



# Separation brings analysts and their graphs together

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# Overview

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- Stata in the ONS
- Economic Trends
- The solution: use Stata's graphics
- Wishlist

# Stata in the ONS

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- Increasingly wide use in development
- Not a “production” tool
- Key part of the analytical toolkit
- Intensively used in our new virtual Research Lab

# Research Lab – business microdata

[www.statistics.gov.uk/about/bdl/](http://www.statistics.gov.uk/about/bdl/)

The screenshot displays a Citrix ICA Client window titled "Research Desktop - Citrix ICA Client". Inside, the Stata/SE 8.2 application is running. The Stata interface consists of several windows:

- Review**: Shows the file path "use 'W:\ard\results\dat2000".
- Variables**: A list of variables including year, ruref, sic92, levelu, frm\_type, rec\_date, vet\_date, respstype, awtband, nsamp, npop, gwltband, enforce, region, ullfoc, wowent, acp\_stat, chklet, entrel, empment, turnover, er\_stat, late\_ret, and wq11.
- Stata Results**: Displays the Stata logo and version information: "STATA 8.2 Copyright 1996-2007 StataCorp. 4905 Lakeway College Station, TX 77845-6100 USA". It also shows license information for a 28-user perpetual license and notes about memory and maximum number of observations.
- Stata Command**: Shows the command ". use 'W:\ard\results\dat2000pdg.dta', clear".
- summarize - Summary statistics**: A dialog box with the following settings:
  - Tab: Main
  - by/i/in: Weights
  - Variables: (leave empty for all variables)
  - Examples: yr\* (all variables starting with 'yr'), xyz-abc (all variables between xyz and abc)
  - Options:
    - Standard display
    - Display additional statistics
    - No display; just calculate mean
    - Use variable's display format
    - Separator line every N variables (set 0 for none): 5

**CITRIX**

# Economic Trends

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- Revamp for 600<sup>th</sup> issue in November 2003
- Higher quality graphing required
- Done by designers for long articles
- Problem for short-term analytical articles

# Short-term articles

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- Solution involving design unit
  - Process slow
  - Prone to errors as designers don't understand analysts intentions
  - Very inefficient
- Need to find an alternative solution
  - Could Stata provide what we needed?

# Using Stata: problems in Summer 2003

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- Need for colour separable EPS files
  - But Stata only supported the RGB colour model when printing needs CMYK
- No documentation of graph styles
  - Styles are critical so non-expert users can produce correctly formatted graphs

# Response: contact Stata Corp!

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- Very helpful
- CMYK added in January 2004 update
- Set up a style for us
- Support to customise styles



# The result...

Stata/SE 8.2

File Edit Prefs Data Graphics Statistics User Window Help

Review

```
discard etrends.scheme
discard
do "P:\matt\Charts\test 220604.do"
sysuse nlsw88
graph dot wage , over(occupation, s
graph dot wage , over(occupation, s
graph dot wage , over(occupation, s
graph dot wage , over(occupation, s
graph dot wage , over(occupation, s
graph dot wage , over(occupation, s
graph dot wage , over(occupation, s
graph dot wage , over(occupation, s
do "P:\matt\Charts\demo\test 22060
do "P:\matt\Charts\demo\test 22060
```

Stata Results

```
local end_date=168
*Bar Series
local bar_series="pabjr"
```

Stata Graph

Year	Quarter	Quarterly growth (%)	Annual growth (%)
1990	1	1.2	0.1
1991	1	-1.5	-0.5
1992	1	-1.2	-0.2
1993	1	2.8	1.2
1994	1	3.5	1.5
1995	1	1.2	0.5
1996	1	3.8	1.0
1997	1	4.5	1.5
1998	1	3.5	1.0
1999	1	4.5	1.8
2000	1	5.2	1.5
2001	1	3.8	1.2
2002	1	4.2	1.2

Variables

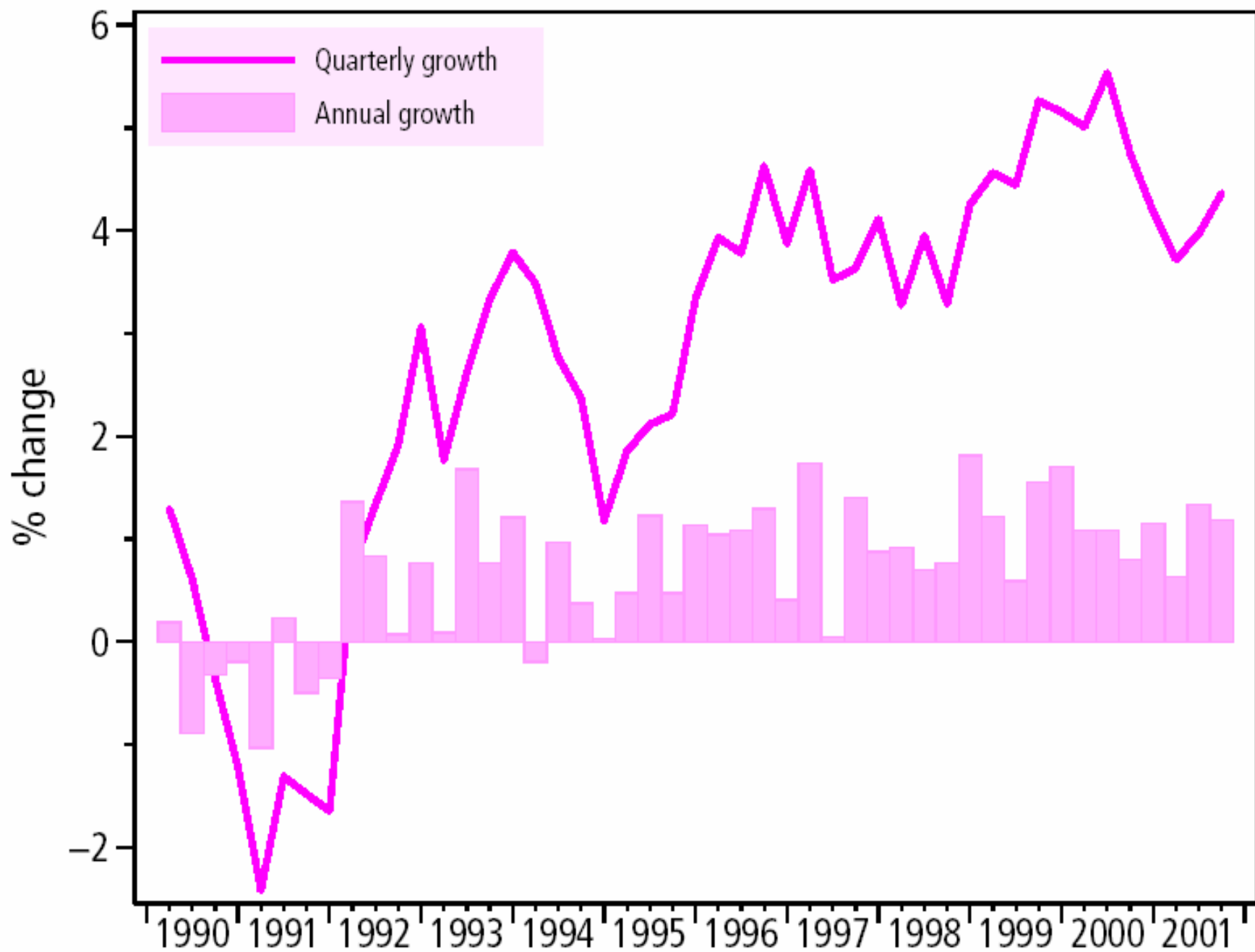
Target: Command Window

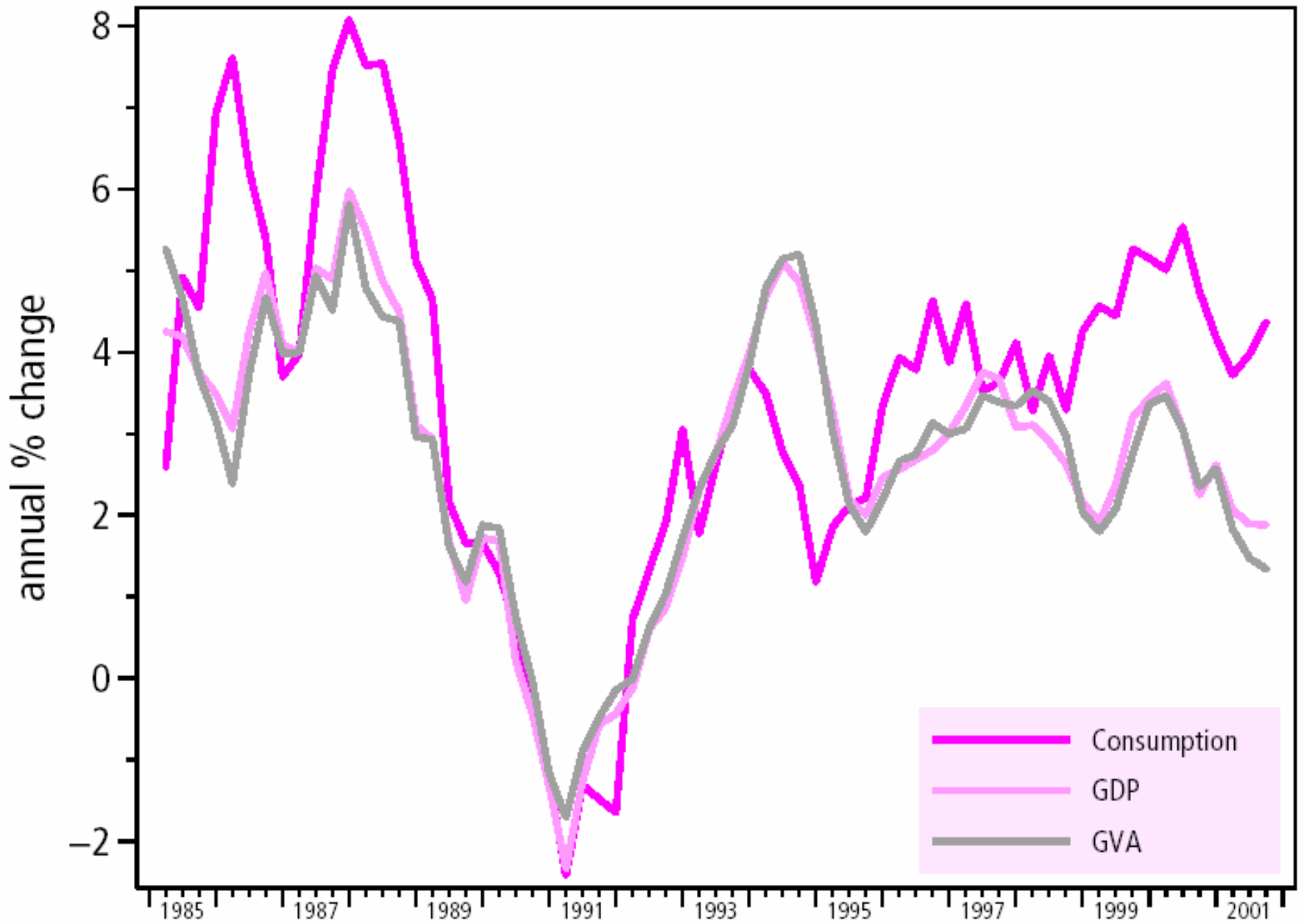
date  
obs  
p4abjr  
p4abmi  
p4abmm  
p4abms  
p4abng  
p4abze  
p4aeiu  
p4aeiw  
p4agbg  
p4ajfa  
p4ajfo  
p4ajhx  
p4ajma  
p4ajno  
p4apin  
p4auss  
p4avbr  
p4bbjv  
p4bcaj  
p4bcja  
p4bqku

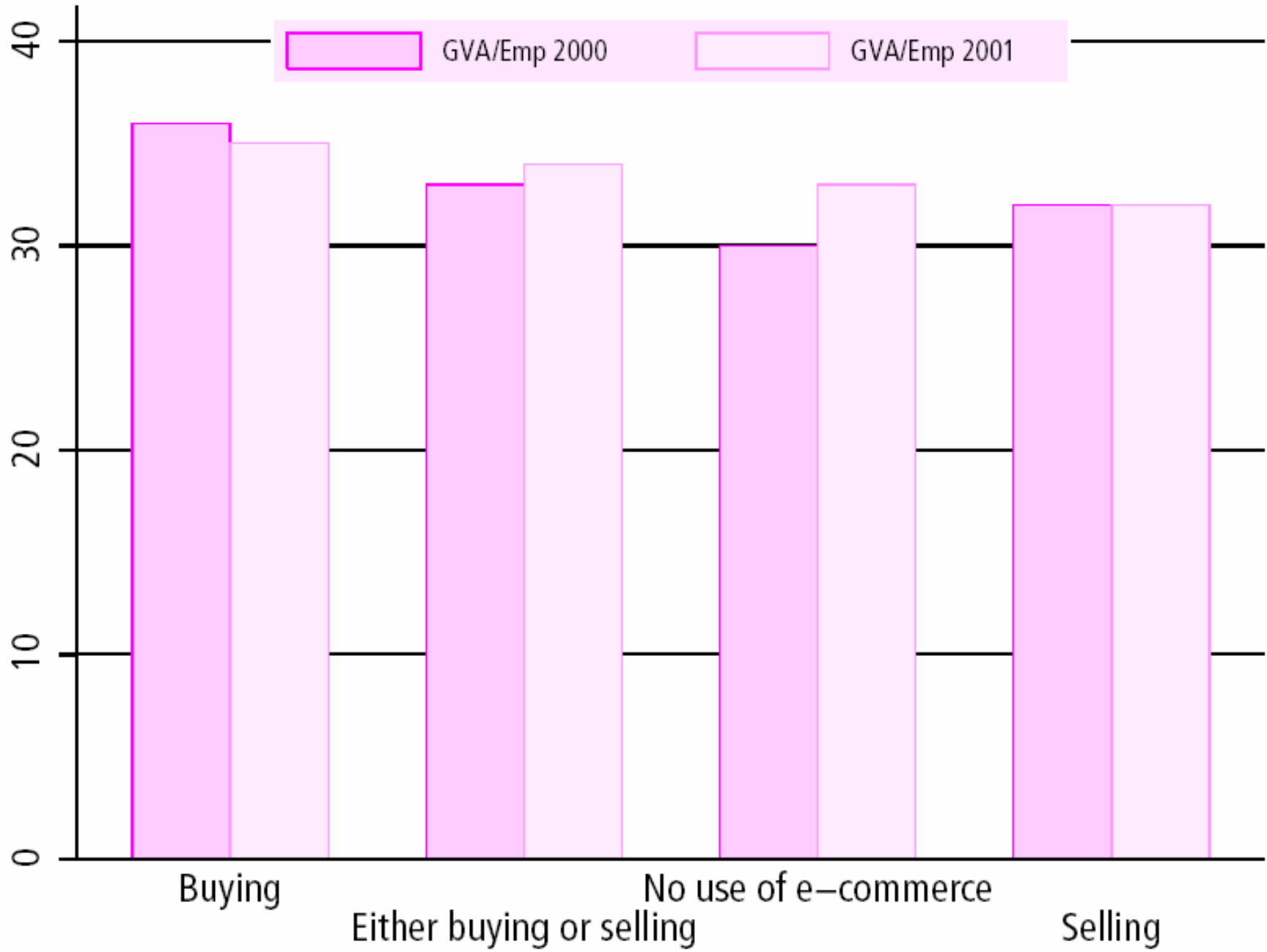
```
te<'end_date') (bar `bar_seri
ame') ymlabel(##2, tlength(1)
(vertical)) xlabel(120(1)168
:_series_label'')) legend(pos
)
```

cmdlog on

Stata Command







# Not yet being used in production...

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... but soon

- Proof of concept done
- Still tweaking the style with design
  - e.g. wanted lines 0.4pt rather than 0.33pt!
- Some training of staff who produce graphs needed
  
- Also plan to use Stata in place of Eviews for internal analytical chart packs – adaptation of ET style with more pleasant colours

# Wishlist

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- Speed – currently it is frustratingly slow at times
- Documentation – more would allow additional refinements and applications
  - Diagram showing what elements of scheme files refer to
- Direct use of PostScript fonts for correct previews
- Units other than inches
- Relationship between line widths and chart size makes design work more difficult

# Conclusion

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- Stata can do it and will save time
- Could be a possible corporate solution
- Still some things that could be better...