Tips for making a poster for the XVth World Economic History Congress.

Poster presentations are not commonplace in economic history. Therefore we provide some suggestions on how to make an academic poster. Many details have been omitted here, especially on working with Powerpoint. The references at the end give more detailed information.

These tips mostly apply to making a poster on the computer. Although this is not mandatory, with computers and printing options widely available nowadays, making a poster like this is probably not beyond anyone's capabilities.

All tips here are nothing more than that, with the notable exception of the size requirements on page three. Many of the websites at the end will in fact tell you to do different things. Feel free to ignore anything here if you have a better idea.

Why posters?

(Junior) researchers need an international podium for their ongoing research. Poster session are an informal and interactive way to present your research to an international audience. Hopefully, you will get useful comments and feedback. The emphasis on presentation combined with the broad audience means you might get more attention than if you were yet another paper in the stack for the congress.

What should be on a poster?

A poster consists of text and figures. You should strive for about 50% of your poster area to be text, and 50% to be figures. Since most posters will be about ongoing research, different things can take centre stage than in a paper. Important aspects become: why it is interesting research, why it is promising research, source material, methods, expectations, preliminary results, *&c*.

Below follow some elements that might be on a poster.

Title. Shorter is catchier and will fit more easily.

Name & affiliation. Both should be easily discernable, but should not draw too much attention to themselves.

Introduction. What you are doing and why should everyone know about it? Brevity is important here as part of it will become clear in what follows. Don't go into definitions and debates at length. Place your research in the literature, but don't overdo it – it is not what is most interesting about your research.

Research questions & hypotheses. Can be in the introduction, but mat deserve a place of their own.

Sources & methods. In the case of ongoing research, this may be the better part of a poster. Don't take that as an excuse to go crazy on text at the expense of graphical information. Diagrams may substitute for text, as can other figures.

Results. Preliminary results are of course fine. Do explain this and any it may have. Pretty graphs or other figures here are a necessity for a good poster. Lengthy tables and heaps of text will probably not get much reading.

Conclusions.

Literature and references. A poster is an academic product, so these do need to be there, just as they would in a paper. However, to conserve space, don't waste too much space on it. There shouldn't be more than a handful of references. The best way to achieve this without slipping into plagiarism is to make your research methods, sources, and results the focus of the poster. As these are your contribution to the academic debate, they won't need many references.

Before starting

Before you start the real design of your poster, you *always* need to know the requirements for printing it. To print A0, your best bet is the local copyshop. Alternatives are campus and online printing services. Ask them about which sizes they will print, which file formats they accept/prefer, how long they will take to print, how much it will cost, colour options, and if there is anything else you need know. Only after finding this out can you know what you should be making. Any other advice they can give you is useful. Many printing services have experience with academic posters.

When you finally print your poster, it is always a possibility that you find errors that need fixing. Therefore, you should print a full poster early enough for you to fix it and have it printed again.

Software

For making posters in academia, Powerpoint is often used. Most people have it, most can work with it, and it does an adequate job. After you have selected an empty layout, you can start placing the boxes for text and figures that make up your poster. Most of the issues discussed in this document concern Powerpoint.

Latex will make posters, but not readily. You need to have some serious skills to make more than a standard paper with it. If you still need to learn how to make posters with Latex, consider using something else.

Professional desktop publishing programs such as Indesign or Quarkexpress can create beautiful posters. If you want a professional look, here's where you go. Be careful however that these programs are expensive and will take time to master. Photoshop and similar programs are also an option, but watch out for how they handle text. It may render it as raster graphics instead of vector graphics (more on which later).

Size & margins

First, the size of the poster. The maximum size that will fit on the congress's boards is A0. That is: 841mm by 1189mm (33.1 by 46.8 inches). To fit on the congress's board, the posters must be in the portrait orientation. That is: the long sides must be vertical and the short sides must be horizontal. You can set this up in the page setup of Powerpoint.

You are allowed to make a poster that is smaller than A0. Keep in mind however that you can't fit as much information on it.

Your poster will also need to have some margins. Not only is it prettier, it also reduces the risk that part of your poster will get lost in the printing process. Margins of at least 20 mm are a good starting point. You have to set these up manually in Powerpoint by using its rulers and drawing guides You can drag the drawing guides around and multiply them by holding the Ctrl button while doing so. Any elements you insert afterwards will clip to these guides. Drawing guides in other places are also useful to make sure elements are neatly placed relative to other elements fixed to them. Having done this, the rest of making a poster is a matter of placing text boxes for your text and placing figure files for your figures.

Overall design

Making a sketch on a piece of A4 or letter paper first is always a good idea. Try to place the title fields, your text fields, and your figures. Try to get them organised in a logical order. Making a good sketch up front makes sure everything fits together in the end.

A poster needs some structure. Text and figures placed on an A0 paper without a plan will go wrong. The conventional way is a column setup. You can introduce some variation in the sizes of the columns to liven things up. Be careful that it does not become messy, however. Another option is to place text fields and figures

around some field that is central to your subject. See the references for examples at the end for examples of structuring a poster.

Perhaps you can think of some other way of structuring your poster. Keep in mind that although it is important for the poster to stand out and draw a crowd, its message is still the most important part. The audience should not be confused about how to read it. Since you already know what trying to make clear, it is useful to get an outsider to judge whether you've succeeded.

Text

You could probably put a journal article's worth of words on an A0 poster, but you really mustn't. Keep the text to a minimum. Roughly 800 words is a sensible maximum to strive for if you want half of your poster to be text. Besides heavy use of figures, you'll also have to skimp on details to make the poster a success. To compensate for this you'll be standing next to the poster to give further explanation to the audience during the sessions. People doing qualitative research are at a disadvantage as they cannot easily use figures as a substitute for text. It will take some extra creativity and thinking to solve this problem.

You must choose a font. Useful ones for Windows users are: Palatino Linotype, Times New Roman, Arial, Lucida Sans and Verdana. Those in the possession Office 2007 can also use its new fonts: Calibri, Cambria, and Constantia are good choices. They also come with the free Powerpoint 2007 viewer. Mac users tend to have a slightly different set of fonts, though many of the above are also present there, especially if you have MS Office. Helvetica and Hoefler are also good options on a Mac. Bottom line: stay conservative in your choice of typeface. Readability and legibility should trump all other considerations. Exporting your poster to pdf (more on which later) makes sure all your fonts are embedded. That way there will not be any issues with missing fonts.

Keep it limited to one typeface, two at most (one for headings, one for body text). WordArt and other overly fancy headings tend to look unprofessional. Drawing attention to some words with bold might work on a poster. However, doing it too often will quickly kill any positive effect. It is better to let the figures and overall structure of the poster lead the readers to the important bits.

Finding the right font sizes will take some trial and error. Testing is important, since some typefaces need to be printed bigger than others. Colour might add further problems. Also keep in mind that not everyone on the congress will have great eyesight. Print a test out in your font (on A4, of course), stick them to a wall and see whether you can: (i) see your title from across the room (about 90pt) (ii), read headings from a few metres away (about 36–48pt), and (iii) read the poster's body text from about 1 metre away (usually no less than 24pt). At these sizes,

more person than one can read it at the same time. It's best to use three to four font sizes and use these throughout to keep your poster design clean and consistent. Don't use small sizes to fit too much text on a poster. Conversely, don't use large sizes to conceal lack of content.

A further consideration is the space you leave between lines of text (leading; Office calls it line spacing). The body text can probably use some extra room between the lines. Set it somewhere between 1.05–1.2 lines, depending on the font (a secondary default of many programs, 1.5, is far too much). Some programs express leading/line spacing in points, in which case you should make it 5–20% of your font size. The title and headings probably already have enough leading due to their large size, though you can always experiment here.

Coming back to citations, making footnotes on a poster is nearly impossible. Endnotes are an option, though you may end up making them manually. The easiest way of making references is to use in line citation (Author 2008) and list your references in one of the bottom corners. You can keep such a list from taking up to much room by using a smaller font (say, 18–20pt) and abbreviating wherever possible (*EHR* instead of *Economic history review*, F. Lastname instead of Firstname Lastname, and so forth). However, make sure people can make out who you're citing.

Figures

As mentioned a few times by now, figures are important in a poster. They need to be prominent, there need to be a good few of them, and you need to make sure they look right. They should also be relevant. Clipart would therefore be a bad idea. Graphs are usually best. Since they are taking up scarce space, they should tell part of your story, not merely illustrate it what is already said. This might be a problem for those presenting qualitative research. They need to do think hard about how to make their poster work.

Economic history often involves quantitative information. This lends itself well to presentation in graphs. These can make up the better part of a poster. Do not think lightly about making them, however. As with text, you should make sure the graphs give the message you want to bring across.

A general guideline is that the most prominent part should be the data. Graphs should therefore not have any other background than white/none. Prominent gridlines and the like are also a bad idea. Generally, do not overcrowd a graph. Test print to avoid muddy, crowded, and unclear graphs, as some of these problems only become clear on paper. Obviously, matters such as axes and scales should be executed without fault. Tufte's *Visual display of quantitative information* and Cleveland's *Elements of graphing data* are two helpful books on this subject.

Getting pictures into Powerpoint is usually best done by inserting them from file. Copy-paste leaves you open to the risk of the program deciding on what should happen to your images.

The most important thing to keep in mind about figures is size. A0 is large, making up 16 sheets of A4 paper in surface area. Accordingly, your figures will have to be large as well, sometimes more than the area of 2 sheets of A4.

Such size requirements can put incredible strain on your image files. In case of graphs, diagrams and the like, this can be avoided by using vector graphics. These usually print at maximum printer resolution and take up little memory. Some programs allow exporting and saving these figures in vector formats (eps, svg, pdf, emf, wmf). Stata and R, for instance, allows you to export graphs in emf and eps formats. Copying graphs from Excel usually gives a vector format as well (emf). You can easily inspect whether you've successfully obtained a vector format by zooming in. It should blur pretty quickly if you haven't. As Powerpoint only allows zooming up to 400% and does not always render vector graphics properly, you may have to export the poster to a pdf file for closer inspection. Adobe reader allows zooming in to 1600%. Do inspect often and hold on to your original files. Powerpoint may sometimes decide it wants to convert your vector formats into raster formats. Sometimes vector format files don't appear on screen when you insert them. Printing the poster to a pdf can make them visible again (but do check for this).

For many other sort of figures (photos and scanned images), you're dealing with raster graphics. These are made up of many little points and accordingly there are resolution issues. Needless to say, resolution will have to be high. You'll have to prepare the image in some external image editing program to get it at the right size for your poster (also do other editing in that program if necessary). Remember that the file you will eventually import should be fairly large. Divide the amount of pixels in one direction by the size in inches you eventually want the figure to be. About 96 dots per inch (dpi) is a screen resolution and is too small for printing. 200 dpi is something to aim for; 300 dpi and you'll definitely be fine (this would mean a file of 2000 by 2700 pixels fills a surface the size of an A4 paper). Keep in mind that very big resolutions (>300dpi) make for big files. Not all printers and email servers can handle that.

After inserting the image you resize it until it reaches the desired size and the right resolution. Making the image smaller (make sure you maintain aspect ratio) increases the resolution; making it larger decreases the resolution (so don't do this). The exact handling of resolution in Powerpoint is shrouded in mystery, so this process may not always work. Test print your figures at a few dimensions to see if

it does. A further problem in dealing with all these issues is that Powerpoint is very reluctant to tell you the resolution of the figures you have placed. You'll have to calculate it yourself by measuring how large it has become and what the original dimensions and resolution of your picture were.

Regardless of resolution, you have more image formats worries. Raster image formats come in two flavours: lossless and lossy. The former preserves every pixel; the latter tries to compress the file, sacrificing some details to save size. Lossy formats such as .jpg/jpeg are usually best for pictures and other matters not readily available in vector graphics. Their advantages in size often outweigh the disadvantages of losing some detail. Again, hang on to your original files and test prints will tell you if your choices worked out. Copyshops often have strong preferences about image formats.

As the point of a poster is to draw attention to your research, colour can be of great help. Especially figures are clearer and prettier in colour than their mono-chrome counterparts. Be careful though. Printing in colour is expensive. Further-more, your poster can be wrecked by careless use (too many and too much contrast). Body text should always be black. Some programs have premade colour schemes. These can be useful, but ugly as well (they are decent in Office 2007). An introduction to schemes can be found here:

<http://www.tigercolor.com/color-lab/color-theory/color-theory-intro.htm>

<http://www.tigercolor.com/color-lab/tips/tip-01.html>

Carefully studying other posters (not even necessarily academic ones) can tell you a lot about which colours work and which don't. Also keep in mind that colours look different on screen than on paper, so test printing is useful (again).

Black and white is always an option. Be careful though that things which are in colour on your screen (photos and graphs, usually) may not appear properly on paper when printed in black and white. Convert them to black & white on screen and print out to test. Photos in black and white printed on regular paper have a tendency to turn out dark, so some editing might be called for.

Background images and colours in posters are often troublesome. Printing them takes a lot of time and ink. Reading goes best if the text is black on a white background. If for some reason you must use a background, be extra careful.

Pdf exporting

It is strongly recommended that you turn your poster into a pdf before you go to the printer. Most printing services will accept this format.

A pdf file is that it is as close as you can get to the final result on a screen. This gives you an excellent opportunity to inspect the poster (make ample use of the magnifying tool in Adobe Reader to check the details).

Because a pdf is a self contained file, you can be sure that everything you see will be there when it gets sent to the printer. There will be no missing fonts or figures. Furthermore, a pdf cannot be edited, which means that you get what you sent out. There will furthermore be no file incompatibilities between operating systems programs. For something that needs to look good, these are important matters.

Max OS X supports pdf exporting from the box. If you can't yet make pdfs in Windows, you need to install a pdf creator. You can get free ones from:

<http://sourceforge.net/projects/pdfcreator/>

<http://freepdfxp.de/index.html>

Occasionally, a pdf creator will not embed fonts properly (Office 2007's, for instance). It will then create raster graphics of the letters. You can tell by zooming in a lot on a letter – the dots making it up will show. This might turn into a disaster at A0 sizes. Check for this and use another pdf creator if necessary.

Some printing services will demand other formats than pdf. Make sure you know before you start and follow their instructions.

Handouts

Handouts for people to take with them can be a good idea. You can write up a summary or make an A4 version of the poster. Be careful that everything is still legible after shrinking it. Also think of colour usage here. If your poster was in colour, your handout might also need to be, so that everything stays clear. If you change to black & white for the handouts, some editing might be needed.

Getting your poster to the congress

You must bring your own printed version of the poster to the congress. Special cases exist for transporting such large paper objects. Usually you can take them with you as hand luggage on the airplane. Do not fold your poster. Also bring all files for making your poster with you in case anything goes wrong. The congress organisation also wants you to send them the poster digitally beforehand (deadline July 1st), either by email, or by post (on a CD) if the file is too large.

Other places to get instructions & help

There are many websites on the internet that give instruction on how to make an academic posters. Below are some of them. Take note of their general tips, but feel free to ignore the requirements specific to their academic field.

<http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm> (long, but many good tips).

<http://www2.le.ac.uk/offices/ssds/slc/resources/presentation/designing-poster/designing-poster> (online tutorial).

<http://www.bristol.ac.uk/is/learning/documentation/pptxp-ss3/pptxp-ss3pdf> (on using Powerpoint to make posters; pdf file).

<http://www2.le.ac.uk/offices/ssds/slc/resources/it/it-guides/ppt-posters/> (using powerpoint for posters).

<http://physio.ucsf.edu/desai/Support/Preparing%20an%20Academic%20Poster.doc>

<http://faculty.washington.edu/robinet/poster.html>

<http://www.ldeo.columbia.edu/~martins/sen_sem/how_to_poster.html>

<http://www.pptfaq.com/FAQ00075.htm> (on resolution in powerpoint).

Examples

Examples of posters. Not all are great. Look at them critically.

<http://www.eposters.net>

<http://www.flickr.com/groups/368476@N21/>

<http://www.flickr.com/groups/688685@N24/> (get feedback on your poster).