Family, Friends, Work, and Religion: Latent Profile Analysis of 6 countries from the World Values Survey

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Abstract

Latent profile analysis provides a nuanced view of groups within a broader homogenous population. This allows the possibility of identifying sub-groups in the sample beyond an average score. In this article, I report results from latent profile analysis based on the importance placed on family, friends, work, and religion of participants from six countries using the World Values Survey dataset. I also report descriptive means from 60 countries.

Keywords: latent profile analysis, world values survey, family, religion, work

Cultures and countries have different value systems and as a result place varying levels of importance on aspects of life. These aspects are universal and may include family, friends, work, and religion, among other things. In the public eye, there are existing stereotypes which label countries and collective areas in the world based on their values. For instance, there is a common opinion that countries in the west place importance in leisure. Middle eastern countries may place high importance to religion. Likewise, developing countries may emphasize work to support their families.

Regardless of these stereotypes, there may be groups within these countries and cultures which may identify with different priorities than that of the major trend. These within group differences may be lost due to oversimplification of data as a result of descriptive statistics and the problems with aggregation. It also highly impractical to create profiles a priori data collection. In this regard, to address this issue, latent profile analysis provides a valuable analytic tool to identify heterogeneous groups within a larger homogenous group.

Method

Participants

Participants for this study are from the World Values Survey Wave 6. The World Values Survey was started in 1981 conducted by a global network of social scientists interested in cultural values and their impact on social life. The WVS consists of cross-national, time series data conducted in almost 100 countries. In Wave 6, sixty countries were in the study. For more information on the sample, please visit worldvaluessurvey.org.

Measures

Importance in life. Six questions were asked with the prefixes, “For each of the following, indicate how important it is in your life. Would you say it is: . . .?” The suffixes were family, friends, leisure time, politics, work, and religion. Responses were “very important”, “rather important”, “not very important”, and “not at all important.”

Analysis Plan

Mean values of importance for family, friends, leisure, politics, work, and religion are presented in Table 1. For the purpose of this article, I selected six countries from major areas of the world: Australia, China, Nigeria, South Africa, Sweden, and the United States.

Results

Descriptive statistics for 60 countries are presented in the *Appendix* section. For the latent profiles, models with three classes specified were identified. Model fit indices are presented below. An entropy value close to 1 indicates good model fit. With this criterion, it appeared Australia, China, and Nigeria fit the data well with three classes. As can be seen, the entropy values are far apart for Sweden and United States. This indicates poor model fit based on three classes.

Table 1. Model fit indices of 3-class latent profile solution

Country	Classes	AIC	BIC	Entropy
Australia	3	10333.17	10427.07	0.97
China	3	13195.39	13295.5	0.95
Nigeria	3	5131.62	5230.11	0.98
South Africa	3	24133.79	24243.74	0.85
Sweden	3	8141.63	8231.93	0.62
United States	3	17222.66	17324.94	0.52

Australia

There appeared to be good model fit with the three-class solution for Australia. Greater variation among groups was seen in religion while family had a single profile.

China

Based on model fit indices, the three-class solution fit well for China. Interestingly, as seen in the figure below, there is an indication of a group of people who responded that religion was very important or rather important to them. This is in contrast with the mean level 1.6 as reported in *Appendix*.

Nigeria

The fit indices were adequate for a three-class solution. As indicated by the figure below, there appears to be a class consisting of a group of people where work is not as important as other profiles.

South Africa

The entropy value for South Africa was farther from 1 compared with the previous countries. However, a three-class solution appeared to fit well with the data.

Sweden

The entropy value was away from 1 for Sweden. This indicates poor fit for the three-class solution. From the plot below, it appears that there may be two classes instead of three.

United States

The three-class solution may not be the best fit based on the entropy value. There is however a clear spread of level of importance of religion.

Discussion

The three-class profiles indicated good model fit for Australia, China, and Nigeria, relatively lower fit for South Africa, and poor fit for Sweden and United States (Table 1). Overall, based on the latent profiles and mean levels of importance as reported in *Appendix* (see p. 4, 5), we can see that family was almost universally ranked with higher levels of importance. Religion on the other hand had more variation, and politics, although not the focus of the article, was almost always lower in the levels of importance across countries.

These findings indicate that most countries place high importance on family. This may be due to historically established cultural norms as well as the close nature of family involvement for people. It would be interesting to see future patterns with upcoming waves of the World Values Survey. A retrospective view over the previous five waves of the WVS may also provide important insights.

Religion appeared to have varying levels of importance within countries and across countries. For instance, although China had an overall lower mean value of level of importance to religion, there appeared to be a small group of individuals who placed high importance on religion. This pattern was seen in other countries as well.

In conclusion, as this brief article illustrated, latent profile analysis can be a valuable tool for examining underlying sub-groups within a homogenous sample. This analysis can help researchers move beyond average scores and provide more nuanced understandings of how people vary within and across cultures. Findings from this study which examined the levels of importance of family, friends, work, and religion encourage more research on these topics. Finally, the finding of almost universally high levels of importance of family relationships suggest an important need to examine this aspect of life.

References

Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2014. World Values Survey: Round Six - Country-Pooled Datafile
Version: www.worldvaluessurvey.org/WVSDocumentationWV6.jsp. Madrid: JD Systems Institute.

Appendix

Syntax

```
library(readr)
worldvalues3 <- read_csv("worldvalues3.csv")

worldvalues3 %>%
  filter(country == (enter country code)) %>%
  subset(select = c("family", "friends", "work", "religion")) %>%
  estimate_profiles(1:3) %>%
  compare_solutions(statistics = c("AIC", "BIC"))

worldvalues3 %>%
  filter(country == 12) %>%
  subset(select = c("family", "friends", "work", "religion")) %>%
  estimate_profiles(3) %>%
  plot_profiles()
plot_profiles()
```

Please turn over to next page for Table of Descriptive Means of 60 Countries

Mean Levels of Importance of Various Aspects of Life

Country	Family	Religion	Friends	Work	Leisure	Politics
Algeria	3.90	3.88	3.25	3.61	2.98	2.30
Azerbaijan	3.93	2.96	3.21	3.50	2.88	2.07
Argentina	3.88	2.55	3.43	3.42	3.13	2.11
Australia	3.92	2.16	3.53	3.04	3.33	2.51
Armenia	3.97	3.46	3.24	3.63	3.04	2.09
Brazil	3.87	3.40	3.15	3.61	3.19	2.25
Belarus	3.87	2.47	3.28	3.17	3.12	2.19
Chile	3.91	2.69	3.13	3.45	3.47	1.94
China	3.85	1.60	3.42	3.19	2.96	2.44
Taiwan	3.91	2.62	3.38	3.49	3.23	2.20
Colombia	3.85	3.41	2.99	3.74	3.34	1.98
Cyprus	3.93	3.17	3.55	3.54	3.46	2.27
Ecuador	3.98	3.52	3.03	3.83	3.41	2.45
Estonia	3.85	1.98	3.39	3.27	3.21	2.13
Georgia	3.98	3.81	3.71	3.57	2.98	2.27
Palestine	3.95	3.83	3.26	3.49	2.93	2.50
Germany	3.74	2.04	3.45	3.19	3.19	2.41
Ghana	3.95	3.91	3.20	3.93	3.39	2.39
Haiti	3.70	2.96	3.26	3.58	2.70	2.42
Hong Kong	3.83	2.23	3.37	3.07	3.21	2.47
India	3.95	3.59	3.30	3.73	2.98	2.36
Iraq	3.92	3.82	3.34	3.55	2.67	2.27
Japan	3.92	1.89	3.40	3.42	3.35	2.94
Kazakhstan	3.92	2.65	3.33	3.41	3.19	2.41
Jordan	3.96	3.93	3.40	3.51	3.04	2.21
South Korea	3.90	2.63	3.45	3.48	3.19	2.63
Kuwait	3.94	3.86	3.49	3.71	3.03	2.83
Kyrgyzstan	3.96	3.20	3.22	3.55	2.85	2.58
Lebanon	3.76	3.30	3.39	3.52	3.07	2.48
Libya	3.96	3.96	3.57	3.69	3.17	2.72

Note: Higher values (dark green) indicate more importance

Country	Family	Religion	Friends	Work	Leisure	Politics
Malaysia	3.97	3.81	3.36	3.78	3.24	2.60
Mexico	3.97	3.37	3.12	3.81	3.42	2.39
Morocco	3.89	3.87	3.08	3.76	2.49	1.66
Netherlands	3.83	1.91	3.45	3.07	3.35	2.31
New Zealand	3.93	2.23	3.52	3.17	3.41	2.46
Nigeria	3.99	3.87	3.57	3.69	3.38	2.48
Pakistan	3.94	3.87	3.26	3.59	2.64	2.20
Peru	3.85	3.29	2.77	3.67	3.10	2.27
Philippines	3.98	3.84	3.16	3.89	2.53	2.71
Poland	3.92	3.18	3.32	3.54	3.23	2.18
Qatar	3.99	3.99	3.71	3.78	3.22	2.85
Romania	3.92	3.34	2.92	3.43	3.08	1.91
Russia	3.83	2.35	3.13	3.13	3.01	2.05
Rwanda	3.90	3.09	3.69	3.58	3.00	2.71
Singapore	3.92	3.11	3.47	3.26	3.28	2.54
Slovenia	3.88	2.18	3.36	3.30	3.28	1.73
South Africa	3.91	3.39	3.24	3.46	3.03	2.46
Zimbabwe	3.96	3.79	3.18	3.85	3.16	2.38
Spain	3.91	2.06	3.49	3.44	3.37	1.90
Sweden	3.87	1.98	3.68	3.40	3.50	2.71
Thailand	3.87	3.44	3.14	3.58	3.02	3.01
Trinidad & Tobago	3.93	3.69	3.09	3.58	3.35	2.24
Tunisia	3.98	3.94	3.24	3.80	2.99	2.30
Turkey	3.95	3.54	3.56	3.28	3.29	2.48
Ukraine	3.91	2.78	3.27	3.18	3.12	2.07
Egypt	3.96	3.93	3.26	3.09	2.64	2.83
United States	3.90	2.97	3.50	3.05	3.31	2.57
Uruguay	3.87	2.28	3.31	3.51	3.37	2.04
Uzbekistan	3.97	3.03	3.43	3.51	2.86	2.39
Yemen	3.96	3.94	3.42	3.52	2.66	2.33

Note: Higher values (dark green) indicate more importance