PM299.1:

Quantitative Methods in Public Policy Administration

COURSE GUIDE

**Second Semester 2020-2021**

|  |
| --- |
| Annexes |
| 1- Data for the Chat Sessions, Exercises and  Assignments |
|  |

# ANNEX 1 – Data for the Chat Sessions, Exercises, and Assignments

Country Berazia has experienced both shortages and surpluses of gasoline and other petroleum products. It is becoming apparent that the periods of shortages will increase as the world exhausts its supply of crude oil. In an effort to postpone that event, the government has been trying to persuade consumers to reduce their consumption of energy. The government of Berazia has launched advertising campaigns for this purpose.

The Consultants were given a contract to advise the government on what to do regarding increasing shortage and increasing cost of energy. The specific objectives were:

1. To measure correct attitudes toward the energy situation and evaluate if attitudes are changing over time.
2. To measure to what extent the public is reducing energy consumption and whether energy conserving behaviors are increasing.
3. To design an advertising strategy that appeals to energy consumers to use less gasoline, heating oil, natural gas, and electricity.

In March 1995 and again in 2015, 60 respondents were surveyed in nine major cities. Results of these surveys were based on interviews, where the respondents were selected at random. Only the household head was interviewed.

The questionnaire dealt with attitudes and behaviors toward the energy situation, as well as with several demographic characteristics. A partial set of questions and specified responses is given in the materials that follow:

1. I would like you to think about the following issues and tell me how seriously you feel each one is affecting us today. Would you say it is very seriously affecting us, somewhat seriously, not too seriously, or not serious at all?
   1. Energy shortage
   2. Cost of energy

|  |  |
| --- | --- |
| Very seriously | 4 |
| Somewhat seriously | 3 |
| Not too seriously | 2 |
| Not at all seriously | 1 |

1. What about the cost of energy? By what percentage do you think the cost of gasoline has increased in the last twelve months?

.

1. Since the start of the energy situation a few years ago, some people have changed some of the things they do. I will now read to you a list of things that people have or have not done to conserve energy. Please tell me “yes” (y) or “no” (n) for each statement as it applies to you.
   1. Turning down thermostat
   2. Turning off lights more often
   3. Driving less
   4. Using public transportation more
2. If your home has a thermostat
   1. What is the setting during the day?
   2. What is the setting at night?
3. I am going to read more statements about the energy situation. I would like to know, for each, whether you agree or disagree. Do you Agree (a) or disagree (d)?
   1. The energy crisis was a hoax
   2. I resent government asking me to save more energy
   3. The oil companies have profited unfairly from the energy situation
4. What is your age at your last birthday?
5. Sex: Male = M Female = F
6. How many years of formal education have you completed?
7. What was your household income in last year (to the nearest 1,000)?

The data below represent the results from 60 respondents in a major city of Berazia in 1995 and another 60 respondents in 2015.

# 2015 Survey

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **1a** | **1b** | **1** | **2** | **3a** | **3b** | **3c** | **3d** | **3** | **4a** | **4b** | **4** | **5a** | **5b** | **5c** | **5** | **6** | **7** | **8** | **9** |
| 1 | 4 | 2 |  | 40 | Y | N | N | N |  | 70 | 70 |  | D | A | D |  | 58 | F | 14 | 24 |
| 2 | 4 | 1 |  | 13 | Y | Y | Y | Y |  | 65 | 65 |  | D | D | D |  | 60 | F | 11 | 34 |
| 3 | 3 | 4 |  | 42 | Y | Y | Y | Y |  | 65 | 65 |  | D | D | D |  | 68 | F | 16 | 24 |
| 4 | 4 | 2 |  | 9 | N | Y | N | N |  | 70 | 70 |  | A | A | D |  | 61 | F | 12 | 42 |
| 5 | 3 | 1 |  | 2 | N | N | N | N |  | 72 | 60 |  | D | D | D |  | 37 | M | 16 | 60 |
| 6 | 4 | 4 |  | 18 | Y | N | N | N |  | 72 | 60 |  | A | D | D |  | 47 | M | 11 | 30 |
| 7 | 4 | 2 |  | 7 | Y | Y | N | Y |  | 70 | 70 |  | A | D | D |  | 29 | M | 14 | 25 |
| 8 | 4 | 4 |  | 36 | Y | Y | N | Y |  | 72 | 70 |  | D | D | D |  | 25 | F | 11 | 28 |
| 9 | 4 | 2 |  | 22 | N | N | Y | Y |  | 68 | 68 |  | D | D | D |  | 26 | F | 15 | 36 |
| 10 | 4 | 4 |  | 40 | Y | Y | Y | Y |  | 72 | 72 |  | A | D | D |  | 51 | F | 15 | 27 |
| 11 | 3 | 1 |  | 42 | Y | N | N | N |  | 70 | 70 |  | D | A | D |  | 30 | M | 12 | 35 |
| 12 | 4 | 4 |  | 9 | Y | Y | Y | N |  | 65 | 63 |  | A | D | D |  | 41 | M | 11 | 31 |
| 13 | 4 | 4 |  | 23 | Y | Y | Y | Y |  | 72 | 70 |  | A | D | D |  | 29 | F | 11 | 33 |
| 14 | 4 | 1 |  | 24 | Y | N | N | N |  | 70 | 62 |  | A | A | D |  | 62 | M | 15 | 54 |
| 15 | 4 | 2 |  | 5 | Y | Y | Y | Y |  | 62 | 60 |  | D | D | D |  | 33 | F | 12 | 32 |
| 16 | 4 | 3 |  | 8 | N | Y | Y | Y |  | 68 | 68 |  | A | A | D |  | 53 | F | 10 | 21 |
| 17 | 4 | 1 |  | 10 | Y | N | Y | N |  | 65 | 62 |  | D | D | D |  | 45 | F | 11 | 25 |
| 18 | 4 | 1 |  | 10 | Y | Y | N | N |  | 65 | 62 |  | D | D | D |  | 34 | M | 16 | 40 |
| 19 | 4 | 2 |  | 40 | Y | Y | N | N |  | 72 | 62 |  | D | A | D |  | 41 | F | 17 | 36 |
| 20 | 4 | 3 |  | 25 | Y | Y | N | N |  | 72 | 72 |  | A | A | D |  | 56 | M | 12 | 34 |
| 21 | 4 | 4 |  | 37 | N | Y | Y | Y |  | 72 | 72 |  | D | D | D |  | 54 | M | 15 | 36 |
| 22 | 4 | 3 |  | 5 | Y | Y | Y | Y |  | 68 | 68 |  | D | D | D |  | 30 | F | 15 | 23 |
| 23 | 3 | 3 |  | 42 | Y | N | N | N |  | 68 | 68 |  | A | D | D |  | 28 | M | 12 | 16 |
| 24 | 4 | 2 |  | 16 | Y | Y | Y | Y |  | 65 | 65 |  | D | D | D |  | 31 | F | 16 | 48 |
| 25 | 4 | 2 |  | 26 | Y | Y | N | Y |  | 70 | 70 |  | A | D | D |  | 35 | F | 14 | 49 |
| 26 | 4 | 1 |  | 40 | Y | N | N | Y |  | 70 | 70 |  | D | D | A |  | 58 | M | 11 | 15 |
| 27 | 3 | 2 |  | 30 | Y | Y | Y | Y |  | 72 | 72 |  | A | D | D |  | 59 | F | 12 | 28 |
| 28 | 4 | 2 |  | 14 | Y | Y | N | Y |  | 72 | 65 |  | A | A | D |  | 26 | M | 12 | 30 |
| 29 | 4 | 2 |  | 43 | N | Y | Y | Y |  | 68 | 68 |  | D | D | D |  | 26 | F | 16 | 44 |
| 30 | 4 | 3 |  | 34 | Y | Y | Y | Y |  | 68 | 68 |  | A | D | D |  | 53 | M | 11 | 30 |
| 31 | 4 | 3 |  | 42 | N | N | N | N |  | 72 | 72 |  | A | D | A |  | 58 | F | 9 | 14 |
| 32 | 2 | 2 |  | 6 | Y | Y | N | N |  | 70 | 70 |  | A | D | D |  | 25 | M | 13 | 46 |
| 33 | 4 | 4 |  | 10 | N | N | Y | Y |  | 68 | 68 |  | A | D | D |  | 56 | F | 11 | 15 |
| 34 | 3 | 3 |  | 17 | Y | N | N | N |  | 72 | 62 |  | D | D | D |  | 29 | F | 11 | 22 |
| 35 | 4 | 1 |  | 1 | N | N | N | Y |  | 70 | 70 |  | A | D | D |  | 41 | F | 18 | 64 |
| 36 | 4 | 1 |  | 0 | Y | Y | Y | Y |  | 68 | 68 |  | D | D | D |  | 28 | M | 16 | 50 |
| 37 | 3 | 3 |  | 40 | N | Y | N | N |  | 72 | 72 |  | D | D | D |  | 37 | M | 12 | 44 |
| 38 | 3 | 1 |  | 42 | N | Y | Y | N |  | 72 | 72 |  | A | D | D |  | 58 | F | 10 | 28 |
| 39 | 4 | 3 |  | 33 | Y | Y | Y | N |  | 70 | 68 |  | A | D | D |  | 38 | F | 12 | 32 |
| 40 | 4 | 3 |  | 44 | N | Y | N | Y |  | 70 | 70 |  | D | D | D |  | 30 | F | 15 | 14 |
| 41 | 4 | 4 |  | 30 | Y | Y | Y | N |  | 70 | 68 |  | A | D | D |  | 32 | M | 13 | 48 |
| 42 | 4 | 2 |  | 16 | Y | N | N | N |  | 68 | 68 |  | A | D | D |  | 25 | F | 15 | 34 |
| 43 | 4 | 1 |  | 22 | Y | Y | N | N |  | 70 | 70 |  | A | D | D |  | 41 | F | 12 | 37 |

2015 Survey (continued)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **1a** | **1b** | **1** | **2** | **3a** | **3b** | **3c** | **3d** | **3** | **4a** | **4b** | **4** | **5a** | **5b** | **5c** | **5** | **6** | **7** | **8** | **9** |
| 44 | 4 | 4 |  | 12 | Y | N | N | N |  | 62 | 62 |  | D | D | D |  | 38 | M | 14 | 35 |
| 45 | 4 | 3 |  | 7 | Y | Y | N | Y |  | 68 | 68 |  | D | D | D |  | 33 | M | 16 | 39 |
| 46 | 4 | 3 |  | 0 | N | N | N | Y |  | 62 | 62 |  | A | D | A |  | 41 | M | 15 | 44 |
| 47 | 4 | 2 |  | 18 | Y | N | N | N |  | 72 | 65 |  | D | D | D |  | 47 | F | 11 | 51 |
| 48 | 3 | 2 |  | 15 | Y | Y | Y | Y |  | 70 | 70 |  | A | D | D |  | 22 | F | 15 | 2 |
| 49 | 4 | 3 |  | 40 | Y | N | N | Y |  | 70 | 70 |  | A | D | D |  | 60 | M | 8 | 17 |
| 50 | 4 | 4 |  | 42 | Y | Y | N | N |  | 72 | 72 |  | A | D | D |  | 48 | M | 16 | 40 |
| 51 | 4 | 1 |  | 18 | Y | N | N | N |  | 70 | 70 |  | A | D | D |  | 28 | M | 15 | 23 |
| 52 | 4 | 2 |  | 42 | Y | Y | Y | Y |  | 70 | 70 |  | A | D | D |  | 60 | M | 11 | 20 |
| 53 | 4 | 2 |  | 41 | Y | N | N | N |  | 70 | 60 |  | D | D | D |  | 41 | M | 16 | 52 |
| 54 | 4 | 1 |  | 0 | Y | N | N | N |  | 72 | 70 |  | D | D | D |  | 50 | M | 15 | 48 |
| 55 | 4 | 1 |  | 7 | N | N | N | Y |  | 70 | 68 |  | D | D | D |  | 59 | M | 13 | 36 |
| 56 | 4 | 2 |  | 3 | N | N | Y | Y |  | 68 | 63 |  | D | D | D |  | 45 | M | 12 | 44 |
| 57 | 4 | 2 |  | 5 | N | N | N | Y |  | 70 | 70 |  | D | D | D |  | 40 | F | 15 | 26 |
| 58 | 4 | 2 |  | 44 | Y | Y | Y | Y |  | 68 | 68 |  | D | D | D |  | 55 | F | 16 | 50 |
| 59 | 4 | 2 |  | 14 | N | Y | N | N |  | 68 | 68 |  | A | D | D |  | 36 | M | 12 | 41 |
| 60 | 4 | 3 |  | 20 | Y | Y | Y | Y |  | 70 | 70 |  | A | D | D |  | 34 | M | 15 | 33 |