Income, Welfare And Fertility

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CONTENTS

Research Question:

What is the relationship between Income and Fertility?

Is Government welfare system being exploited?

Why Worth Tracking?

Fertility is important

Population quality

Dataset

- SA2 Income Support from AURIN
  - At suburban level
  - A dataset including number of people that claims government support
  - Data include children support, unemployment support, etc

- LGA Basic Community Profile from ABS
  - At Local Government area level
  - A dataset that contains information which collected in 2011 census
  - B24: Number of Children ever born
  - B17b: Income level by age.

Data Wrangling

SA2 Income Support
- Replace Missing Value
- Integrate data from SA2 to LGA

Basic Community Profile
- 27 Data Set -> one Dataframe

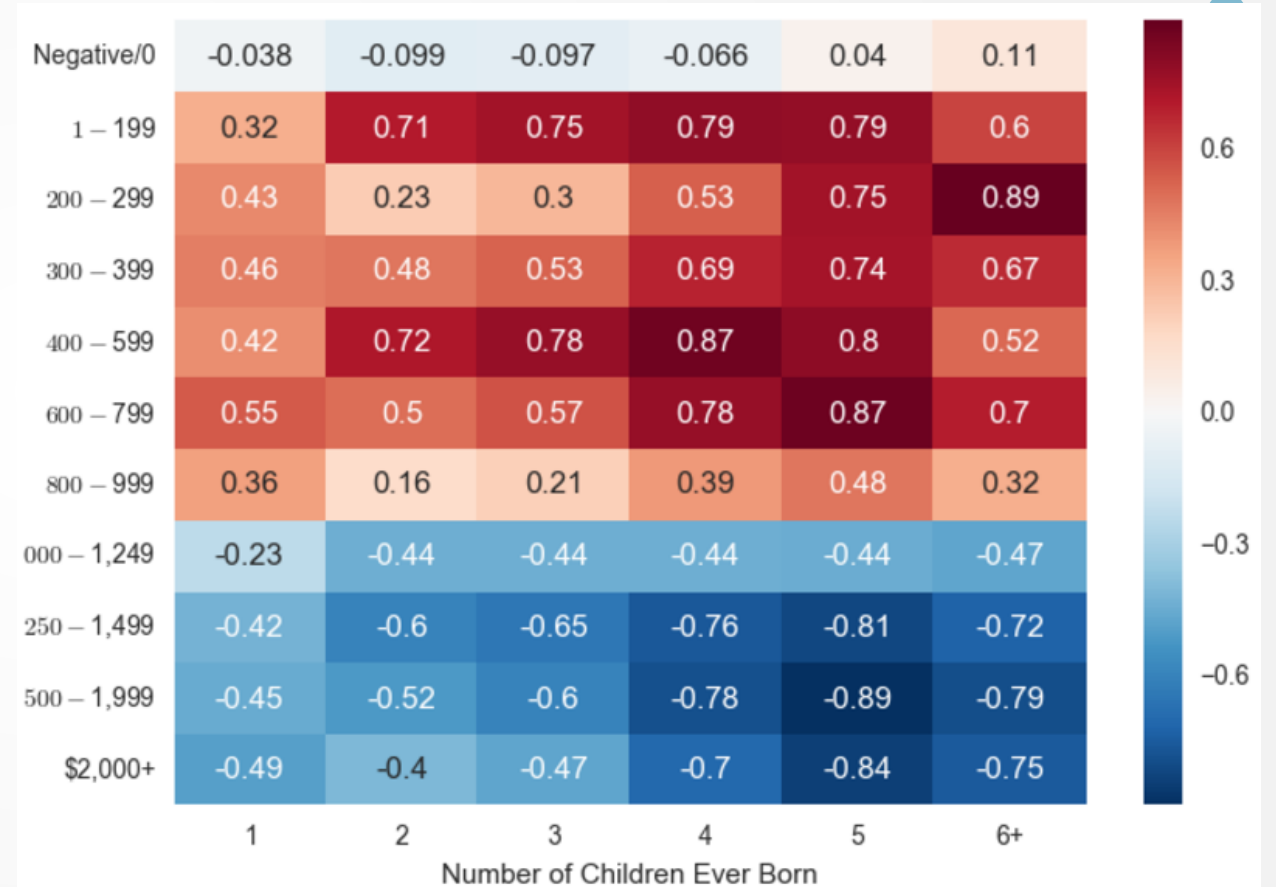| LGA	Children in Welfare-Dependent and Other Low Income Families - Count	Children in Welfare-Dependent and Other Low Income Families - Total	People Receiving an Unemployment Benefit - Count	People Receiving an Unemployment Benefit - Total
Melbourne	1897.298867	5959.964643	1622.767234	53435.264224
Port Phillip	1787.395591	13653.540376	2433.563885	121317.883583
Yarra	2578.000000	10151.527255	2270.000000	65643.472744
Banyule	2658.011623	17629.805428	1734.989699	60696.032087
Darebin	4859.000000	24733.429543	4172.000000	100961.570463
Hume	14640.609728	42640.731320	6804.775539	118867.855588
Moonee Valley	2724.095141	20443.110078	2158.905880	77520.101647
Moreland	5590.390272	28192.979484	4408.224461	113904.433631
Nillumbik	1729.386864	18254.072585	1108.514517	58777.940280
Whittlesea	9816.537689	41985.737869	4891.765070	126675.224764
Boroondara	1410.238877	23965.404818	1158.622944	91967.089954
Knox	4819.000000	29694.417102	3034.000000	103895.582900
Manningham	2393.000000	20013.322726	1565.000000	73858.677271
Maroondah	3534.000000	21447.643362	2335.000000	71092.356632
Whitehorse	3389.761123	32383.995997	2451.377056	115969.509218

Result

Higher Income, Less Children

Normalization

- Number of People at this income level / total people at this income level

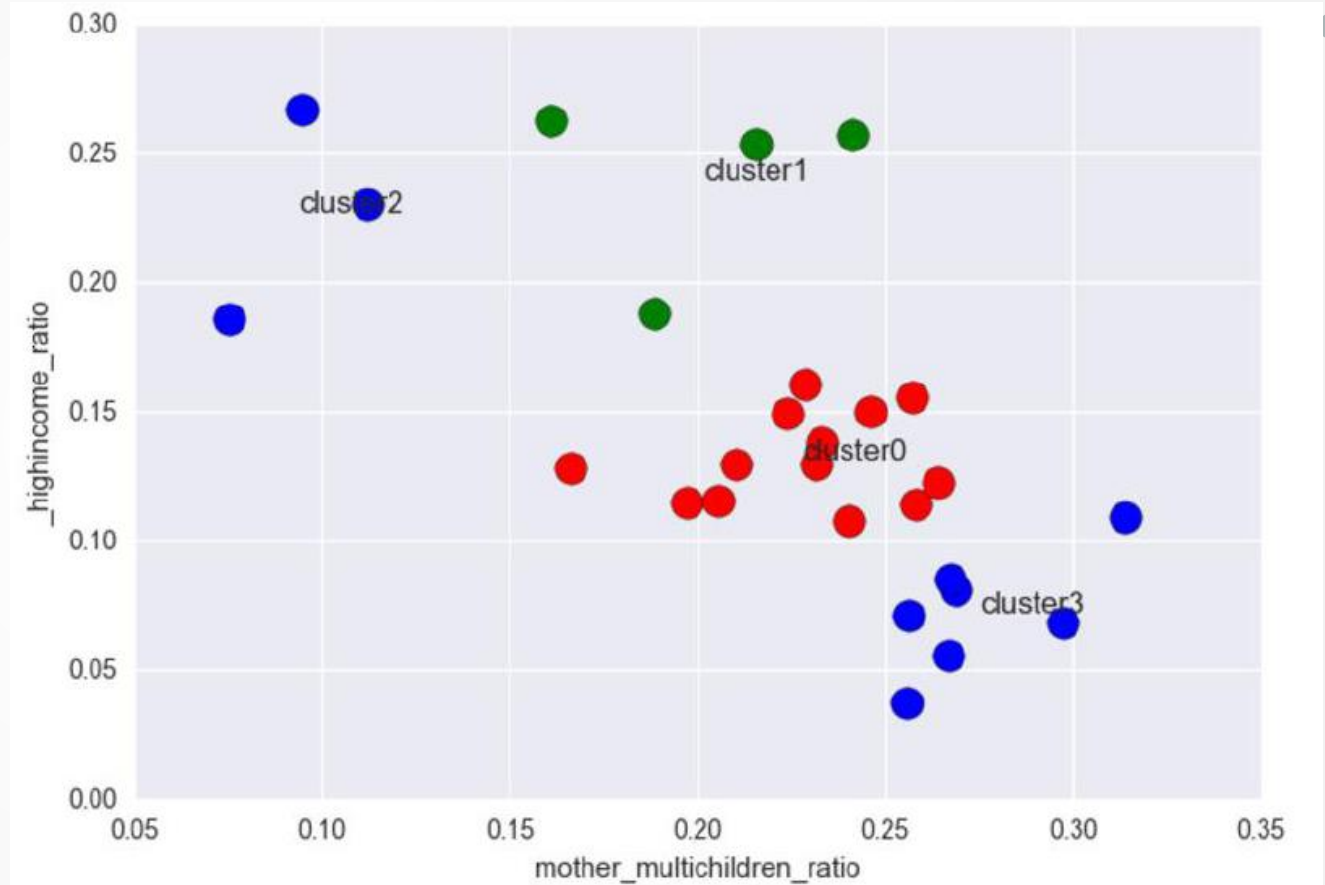- Number of People born X children at this age / total people at this age

Pearson Coefficient

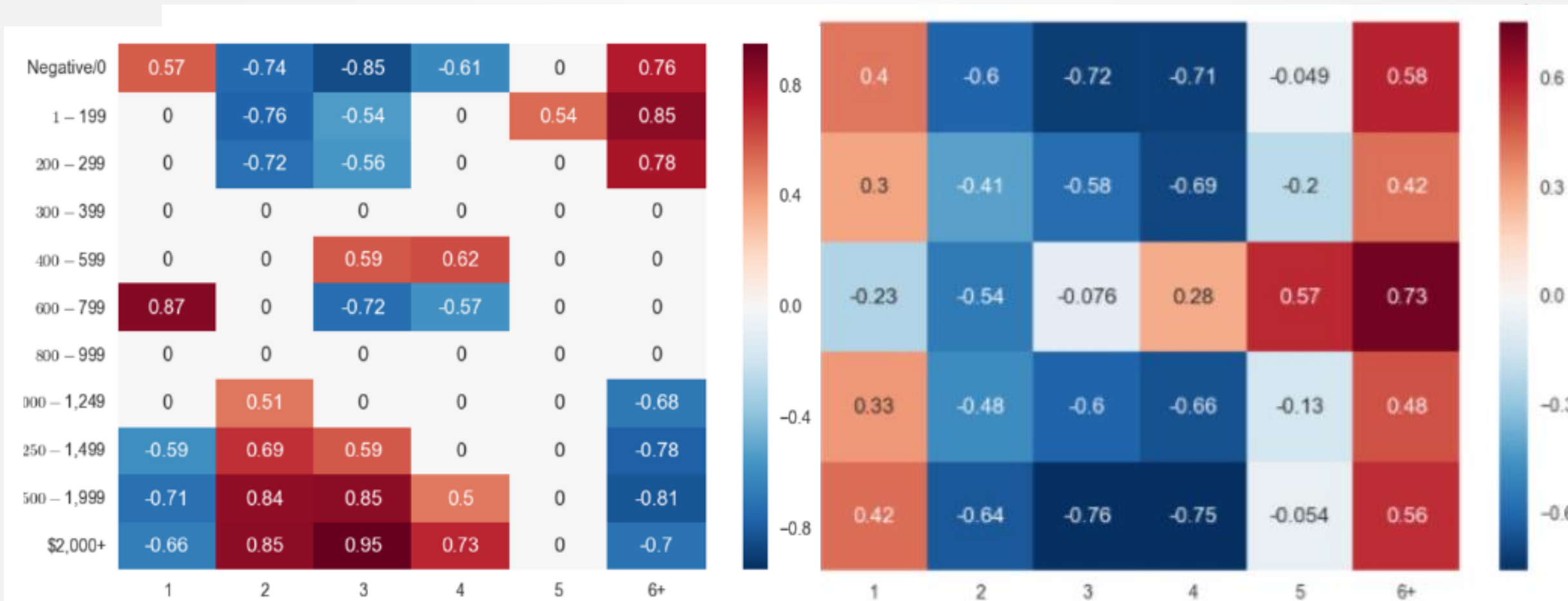- Pearson Coefficient between number of people at each factor

- Across 27 LGA

	1	2	3	4	5	6+
Negative/0	-0.038	-0.099	-0.097	-0.066	0.04	0.11
1 – 199	0.32	0.71	0.75	0.79	0.79	0.6
200 – 299	0.43	0.23	0.3	0.53	0.75	0.89
300 – 399	0.46	0.48	0.53	0.69	0.74	0.67
400 – 599	0.42	0.72	0.78	0.87	0.8	0.52
600 – 799	0.55	0.5	0.57	0.78	0.87	0.7
800 – 999	0.36	0.16	0.21	0.39	0.48	0.32
000 – 1,249	-0.23	-0.44	-0.44	-0.44	-0.44	-0.47
250 – 1,499	-0.42	-0.6	-0.65	-0.76	-0.81	-0.72
500 – 1,999	-0.45	-0.52	-0.6	-0.78	-0.89	-0.79
$2,000+	-0.49	-0.4	-0.47	-0.7	-0.84	-0.75

Number of Children Ever Born

Result

- Multi-Children Ratio:
  - number of children >=3
- High Income:
  - Income Level > 1500/week
  - from ABS
- K-means
  - Into 4 cluster
- Different Characteristic LGA's
  - Separate to reveal characteristic

Result

- Cluster3

Challenge and Improvement

- Multi-Dimension Data
- SA2 to LGA
  - String Matching
  - Similarity Measurement instead of Manually
  - Using Web Scraper : Phantomjs + Selenium