

Tolerance for diversity and happiness in Malaysia: What is the missing link?

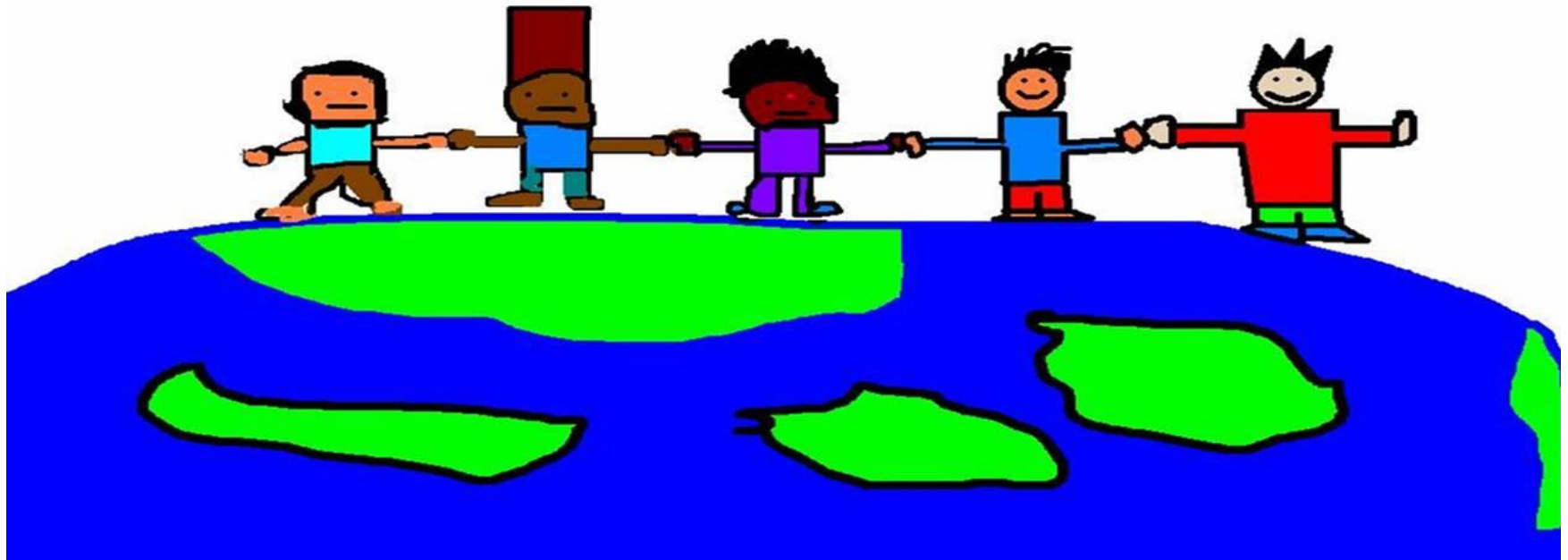
By Ying-Yin Koay, Yoke-Kee Eng, Chin-Yoong Wong

4th Malaysia Statistics Conference – MyStats 2016 "Strengthening Statistical Usage for Decisions and Innovation"



Tolerance means...

appreciating and respecting
differences in people.





Research questions

**Can tolerance itself
nurture a happy country?
Does it need a mediator,
such as freedom?**

Why freedom?

- i. freedom go two together naturally and simultaneously for a sound economic and social development (Berggren & Nilsson 2013, Rothstein 2000)**
- ii. a vast of literature exposes a strong chain between freedom and happiness (Welsch 2003, Jackson 2016, Brulé & Veenhoven 2014).**

Objectives of study

- i. To reveal the knot between tolerance and happiness**
- ii. To examine the mediating role of freedom in bridging tolerance and happiness**
- iii. To discover the direct impact of freedom on happiness**

Data: World Value Survey wave 6

Malaysia: Survey period 2010-2011

Age	Sex		Total	
	Male	Female	Observation	Percentage
Up to 29	190	170	360	27.7
30-49	294	319	613	47.2
50 and more	184	143	327	25.2
Total	668	632	1300	100

Methodology

Categorical Principle
Components Analysis
(CatPCA)



Cross-sectional
Ordered logit/probit
models



Marginal Effects
Cross-sectional
Ordered logit/probit
models

To construct 2 components to proxy tolerance and freedom

To test the hypothesis that (i) the impact of tolerance on perceived happiness (ii) freedom can be a mediator for the linkage between tolerance and perceived happiness, and (iii) the direct role of freedom on happiness

To detect which factors bring greater impact on Malaysians happiness

Results

Table 4: Model Summary of CATPCA

Variables	Component loading	Variance Accounted For		
		Cronbach's Alpha	Total Eigenvalue	% of Variance
<p>1. Tolerance</p> <p><u>Item description:</u></p> <p>“The only acceptable religion is my religion.”</p> <p>“Homosexual can always be justified.”</p> <p>“Sex before married can always be justified.”</p>	<p>0.545</p> <p>0.889</p> <p>0.896</p>	0.706	1.89	63%
<p>2. Freedom</p> <p><u>Item description:</u></p> <p>“A great deal of choice and control you feel you have over the way your life turns out”.</p> <p>“How democratically is this country being governed today?”</p> <p>“How much independence do you have in performing your task at work?”</p>	<p>0.797</p> <p>0.750</p> <p>0.749</p>	0.647	1.758	58.6%

Notes:

The component loading shows the correlation between each original item and the extracted component.

The Cronbach's alpha indicates the reliability on the internal consistency of the extracted component.

The total Eigenvalue measures the variance in all the items which is accounted for by the extracted component.

The % of variance indicates the total variation of the extracted component that can be explained by all the selected items.

Table 5: Regression of happiness: cross-sectional ordered Logit statistics

Independent variables	Model				
	(1)	(2)	(3)	(4)	(5)
tolerance		-0.0329	-0.0122	0.0367	-0.0033
freedom			0.2884***	0.3489***	
tolerance*freedom				0.2179***	0.1695**
choice					0.0482
political					0.1127***
work					0.0481*
religion	0.0257				
homosexual	0.1183***				
sex	-0.1202***				
income	0.1557***	0.1445***	0.1643***	0.1710***	0.1382***
health	1.0357***	1.0396***	1.0120***	1.0144***	1.0313***
financial	0.1277***	0.1404***	0.1386***	0.1338***	0.1251***
life	0.1498***	0.1486***	0.1253***	0.1218***	0.1171***
god	0.1663***	0.1485***	0.1322***	0.1238***	0.1217***
education	-0.0776**	-0.0733**	-0.0694**	-0.0689*	-0.0711**
age	0.0032	0.0049	0.0047	0.0045	0.0022
employment	0.0436	0.0323	-0.0062	-0.0114	-0.0925
malay	0.0670	-0.0290	-0.0427	-0.0211	-0.0306
chinese	-0.1170	-0.3284	-0.2860	-0.2683	-0.2807
constant cut1	3.7008***	3.5286***	3.1814***	3.0548***	4.1279***
constant cut2	7.2128***	6.9979***	6.6635***	6.5504***	7.6435***
n	1,300	1,300	1,300	1,300	1,300
LR χ^2	314.79***	307.49***	324.19***	331.85***	329.15***
Pseudo-R ²	0.1526	0.1449	0.1527	0.1564	0.1551
Brant test	16.88	9.43	10.66	16.99	15.32

Notes:

The asterisk (*) represents the significant level: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.10$.

n denotes the sample size while the Likelihood ratio statistics indicate the significance of model. All the models are significant at 1% of significance level.

Pseudo-R² measures the goodness of fit of model to the data.

Brant test is used to detect the fulfillment of parallel regression assumption. The obtained insignificant Brant test results show that Model (1) to (5) fulfill such as assumption.

Table 6: Regression of happiness: cross-sectional ordered Probit statistics

Independent variables	Model				
	(6)	(7)	(8)	(9)	(10)
tolerance		-0.0170	-0.0058	0.0139	-0.0035
freedom			0.1566***	0.1830***	
tolerance*freedom				0.1041**	0.0849**
choice					0.0266
political					0.0626***
work					0.0280*
religion	0.0296				
homosexual	0.0608***				
sex	-0.0681***				
income	0.0891***	0.0821***	0.0908***	0.0936***	0.0770***
health	0.5933***	0.5961***	0.5800***	0.5803***	0.5887***
financial	0.0788***	0.0855***	0.0845***	0.0821***	0.0773***
life	0.0869***	0.0861***	0.0723***	0.0715***	0.0690***
god	0.0960***	0.0882***	0.0790***	0.0743***	0.0715***
education	-0.0416**	-0.0395*	-0.0371*	-0.0365*	-0.0377*
age	0.0023	0.0033	0.0031	0.0031	0.0017
employment	0.0481	0.0390	0.0208	0.0215	-0.0319
malay	0.0560	-0.0131	-0.0151	0.0011	-0.0076
chinese	-0.0729	-0.1968	-0.1688	-0.1561	-0.1670
_cut1	2.2942***	2.1699***	1.9631***	1.9106***	2.4898***
_cut2	4.2458***	4.1037***	3.9060***	3.8562***	4.4456***
n	1,300	1,300	1,300	1,300	1,300
LR χ^2	319.22***	313.08***	328.11***	333.87***	332.87***
Pseudo-R ²	0.1547	0.1475	0.1546	0.1573	0.1568
Approximate LR	17.63	8.51	9.33	17.84	16.84

Notes:

The asterisk (*) represents the significant level: * p < 0.10, ** p < 0.05, and *** p < 0.01.

n denotes the sample size.

Likelihood ratio χ^2 statistics indicate the significance of model. All the models are significant at 1% of significance level.

Pseudo-R² measures the goodness of fit of model to the data.

The approximate likelihood ratio test is used to detect the equality assumption of coefficients across response categories. The obtained insignificant approximate likelihood ratio test results show that Model (6) to (10) fulfill such assumption.

Table 7: Marginal effects based on Model (5) and Model (10) for each level of perceived happiness

Independent variables	Ordered logit Outcome			Ordered Probit Outcome		
	(2)	(3)	(4)	(2)	(3)	(4)
tolerance	0.0001	0.0007	-0.0008	0.0001	0.0012	-0.0014
tolerance*	-0.0036***	-0.0379**	0.0414**	-0.0034**	-0.0299**	0.0333**
freedom						
choice	-0.0010	-0.0108	0.0118	-0.0011	-0.0094	0.0104
political	-0.0024***	-0.0252***	0.0275***	-0.0025***	-0.0220***	0.0245***
work	-0.0010**	-0.0107*	0.0118*	-0.0011*	-0.0099*	0.0110*
income	-0.0029***	-0.0309***	0.0338***	-0.0031***	-0.0271***	0.0302***
health	-0.0217***	-0.2303***	0.2520***	-0.0235***	-0.2071***	0.2307***
financial	-0.0026***	-0.0279***	0.0306***	-0.0031***	-0.0272***	0.0303***
life	-0.0025***	-0.0262***	0.0286***	-0.0028***	-0.0243***	0.0270***
god	-0.0026***	-0.0272***	0.0297***	-0.0029***	-0.0252***	0.0280***
education	0.0015**	0.0158**	-0.0174**	0.0015*	0.0133*	-0.0148*
age	-0.00005	-0.0005	0.0005	-0.0001	-0.0006	0.0007
employment	0.0019	0.0206	-0.0225	0.0013	0.0112	-0.0125
malay	0.0006	0.0068	-0.0075	0.0003	0.0027	-0.0030
chinese	0.0063	0.0628	-0.0691	0.0073	0.0585	-0.0658

Notes:

The asterisk (*) represents the significant level: * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.10$.

Outcome (1) is not applicable in this study as none of respondent chosen the answer of 'not at all happy'.

Outcome (2) represents the probability of a respondent being not very happy; Outcome (3) indicates the probability represents the probability of a respondent being rather happy; Outcome (4) shows the probability of a respondent being very happy.

Conclusion

- i. Tolerance itself may not be able to stimulate gladness.**
- ii. Freedom has both indirect and direct impacts on happiness. It can be the mediator to bridge tolerance and happiness.**
- iii. More precisely, political freedom and freedom at work help to enhance the level of wellbeing.**
- iv. Health is the main concern of Malaysians in the pursuit of life contentment.**

Policy implementation

- i. It rings the bell of the importance of safeguarding political freedom in creating a tolerant society for the sake of happiness of Malaysians.**

- ii. The Government may need to improve and upgrade the health care policy always.**

- iii. Employers could play a role in tackling their employee's happiness by granting them a freer working environment.**



**Thank
You!!!**