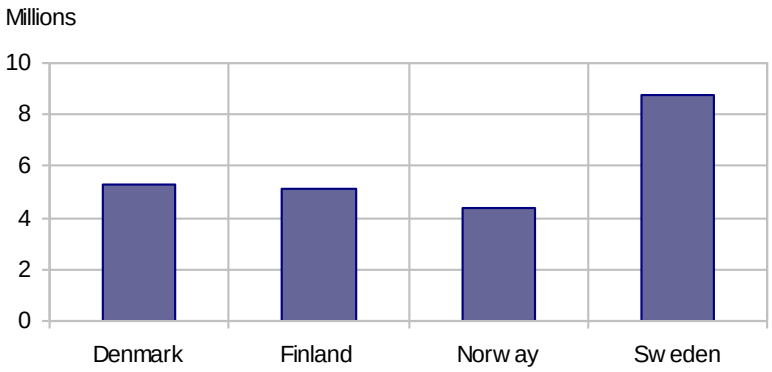
Adopted children by age 1990-1997



Adopted children. Percentage girls.

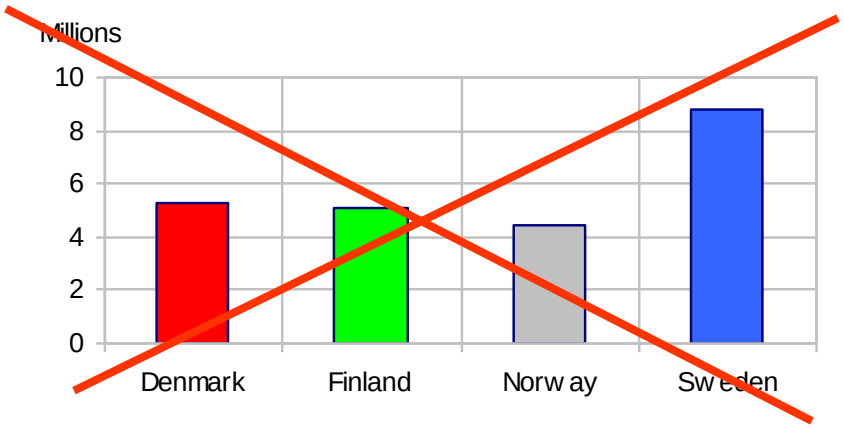


Bar charts (vertical):

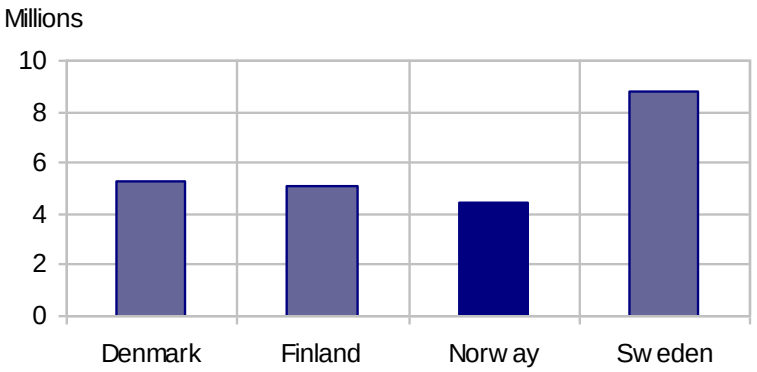


- The simplest and most basic chart type
- Used to show absolute or relative frequencies, percentages, averages

Bar charts (vertical) (cont.):

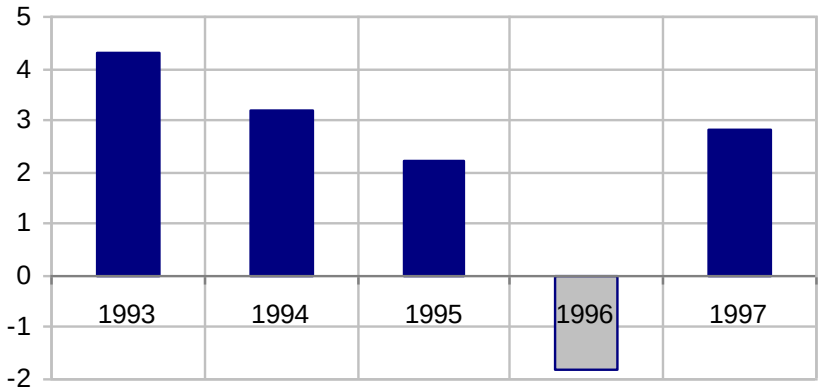


With only one classification variable it is best to use only one colour/pattern



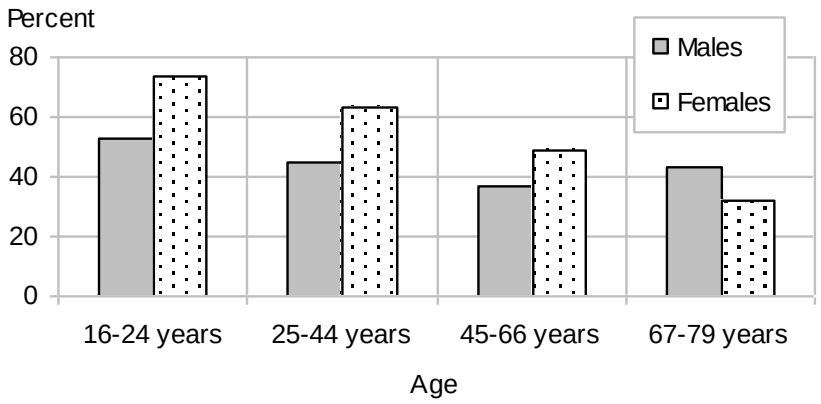
If you want to focus on one class/group, this can be done by using a different colour/pattern

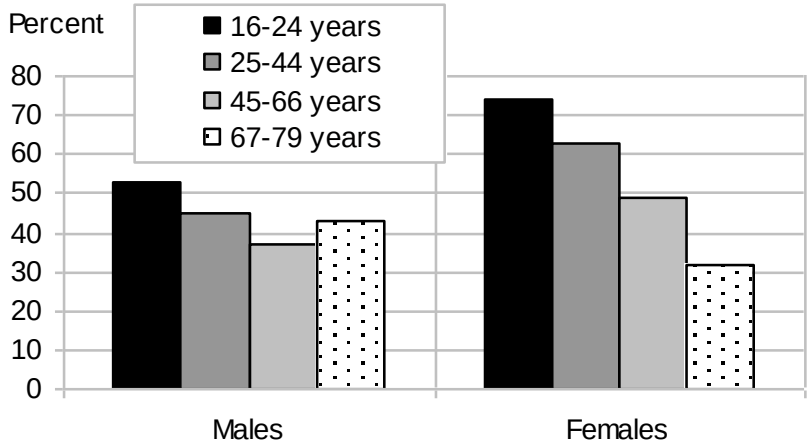
Bar charts (vertical) (cont.):



When both positive and negative values are plotted, use different colours/ patterns

Grouped bar charts:



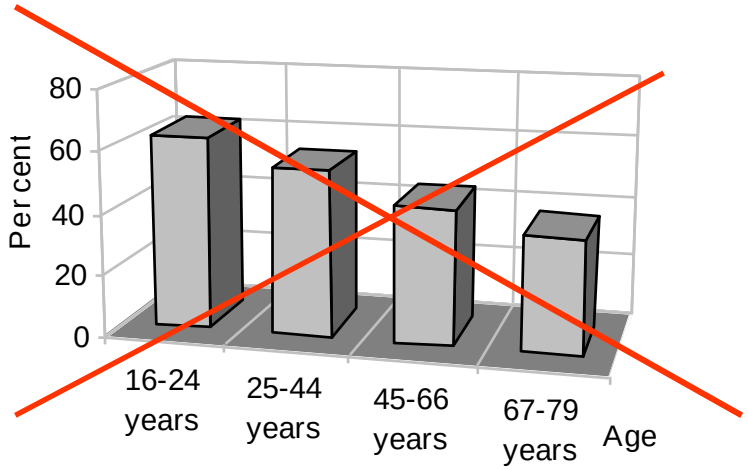


Two (or more) categories

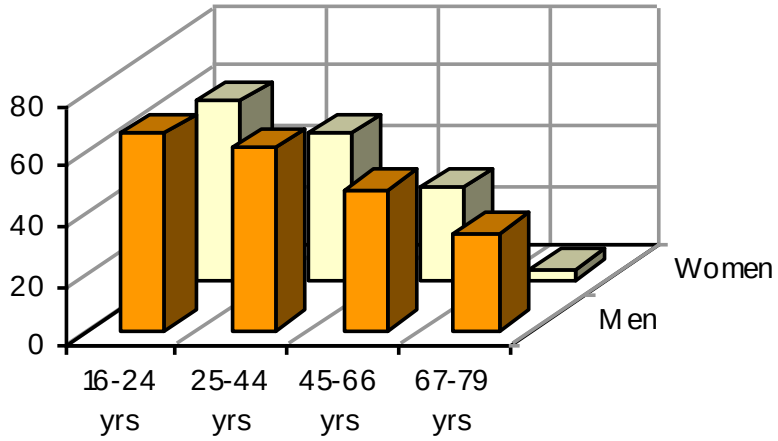
Example: *Percent using a library last year, by sex and age*

With two categories, we have two ways of grouping, inviting to different comparison

“3D” bar charts:

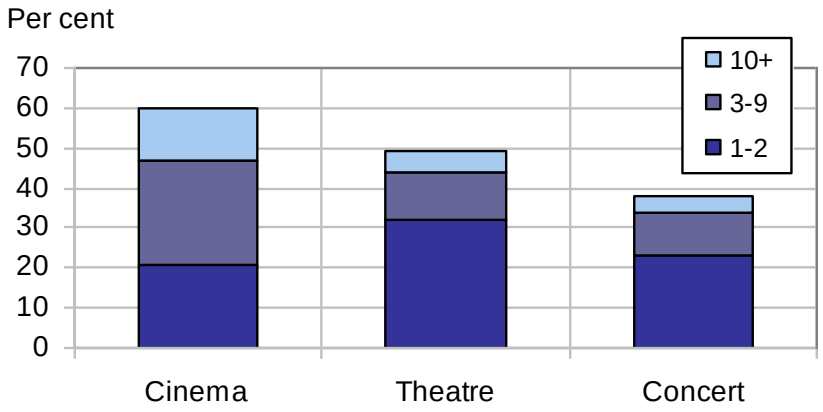


Popular, but not recommended

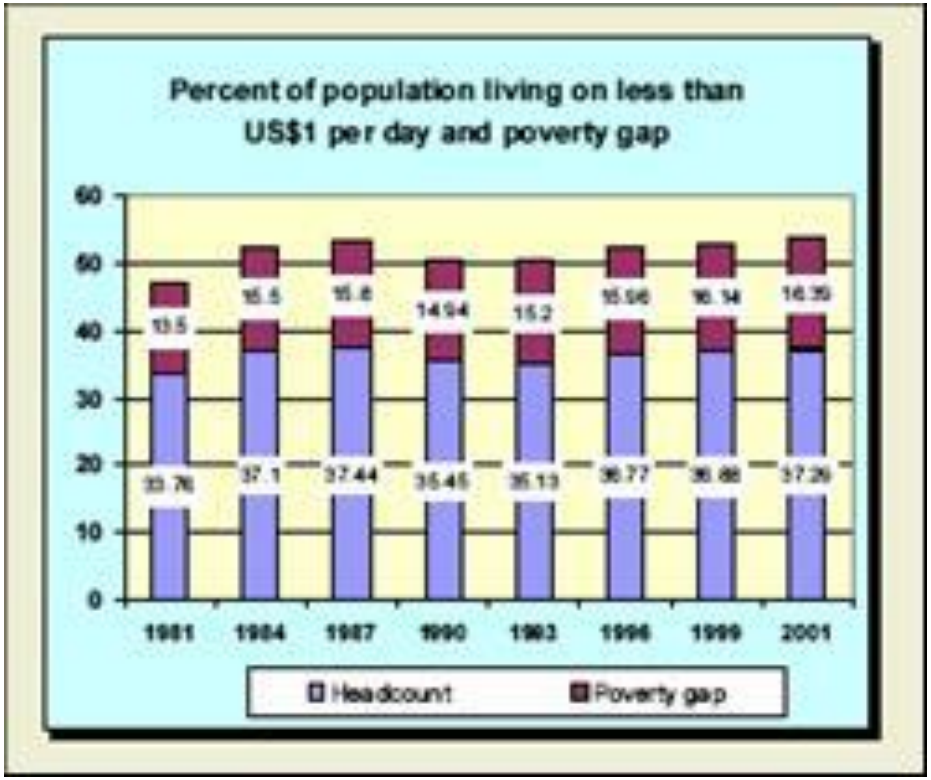


“Genuine” 3D-chart (3 variables)

Stacked bar charts

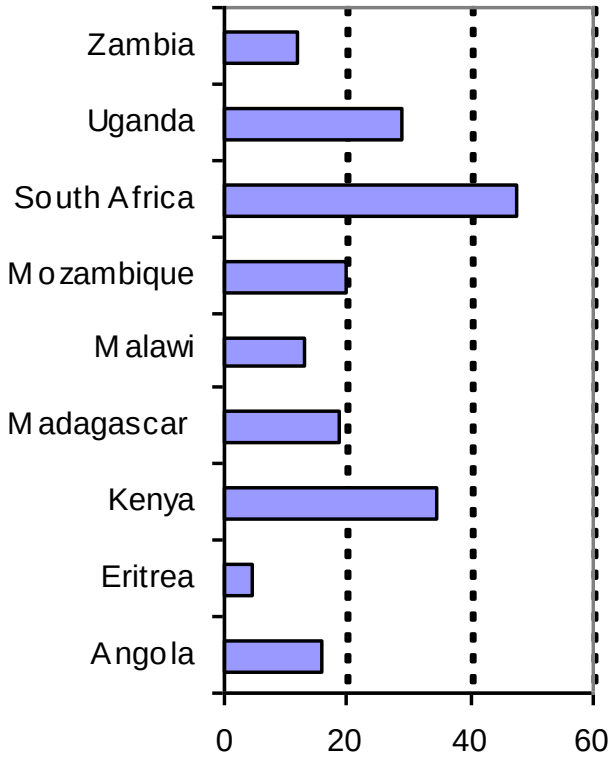


Show total frequency and how the total is divided into different components



From: African Development Bank 2006. Gender, Poverty and Environmental Indicators on African Countries, page 37

Horizontal bar charts:

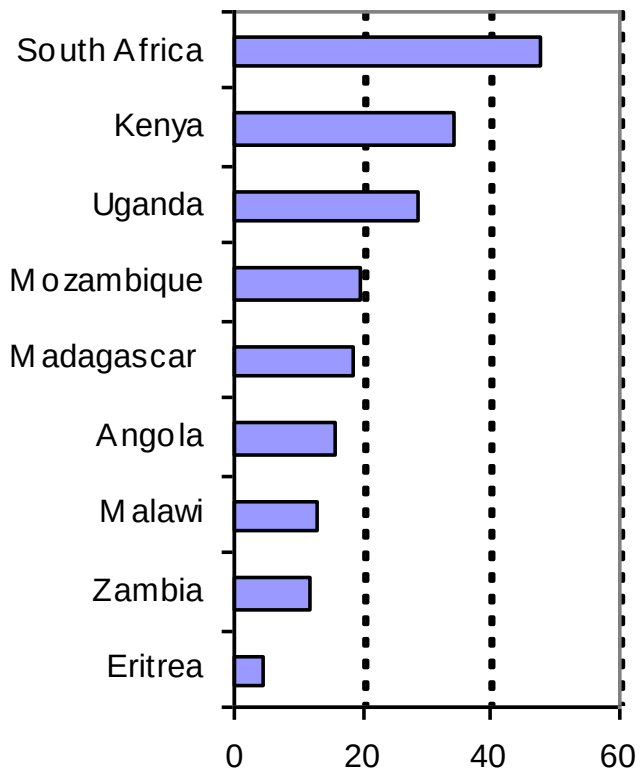


Often used

- when labels (variable names) are long
- when there are many variables or classifications

Here, text should be right justified

Horizontal bar charts:



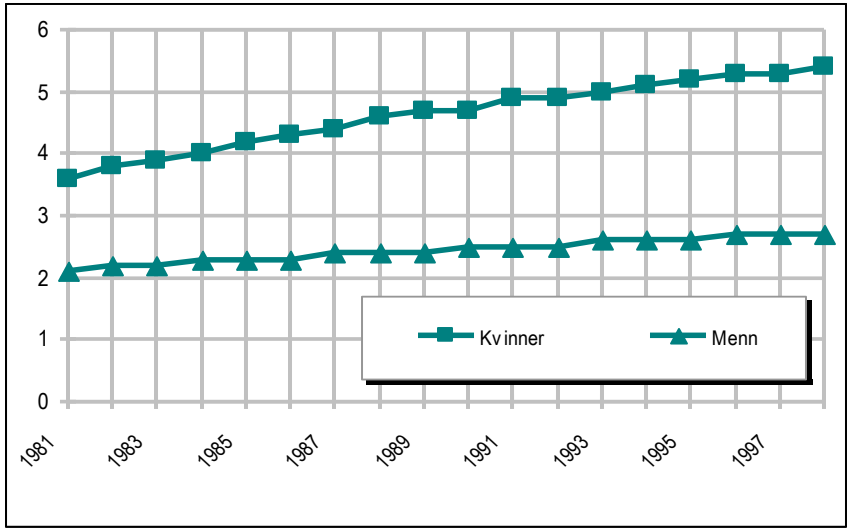
Often it is better to sort by the value of the indicator (dependent variable)

Line charts:

- Most often used for time series

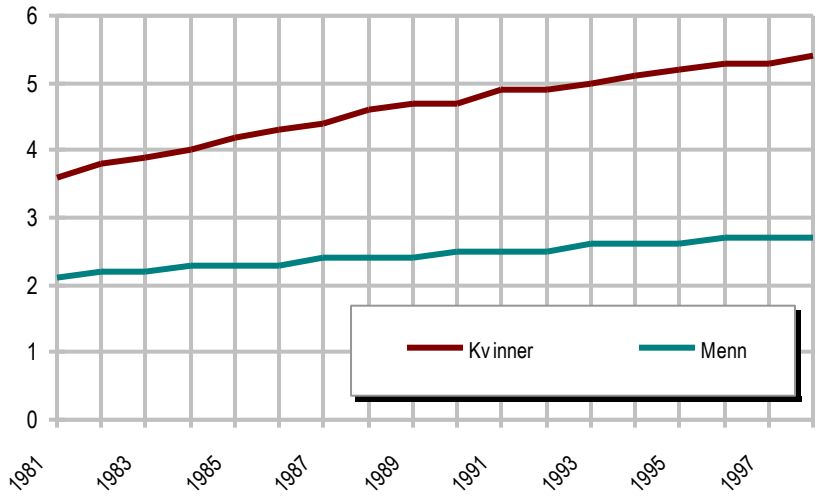
  = years, quarters, months, weeks, days, hours and minutes + age
- What is a time “series”? Minimum = 4 data points? Up to 4, use vertical bar chart
- The longer series, the better?!

Line charts: Symbols?

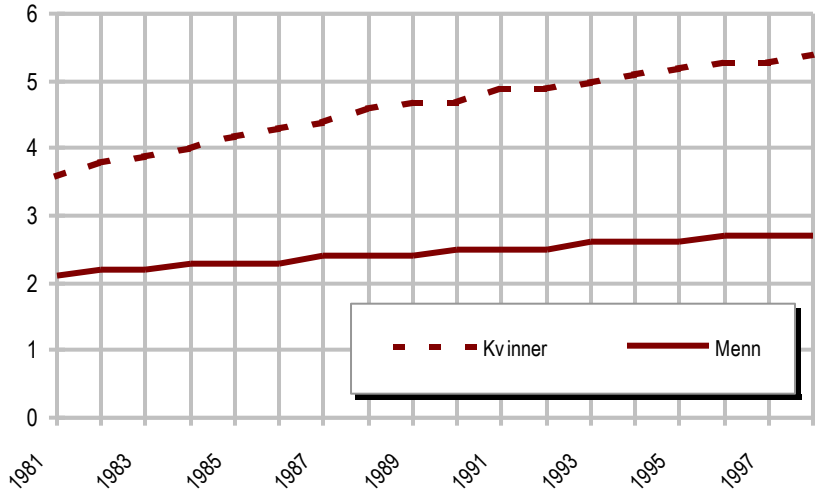


Indicators or symbols (■ ∇) are often used to differentiate between series, but these symbols overload the chart

Line charts:

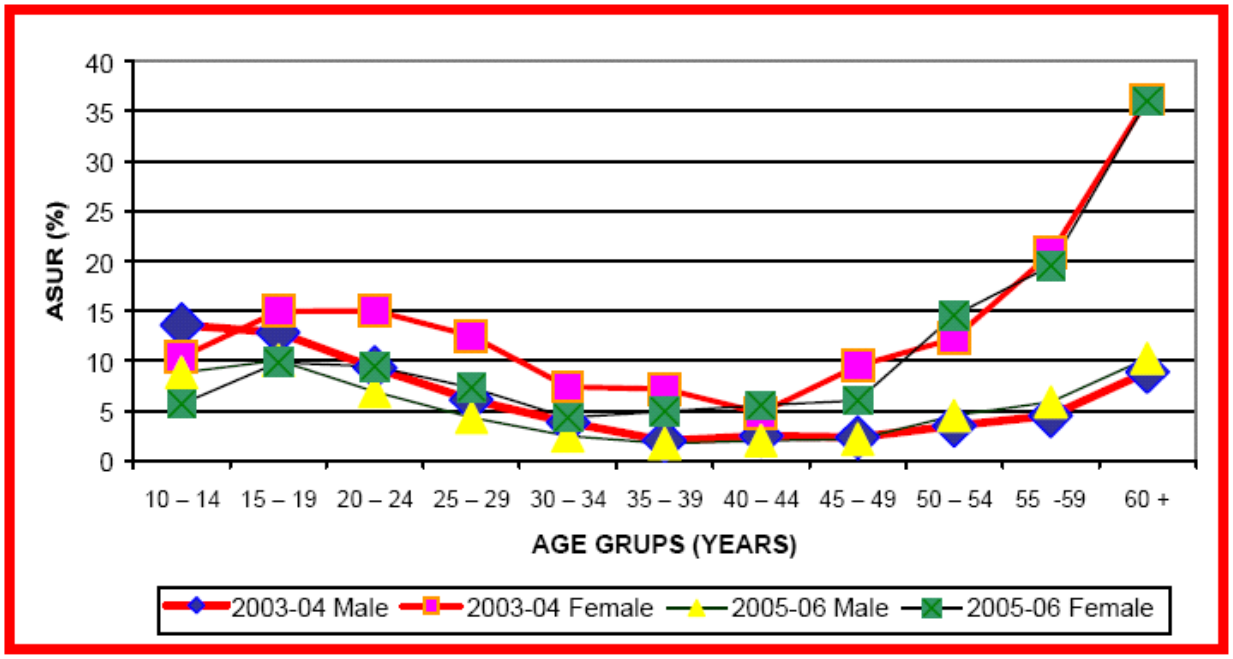


It is better to use different colours ...

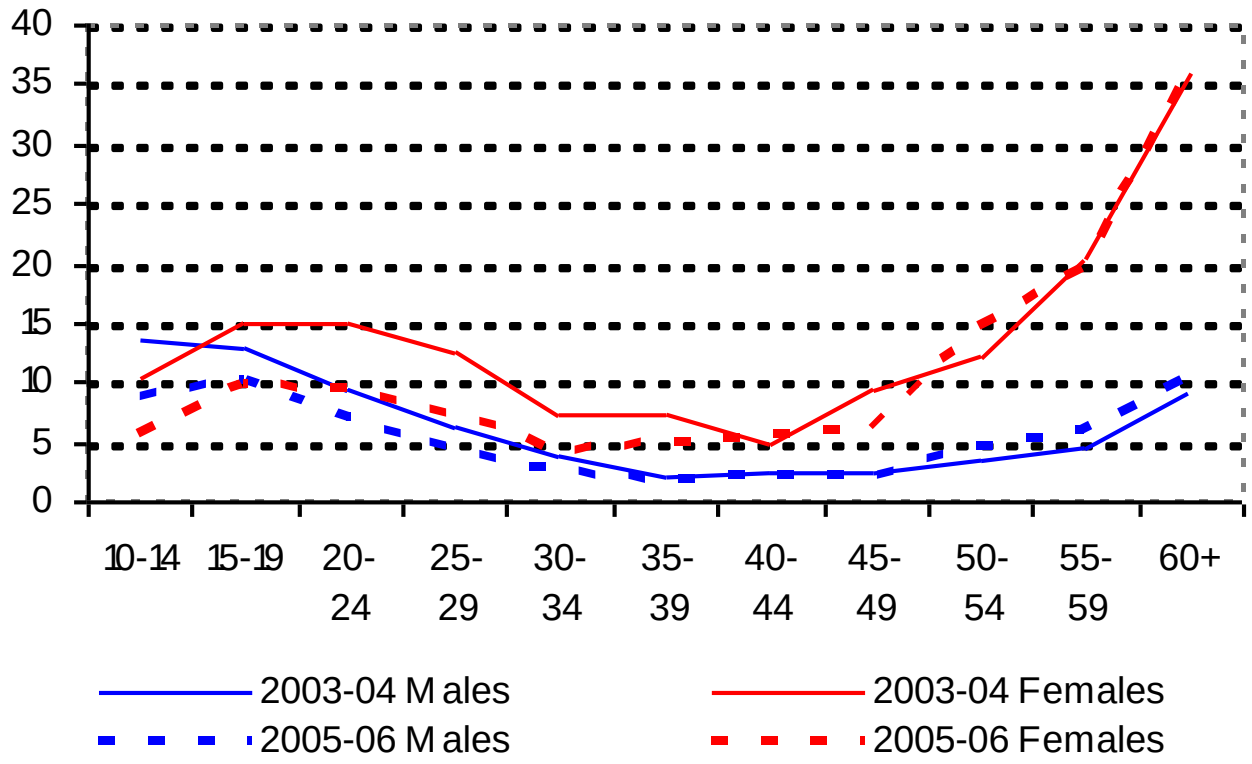


... and/or line styles

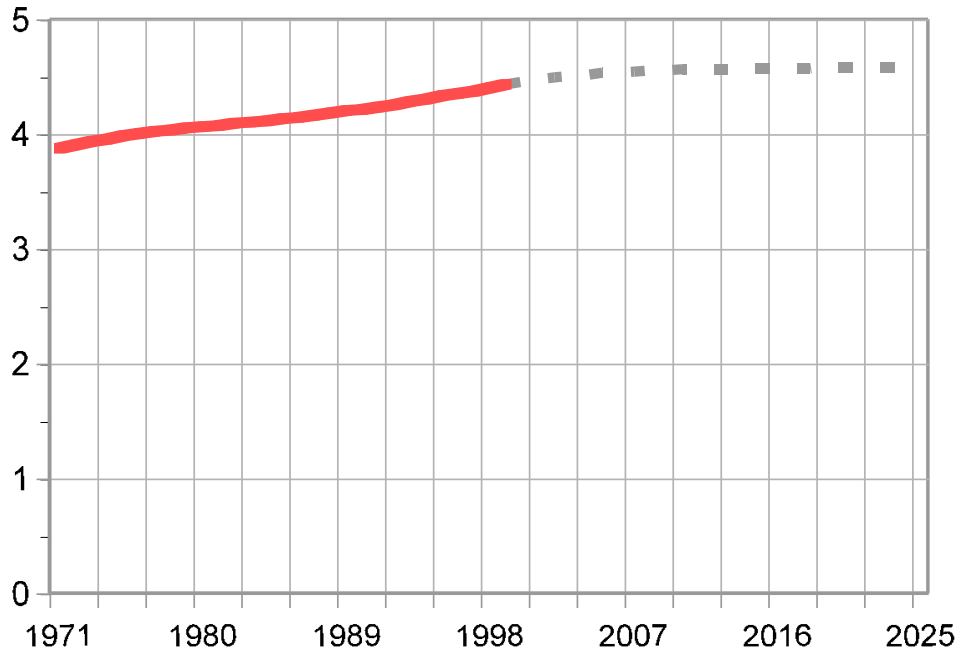
FIGURE-5: AGE SPECIFIC UNEMPLOYMENT RATES (ASUR) BY SEX FOR PAKISTAN



From: Pakistan Labour Force Survey 2005-2006

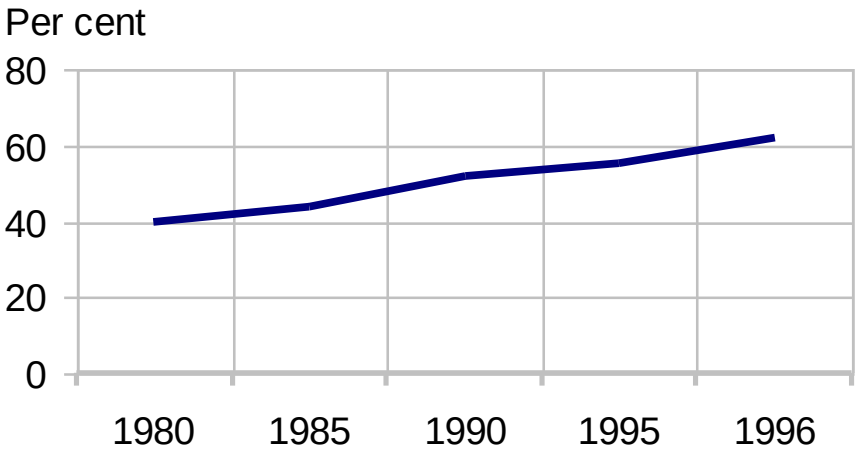

40
35
30
25
20
15
10
5
0
10-14
15-19
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60+
2003-04 Males
2003-04 Females
2005-06 Males
2005-06 Females

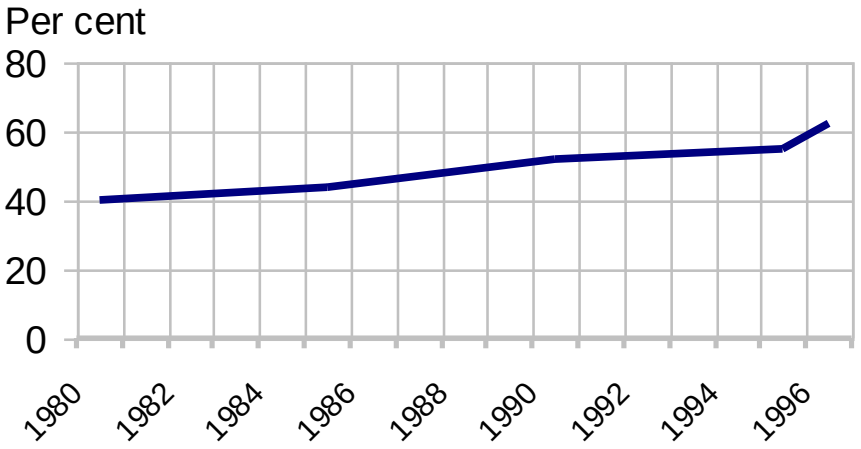
Line charts:



When showing projections, the projection part should be clearly differentiated from the rest of the curve

Standard line charts

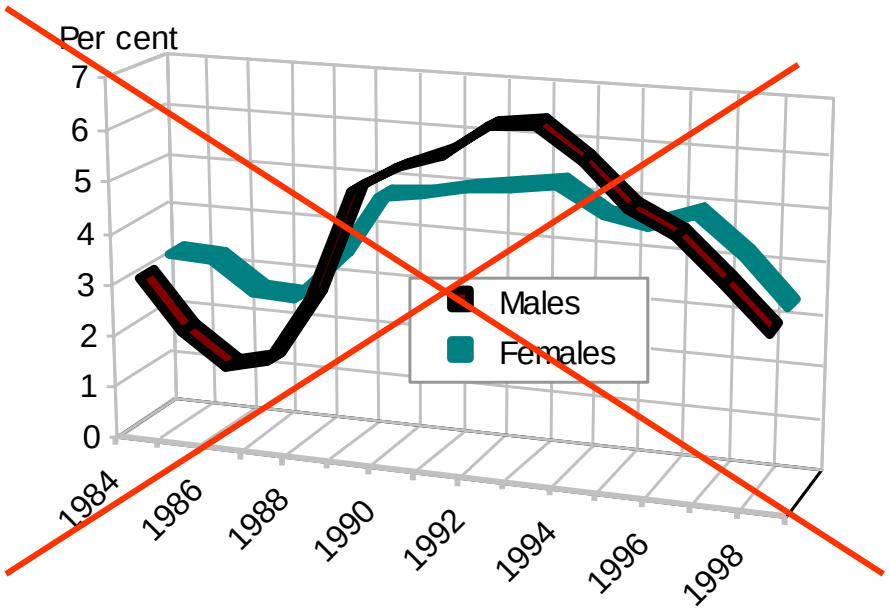




"A time series" requires at least 4? data points (if not: use bar chart)

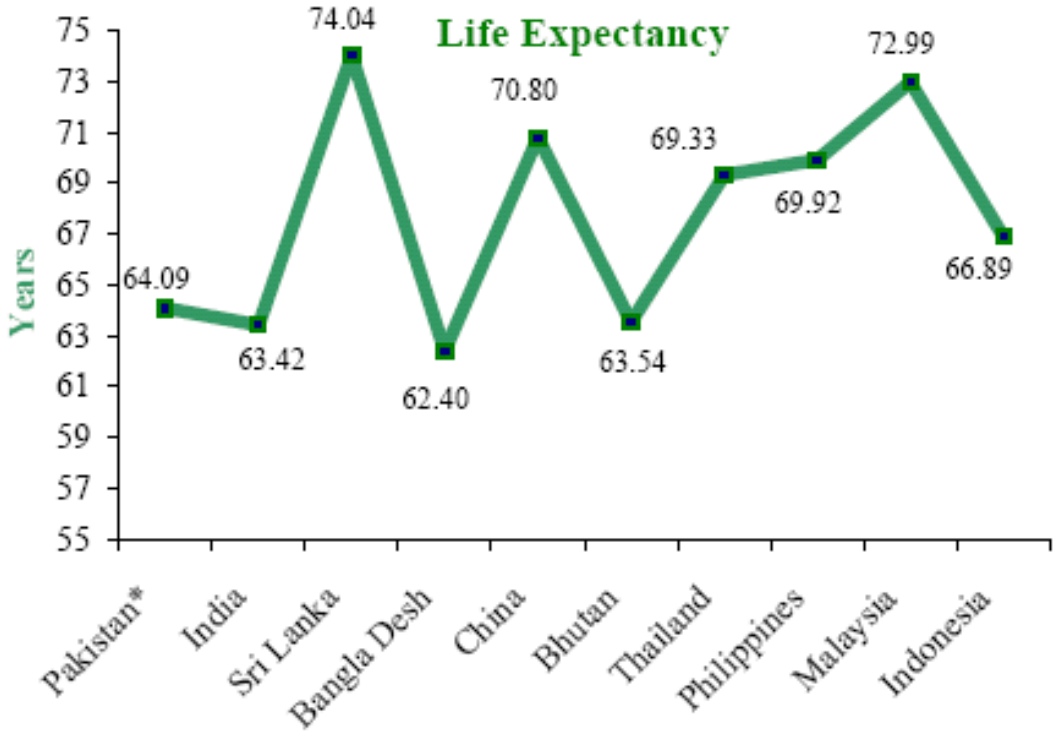
Be careful when the data points are not evenly spaced; like 1980, 1985, 1990, 1995 and 1996

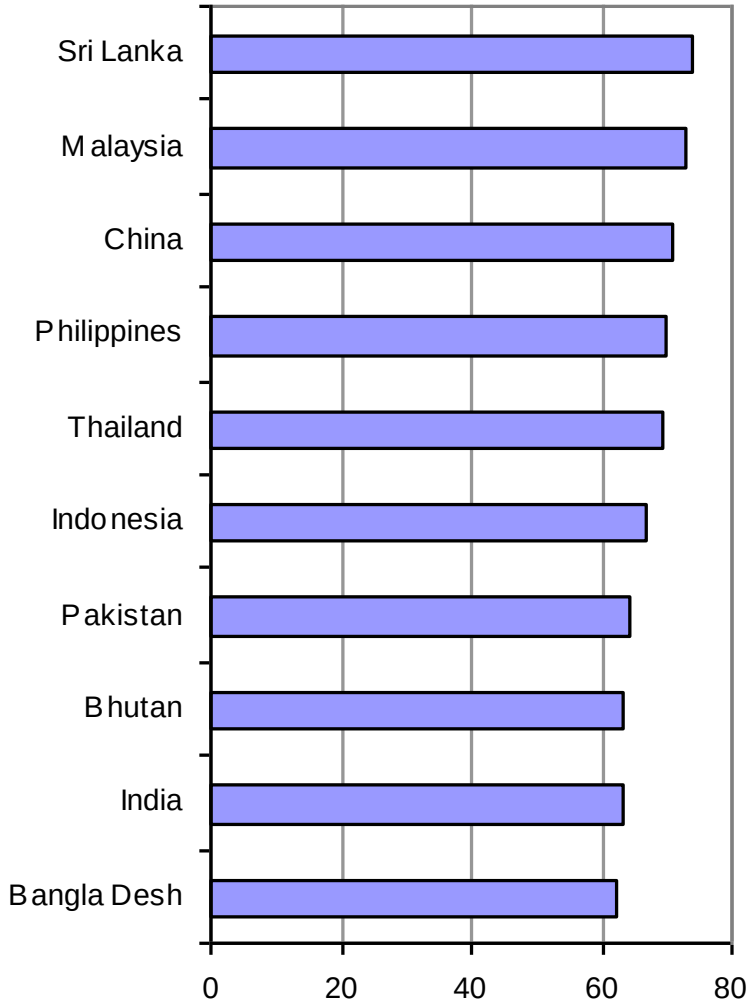
“3D” line charts?



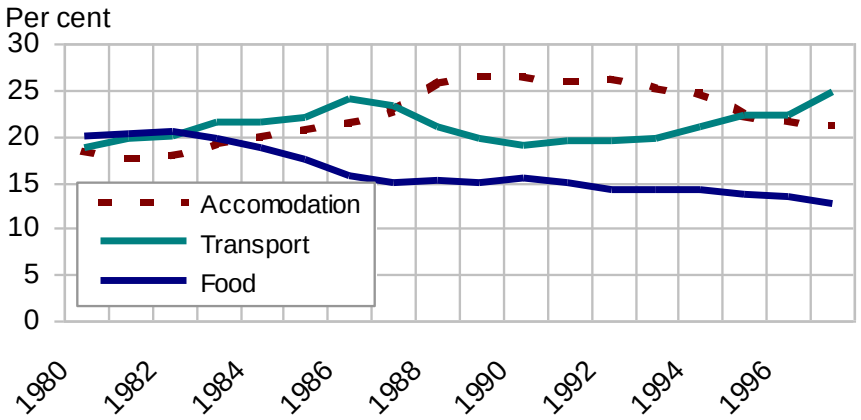
NO!!

Should *never* be used to illustrate differences between group, for instance countries

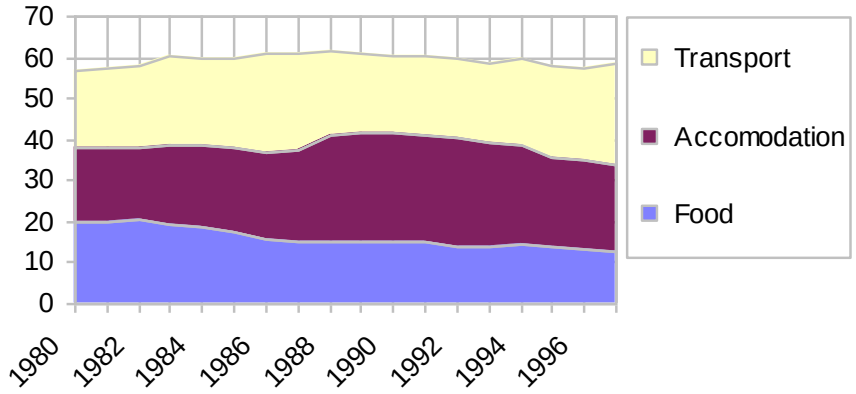




Area chart



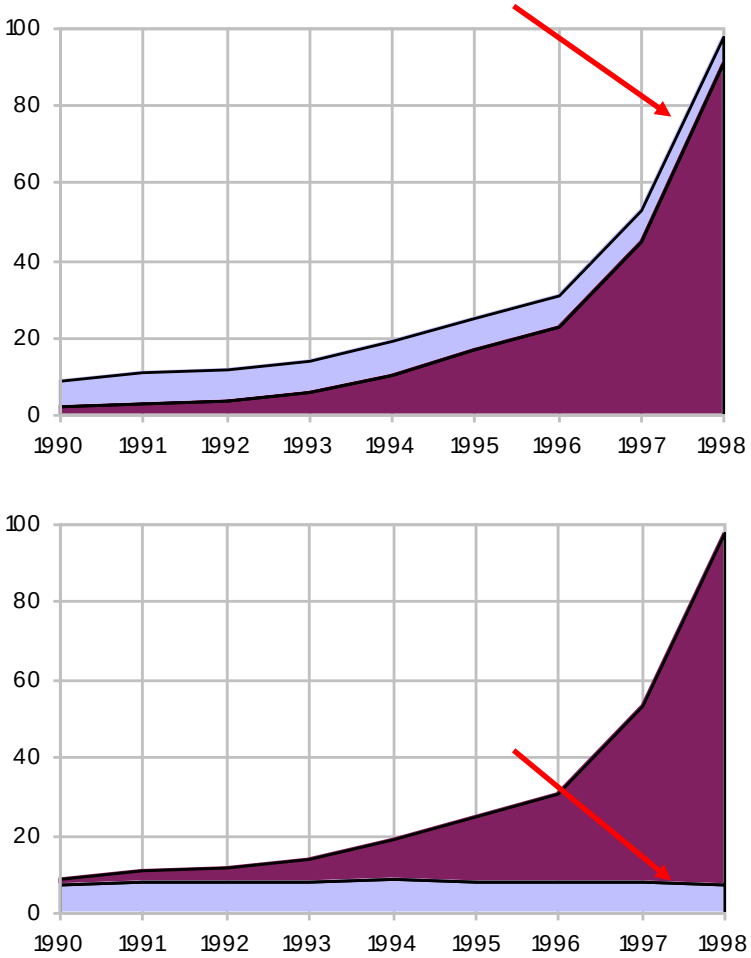
Area charts are accumulated line charts; like stacked bars.



Shows total and parts

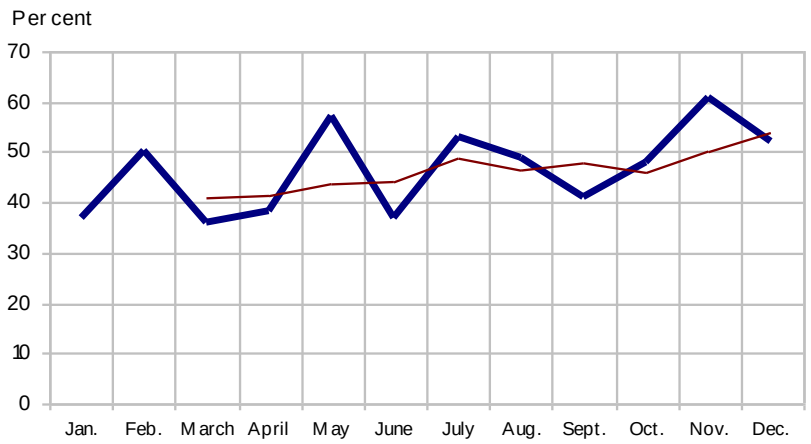
Don't use with too many groups/values

Area chart



Order of series may be important

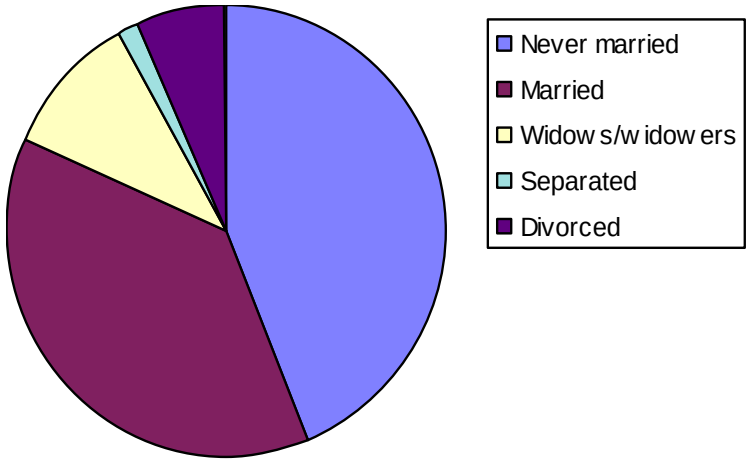
Curve smoothing



Often used with periodical data

Moving average (here: 3 years)

Pie chart



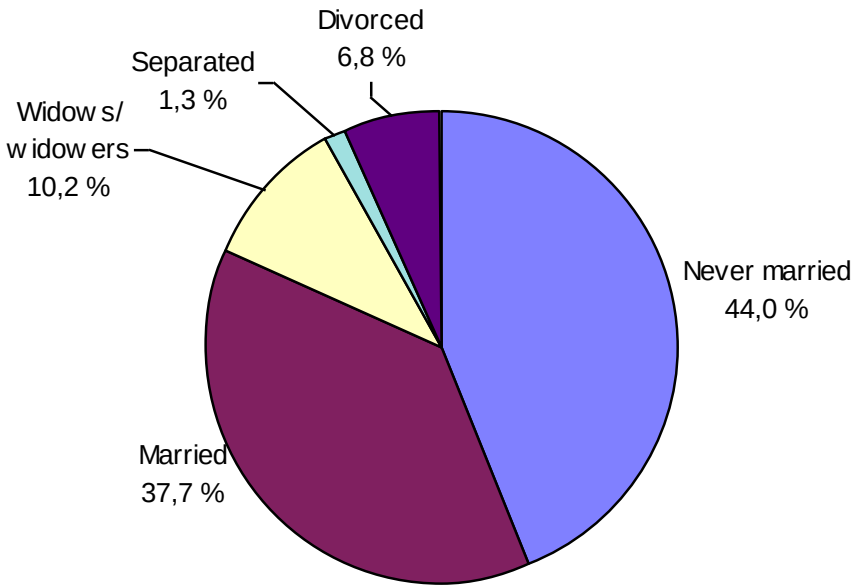
Shows distribution of (qualitative) variables

No axis

Total area = 100%

Instead of legend....

Pie chart

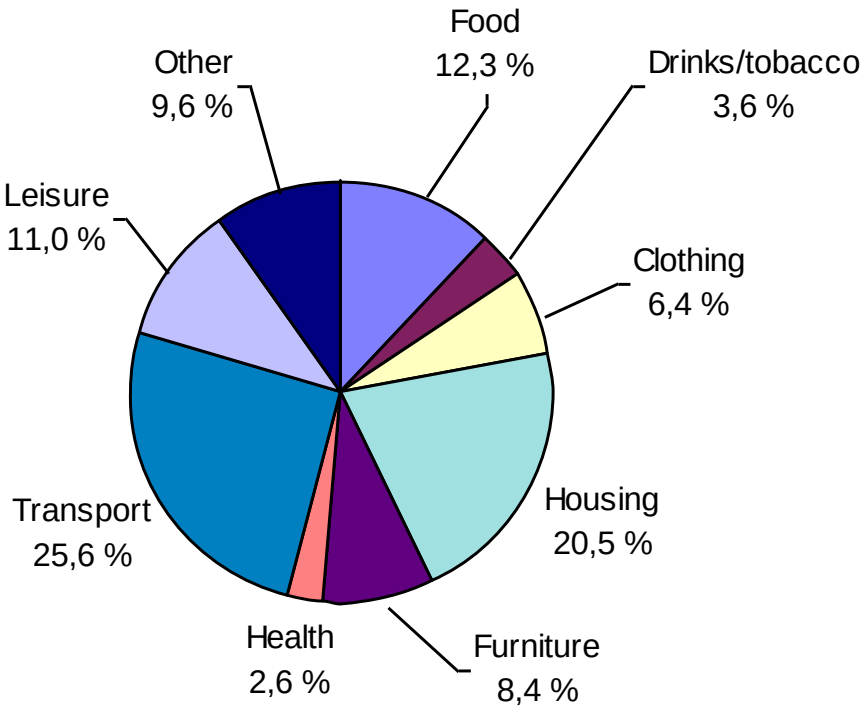


...use labels

Since pie charts have no value axis, show percentage

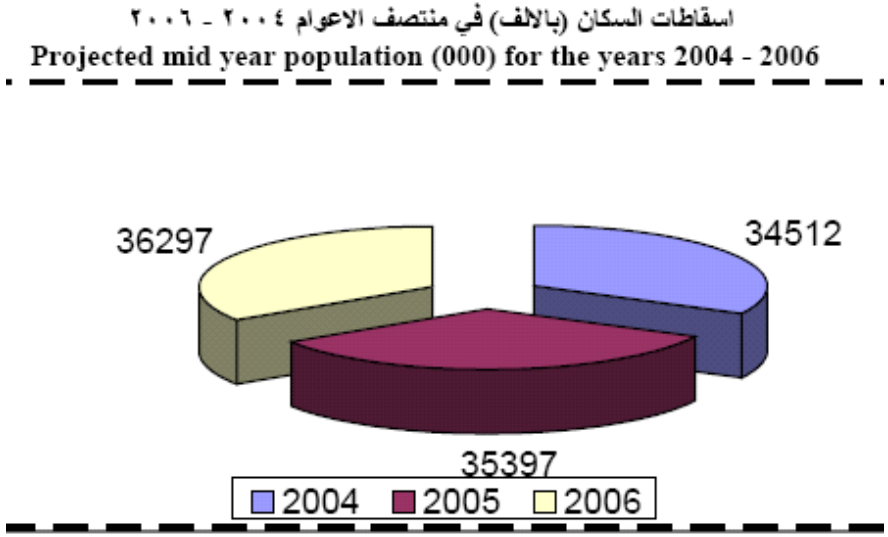
Maximum 5 values?

Pie chart



With too many values, the reader looses interest

Pie chart

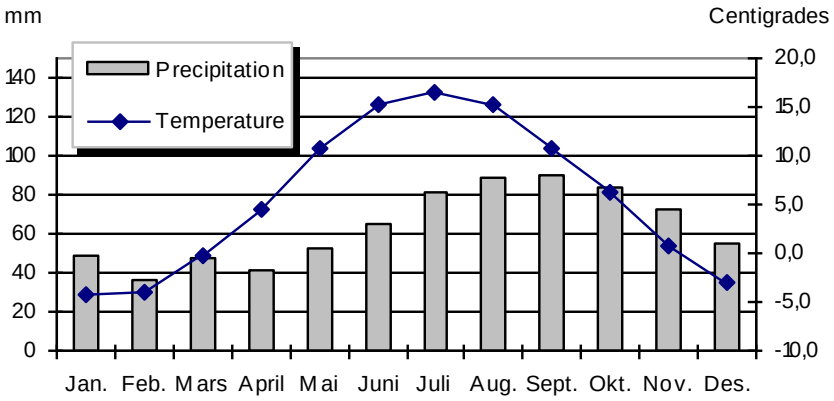


Statistical Yearbook of Sudan 2006

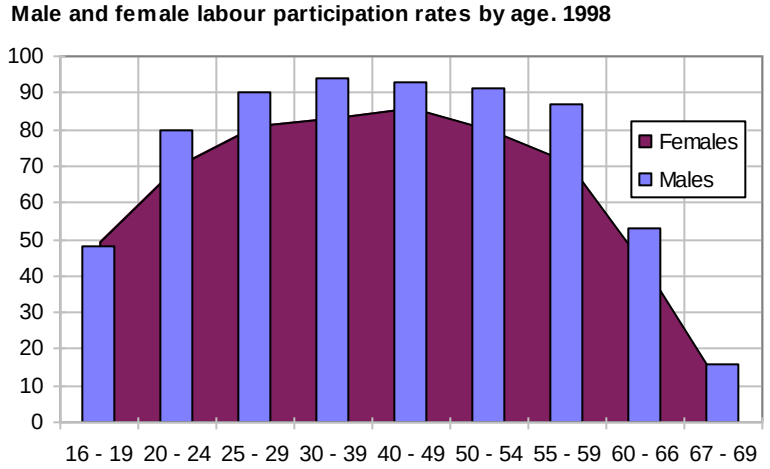
Pie charts should *never* be used to illustrate time series

Other types

Combination graphs (also called “overlay”):

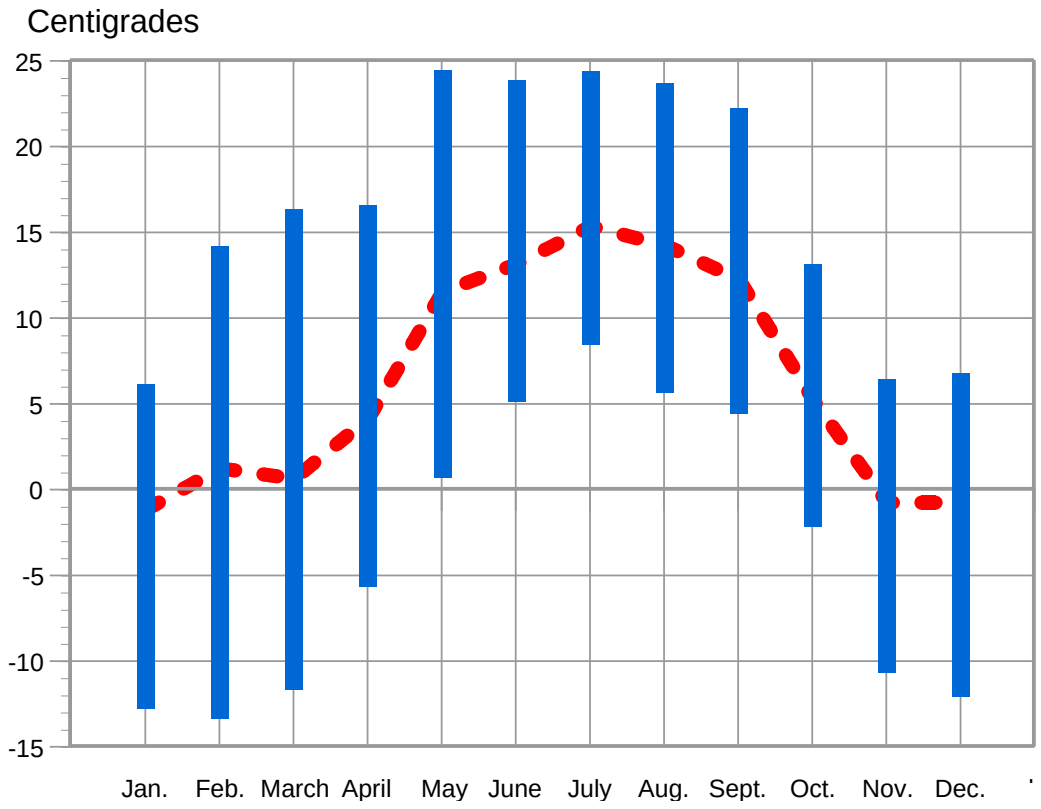


Bar & line



Bar & area

Other types



Min. - max. (floating bar)

\+ average temperature