# **CPSC203 WEEK-2 LAB-2 SPREADSHEET DESIGN RULES**

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# SOME BASIC RULES ABOUT DESIGN

- Design the spreadsheet on paper first. Graph paper often works well.
- Test and edit your calculations. Where appropriate use intermediate calculations and check-sums to ensure calculations are correct.
- Keep the components of a calculation visible. No "magic numbers". Place fixed numbers used in a calculation in their own cell with a descriptive title.
- Be aware of the "space" or "geography" of the spreadsheet. Arrange your information so that it is well spaced and easy to take in at a glance.

## PARTS OF A WELL DESIGNED SPREADSHEET

# Adapted from: The Elements of Spreadsheet Style. 1986. By J.M. Nevison

- These parts can be considered components of a disciplined approach to building spreadsheet so they are self-documenting. The parts could each be in their own sheet, or they could be in a single sheet.
- Introduction -- What is this spreadsheet or workbook about. Note the title, purpose, author, creation and revision dates etc.
- Model and Assumptions -- Justify any models, summary statistics, or calculated variables you are using.

## PARTS OF A WELL DESIGNED SPREADSHEET

- **Data Dictionary** -- For every variable in the spreadsheet note: its
  - Location (cell range),
  - Name,
  - The **Data Class** it is (Raw Data, Statistical Summary, Calculated Variable, Score etc.),
  - Data Type (e.g. Integer, Text, Currency, Date, etc.) and
  - **Description** (a description of the data or what it's 'purpose' is).
- Raw Data -- Present your raw data in tabular form -- with columns representing variables and rows representing cases.

## PARTS OF A WELL DESIGNED SPREADSHEET

#### • Calculated Data

- Summary Statistics -- Usually Summary statistics result from calculations across rows for a single column.
- Derived variables are often based on calculations across columns for a row.

#### • **Presentation** (Reporting)

- Emphasize the final information you wish to show without excessive background details.
- Use charts wherever appropriate to summarize large volumes of data.

• The following example shows incremental improvements, working towards good spreadsheet design

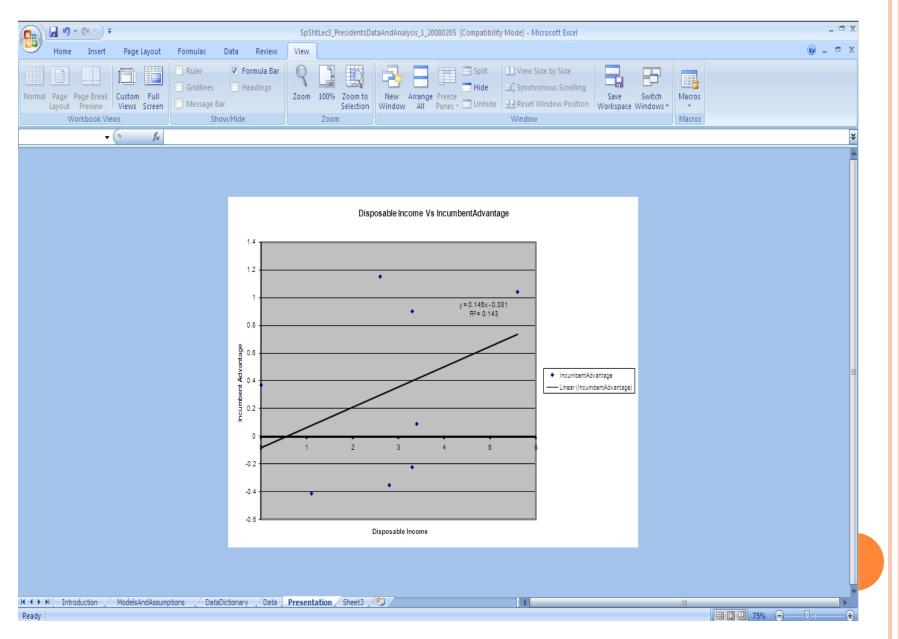
Part 1

In this first iteration, two separate sheets are used:

• data

• presentation

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#### Part 2

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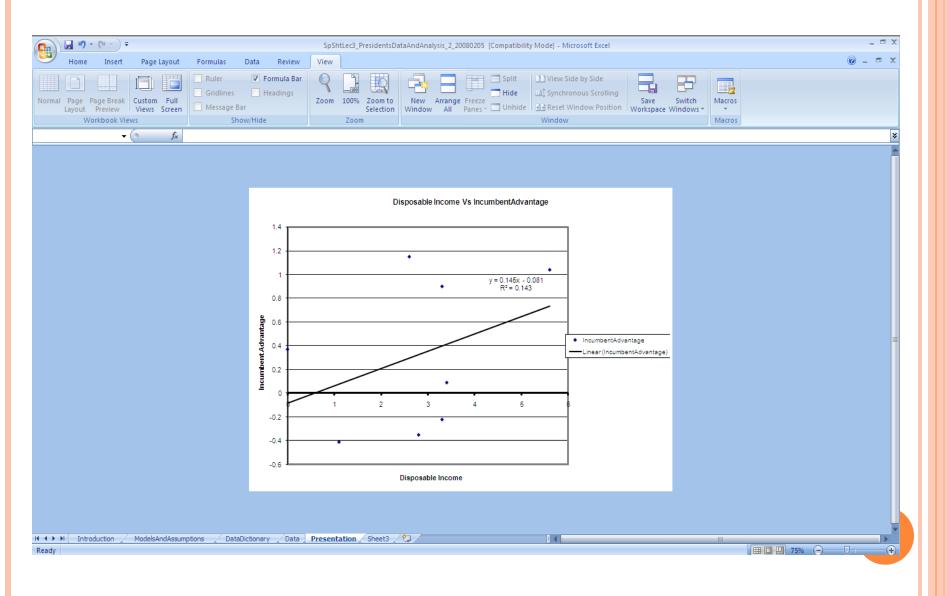
- introduction
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#### Part 3

• In this third iteration, the same five sheets are used (as in Part 2), with further refinements, descriptions, and presentation of the two models used.

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	1956 E	isenhow			2.6		57.8			1.15						0.2975	6	52.880	058			0.85	244	4.91942		0.72	665	
	1960 N				0		49.9			0.37						-0.08		46.5						3.333		0.20		
	1964 J				5.6		61.3			1.04						0.7343		60.165						1.13452		0.093		
		lumphrey			2.8		49.6			-0.35						0.3266		53.366						3.76624		0.45		
	1972 N				3.3		61.8			0.9						0.3994		54.580						7.21961		0.250		
	1976 F	ord			3.3		48.9			-0.221						0.3994	8	54.580	039			-0.62	2048 -	5.68039		0.3	385	
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