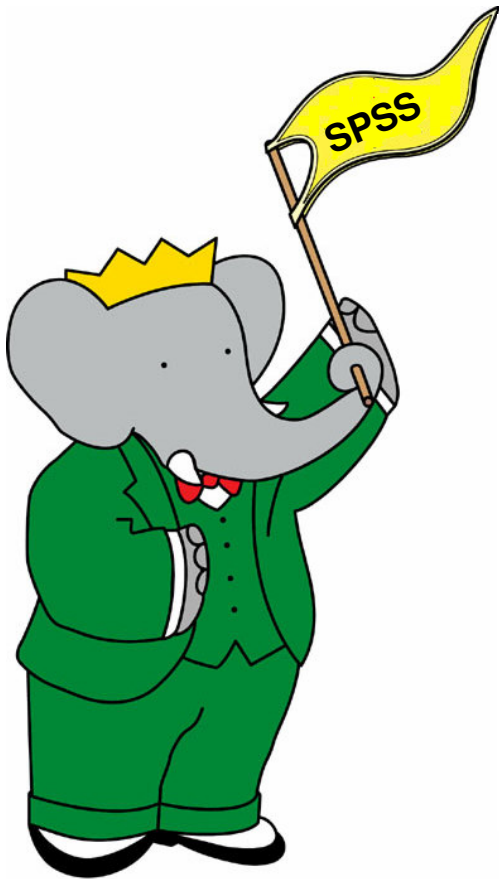


The Elephant in the Corner – Part 2

David Dipple



Institute of
Fundraising
INSIGHT IN
FUNDRAISING

tangible:
data

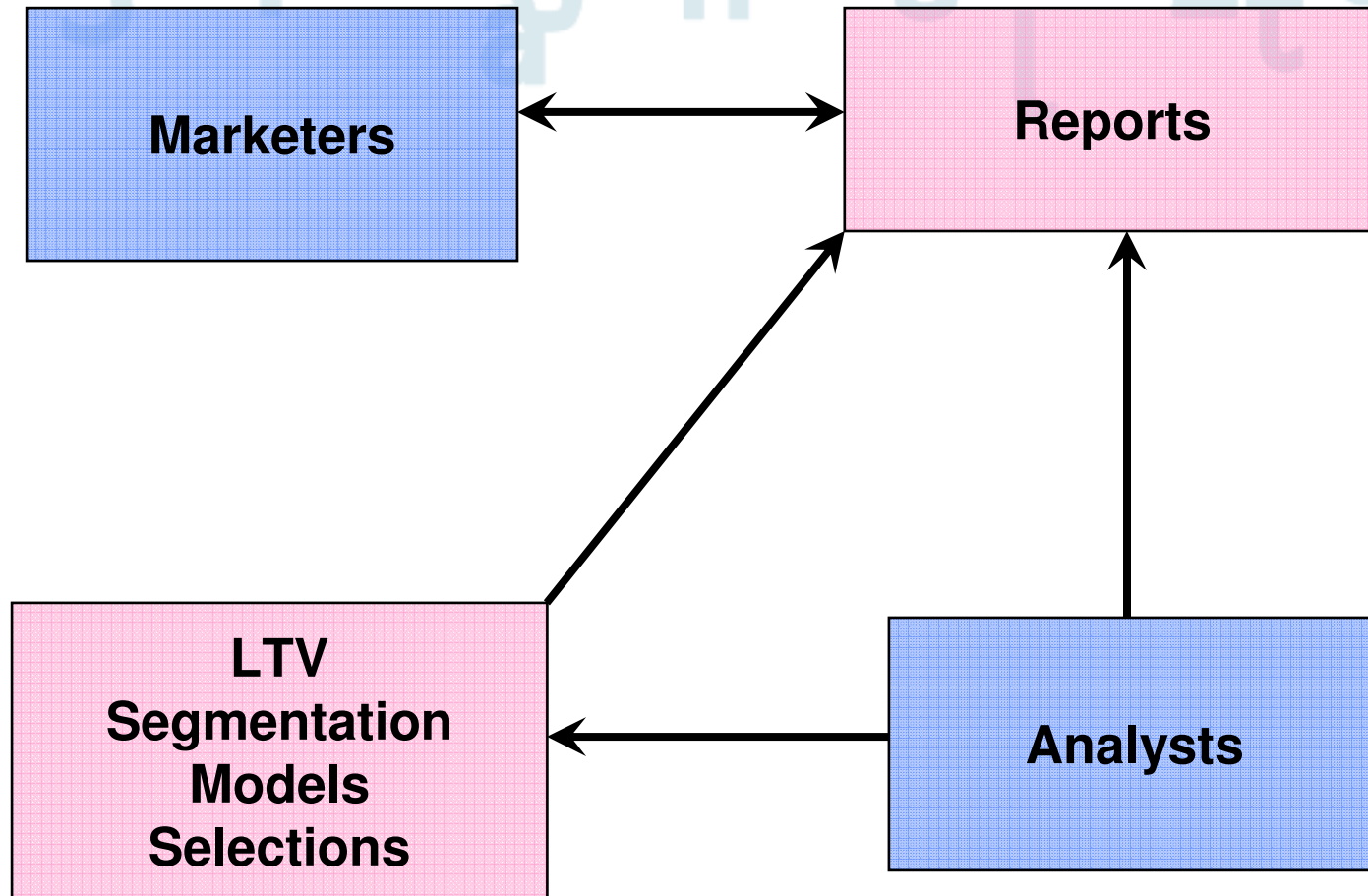
Agenda

- Introduction
- Using SPSS
- Attrition Analysis
- Recency, Frequency and Value
- Modelling
- Other Apps

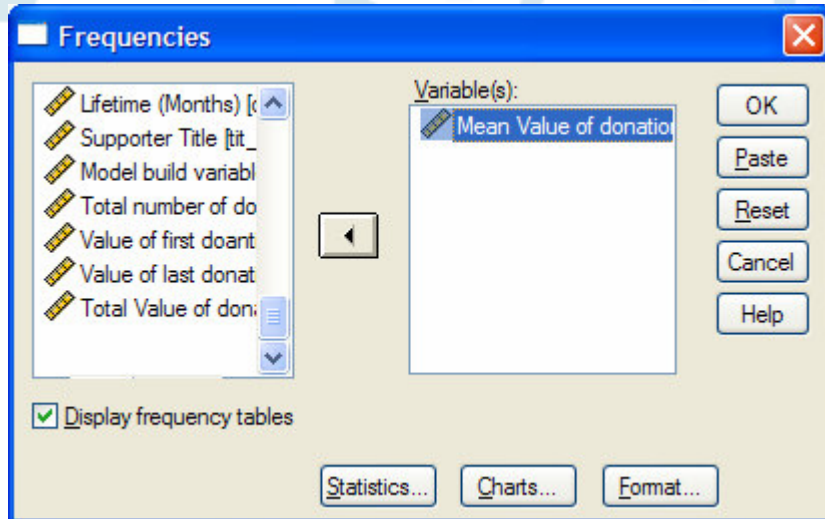
Using SPSS

- SPSS is a powerful tool that is adaptable for use by a wide range of people with differing levels of skills
- Marketers can obtain basic reports and counts quickly and easily
- More advanced users can build powerful models and segmentation solutions

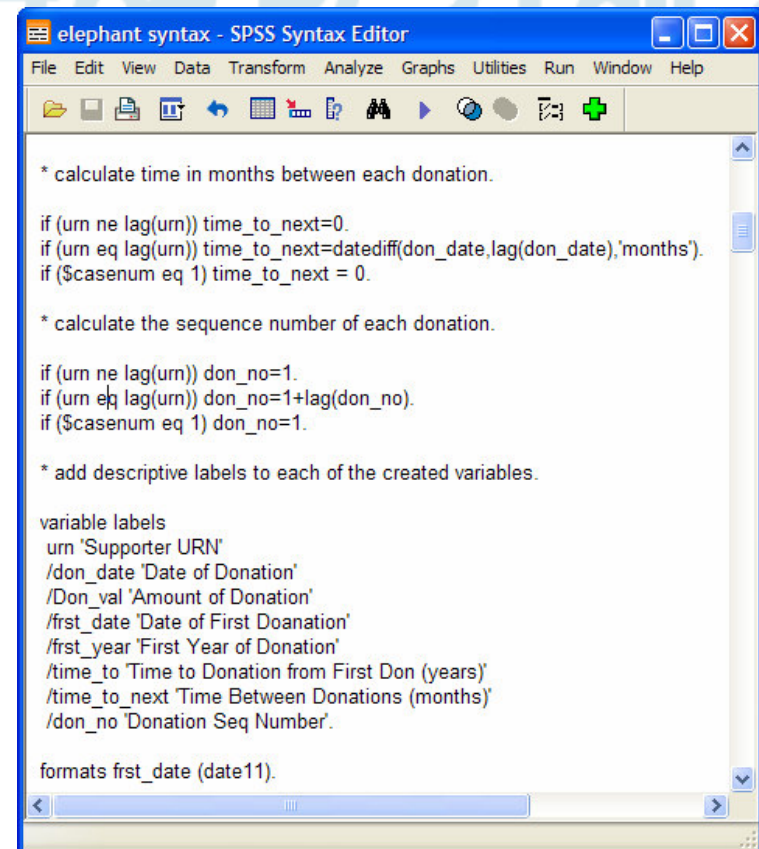
SPSS and You



Menus and Syntax

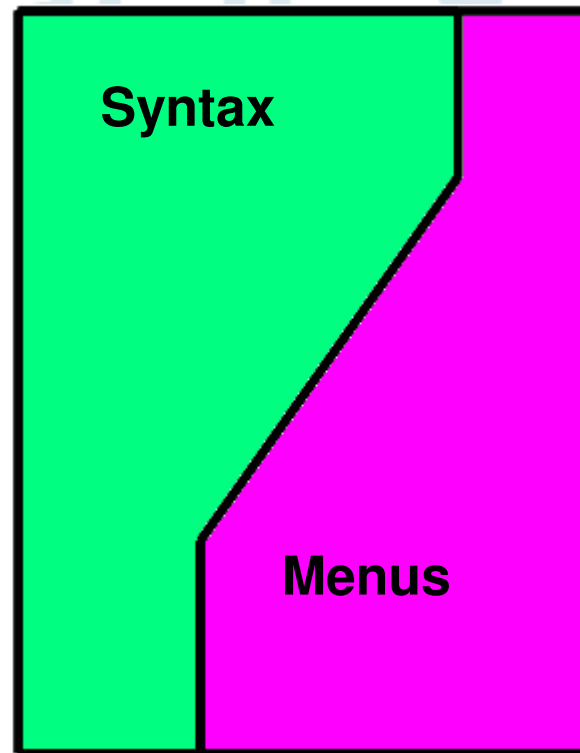


The menu structure and syntax allows people with different skills and requirements to use SPSS



Menus and Syntax

As the analyses become more complex – the need to use SPSS syntax increases



Analysis Requirements

Relative Importance

tangible:
data

Benefits and Drawbacks of Using Syntax

- Benefits
 - Repeatability
 - Multi-tasking
 - Analysis History
 - Powerful and essential for more complex analyses
- Drawbacks
 - White page syndrome
 - A level of knowledge is required
 - Possibility of making mistakes
 - It isn't Excel

SPSS Syntax

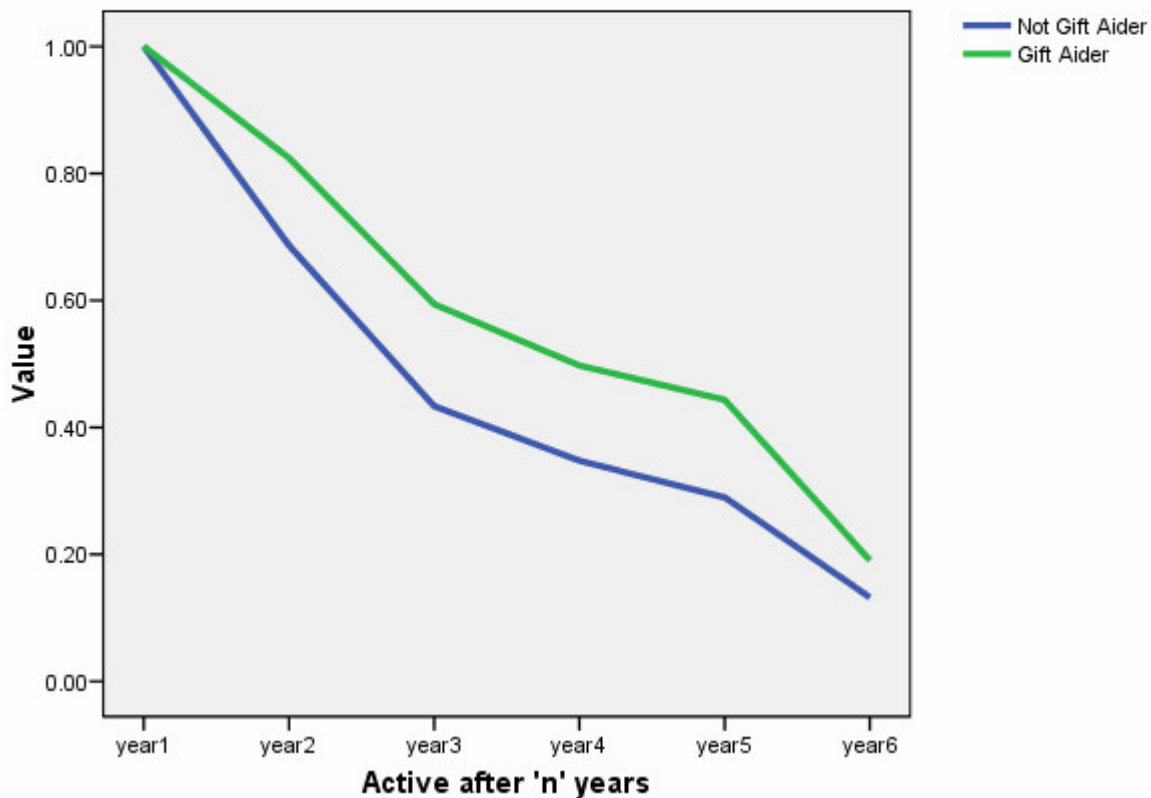
Let's see some in action

Syntax in Action – Attrition Analysis

- Understanding who stays and who goes allows us to decide where money should be invested in the future
- It also allows expectation values to be calculated to give an idea of a supporter's potential worth
- Using SPSS it is not difficult to calculate and create attrition curves by numerous factors.....

Attrition

Graph Showing Activity 'n' years after recruitment in 2000



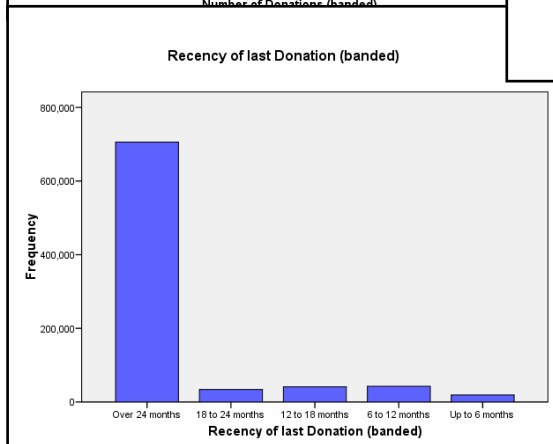
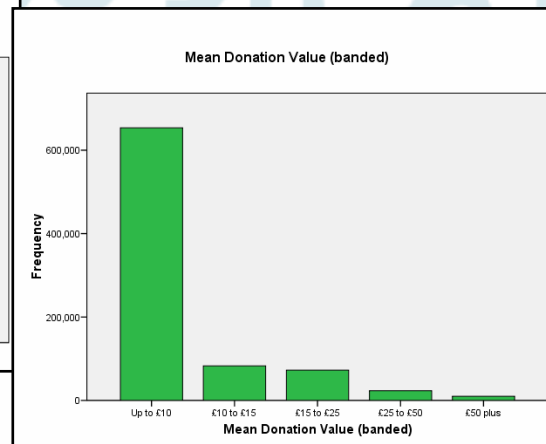
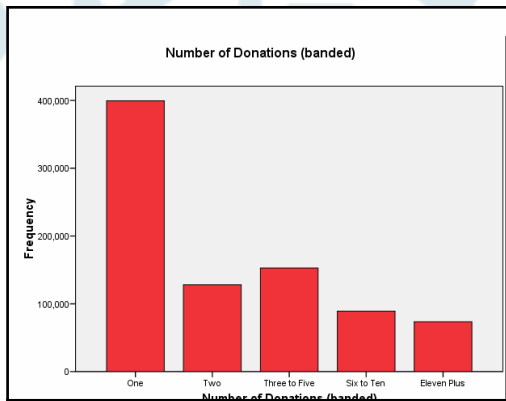
With some basic data manipulation it is possible to create some powerful analysis and reports.

Here an attrition/retention curve has been produced to understand supporter fall-off.

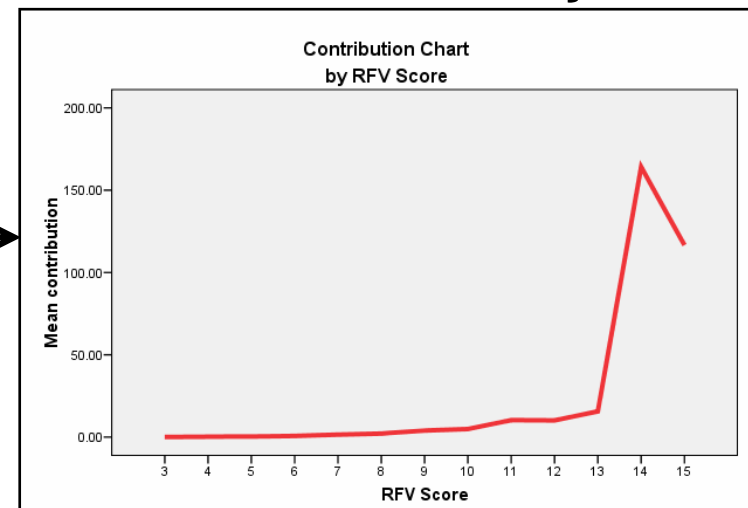
Syntax in Action – Recency Frequency & Value

- RFV is one of the basic building blocks for understanding supporter value and behaviour
- RFV is often an important factor when doing more advanced analysis and segmentation
- RFV is relatively easy to calculate.....

Recency, Frequency & Value



Again with some basic data manipulation it is possible to create both basic and more advanced recency, frequency & value analysis.



Planning tools at your fingertips

Mean Donation Value (banded) * Number of Donations (banded) * Recency of last Donation (banded) Crosstabulation

Crosstabs

Supporter URN [um]
no_don
mean_don
Date of Donation [last_...]
tot_value
recency

Row(s):
Mean Donation Value

Column(s):
Number of Donations (banded)

Layer 1 of 1
Previous Next

Recency of last Donat...

Display clustered bar charts
 Suppress tables

Statistics... Cells... Format...

OK Paste Reset Cancel Help

				Number of Donations (banded)			Total	
				Three to Five	Six to Ten	Eleven Plus		
				90107	44438	28818	559240	
				17892	11692	8961	61835	
				11602	7572	6013	58021	
				4074	2944	2442	18667	
				1530	1060	749	8026	
				125205	67706	46983	705789	
				5463	3462	2492	25181	
				1713	991	764	4383	
				923	542	450	3287	
				259	156	167	947	
				101	67	70	402	
				8459	5218	3943	34200	
				5691	4536	4492	28622	
				1672	1473	1531	6120	
				980	857	952	4274	
				314	262	403	1422	
				154	92	138	681	
				8811	7220	7516	41119	
				2832	3246	5685	27331	
				1430	1459	2169	7290	
				862	875	1525	5589	
				347	287	595	1832	
				132	119	201	640	
				5603	5986	10175	42682	
	Total	£50 plus	110	78				
	Total		17258	3660				
Up to 6 months	Mean Donation	Up to £10	1893	2753	3502	2047	3189	13384
	Value (banded)	£10 to £15	841	393	688	566	879	3367
		£15 to £25	313	138	370	268	503	1592
		£25 to £50	71	69	108	99	209	556
		£50 plus	14	23	41	34	83	195
	Total		3132	3376	4709	3014	4863	19094

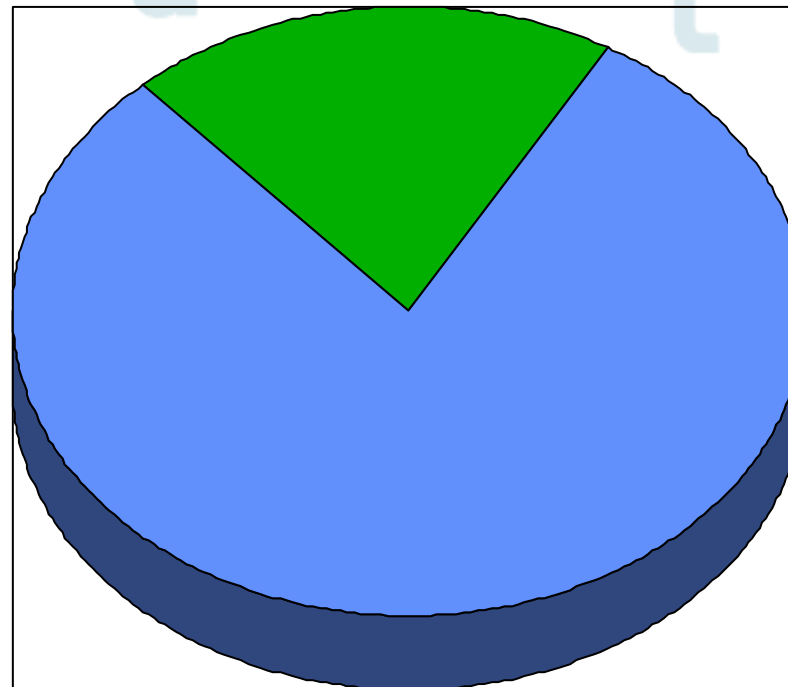
Modelling

An approximate answer to the right question is worth a great deal more than the precise answer to the wrong question.

The first golden rule of applied mathematics

Modelling

During a modelling project about 80-85% of the time is taken up with data manipulation and understanding



Don't be daunted – help is always at hand

```
elephant modelling syntax - SPSS Syntax Editor
File Edit View Data Transform Analyze Graphs Utilities Run Window Help

/mval_bnd 'Mean Value of donations'.

fre var no_donsb fdon_bnd ldon_bnd tval_bnd mval_bnd.

temporary.
select if (sel_var eq 1).
save outfile='c:\wip\clients\iof sig\elephant\summary chaid file.sav'.

* run a logistic regression - based on the sample sample created earlier.

LOGISTIC REGRESSION VARIABLES legacy_flag
/SELECT = sel_var EQ 1
/METHOD = ENTER tit_code don_lifetime reg_flag sales_flag
lott_flagdon lott_flag inmem_flag don_flag no_trans frst_don_val
last_don_val tval_dons mval_dons no_dons AcornCat AcornGroup
/CONTRAST (AcornGroup)=Indicator /CONTRAST (tit_code)=Indicator /CONTRAST
(reg_flag)=Indicator /CONTRAST (sales_flag)=Indicator /CONTRAST
(lott_flagdon)=Indicator /CONTRAST (lott_flag)=Indicator /CONTRAST
(inmem_flag)=Indicator /CONTRAST (don_flag)=Indicator /CONTRAST
(AcornCat)=Indicator
/SAVE = PRED PGROUP
/CRITERIA = PIN(.05) POUT(.10) ITERATE(20) CUT(.5) .

* pre_1 is saved PRED value from the LR function - the probability that a person will leave a legacy.

sort cases by pre_1 (d).
```

Regression Models Option

Press F1 and get full syntax help

LOGISTIC REGRESSION

LOGISTIC REGRESSION VARIABLES dependent var
[WITH independent varlist [BY var [BY var] ...]]

```
[/CATEGORICAL = var1, var2, ... ]
[/CONTRAST (categorical var) = [(INDICATOR [(refcat)] )]
(DEVIATION [(refcat)] )
(SIMPLE [(refcat)] )
(DIFFERENCE )
(HELMERT )
(REPEATED )
(POLYNOMIAL[(1,2,3,...)])
(metric )
(SPECIAL (matrix) )
[/METHOD = ENTER ... ]
[/ALL ... ]
```

Logistic Regression

Dependent: Legator [legacy_flag]

Block 1 of 1

Previous Next

Covariates:

- lott_flag
- ldon_flag
- sales_flag
- reg_flag
- don_lifetime

Method: Enter

Selection Variable: Rule...

Categorical... Save... Options...

Or build the syntax through the menu system and paste the results –

I DO

Understanding the model

Classification Table^c

Observed			Predicted					
			Selected Cases ^a		Unselected Cases ^b		Percentage Correct	
			Legator		Legator			
	0	1	Percentage Correct	0	1	Percentage Correct		
Step 1	Legator	0	776	134	85.3	908940	153597	85.5
		1	178	725	80.7	83	272	76.6
	Overall Percentage				83.0			85.5

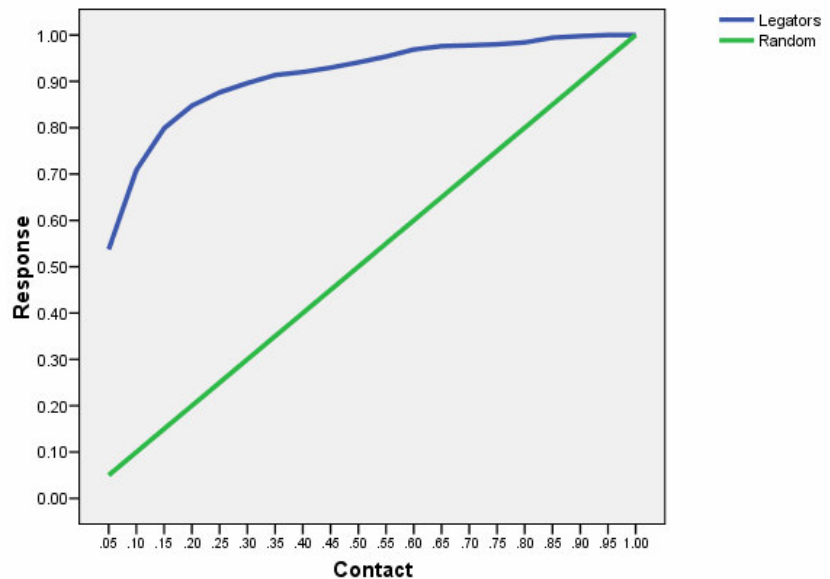
a. Selected cases sel_var EQ 1

b. Unselected cases sel_var NE 1

c. The cut value is .500

Multiple ways of understanding if a model has worked. Most of the output can be ignored by non statisticians and the key parts used to determine power.

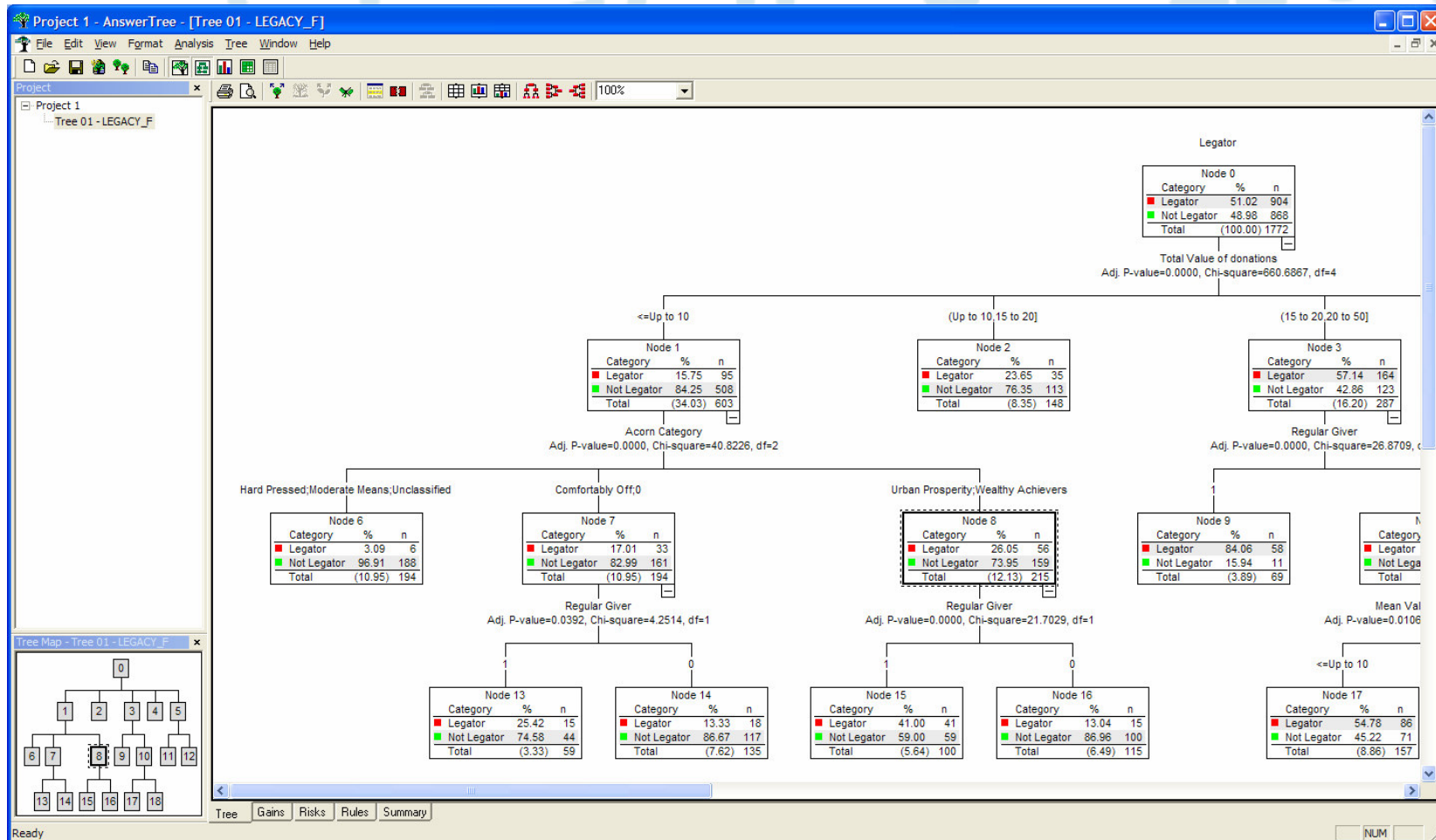
Legacy Model Gains Chart

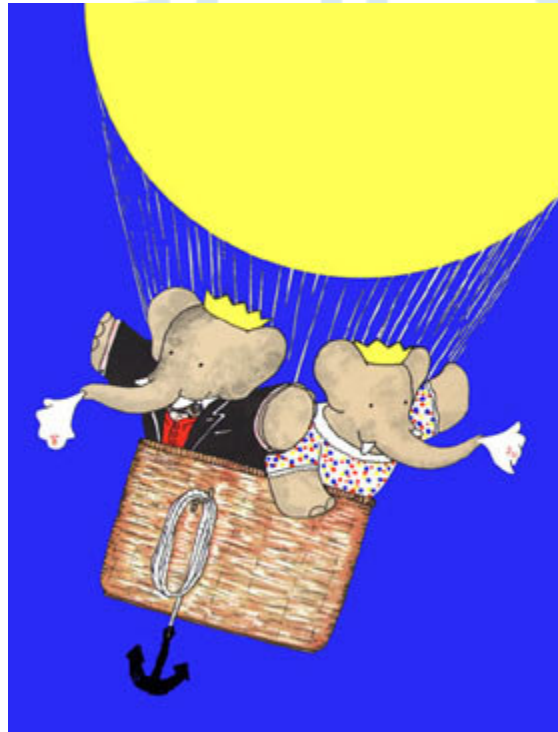


Talking with other apps

- SPSS is very adaptable and able to work with other applications
- Exchanging data is easy and complex problems can be broken down into smaller parts using the power of each of the applications.
- SPSS Answer Tree is a powerful graphical modelling and data mining tool

More than one way to skin an elephant





David Dipple: ddipple@tangibledata.co.uk



tangible:
data