Investigation on the Real State of Housing in Beijing—The Cross and Correlations Analysis of the Real State of Beijing House Market in 2016 Based on the Questionnaire

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Abstract

This dissertation investigates the real state of Beijing house market in 2016 based on the questionnaire. Based on the result of the cross analysis and correlations analysis, people who live in Beijing became to buy houses when they just work for few years, they and their all family members’ annual income were not very high. Everyone has a strong sense of buying house in Beijing. They try to buy houses as soon as possible after them and their family have a little income. The first or the second house which bought in Beijing had the biggest increase in price during these 10 years.

Keywords

cross analysis, correlations analysis, real state of Beijing house market

1. Personal Situation

This dissertation investigates the real state of Beijing house market in 2016 based on the questionnaire. It tries to use the method of correlation analysis in order to find the relationship between the house price when purchased and the current housing price (Second-hand house price).
1.1 Gender

![Gender Pie Chart]

**Figure 1. Gender (Beijing)**

| Option   | Amount | %    |
|----------|--------|------|
| Male     | 104    | 49.06%|
| Female   | 108    | 50.94%|
| Total    | 212    | 100% |

Based on the results of the questionnaire, a total of 212 people completed the questionnaire. There are 104 men and it takes 49.06% of all total 212 people. There are 108 women and it takes 49.06% of all total 212 people.

1.2 Age

![Age Pie Chart]

**Figure 2. Age (Beijing)**
Table 2. Age (Beijing)

| Option          | Amount | %    |
|-----------------|--------|------|
| 20-30 year’s old | 79     | 37.26% |
| 31-40 year’s old | 82     | 38.68% |
| 41-50 year’s old | 30     | 14.15% |
| 51-60 year’s old | 15     | 7.08%  |
| over 60 year’s old | 6      | 2.83%  |
| **Total**       | **212**| **100%** |

Based on the results of the questionnaire, there are 79 people of 20-30 year’s old and it takes 37.26% of all total 212 people. There are 82 people of 31-40 year’s old and it takes 38.68% of all total 212 people. There are 30 people of 41-50 year’s old and it takes 14.15% of all total 212 people. There are 15 people of 51-60 year’s old and it takes 7.08% of all total 212 people. There are 6 people of over 60 year’s old and it takes 2.83% of all total 212 people.

1.3 The Only Child

![Figure 3. The Only Child (Beijing)](image)

Table 3. The Only Child (Beijing)

| Option | Amount | %    |
|--------|--------|------|
| Yes    | 104    | 49.06% |
| No     | 108    | 50.94% |
| **Total** | **212** | **100%** |

Based on the results of the questionnaire, there are 104 people of the only child and it takes 49.06% of all total 212 people. There are 108 people of not the only child and it takes 50.94% of all total 212 people.
1.4 Academic Qualifications

![Academic Qualifications (Beijing)](image)

**Figure 4. Academic Qualifications (Beijing)**

| Option     | Amount | %   |
|------------|--------|-----|
| Middle school | 0      | 0.00% |
| High school  | 9      | 4.25% |
| Bachelor    | 160    | 75.47% |
| Master      | 37     | 17.45% |
| Doctor      | 6      | 2.83% |
| **Total**   | **212** | 100% |

Based on the results of the questionnaire, there are 0 people of middle school and it takes 0% of all total 212 people. There are 9 people of high school and it takes 4.25% of all total 212 people. There are 160 people of bachelor and it takes 75.47% of all total 212 people. There are 37 people of master and it takes 17.45% of all total 212 people. There are 6 people of doctor and it takes 2.83% of all total 212 people.
1.5 Annual Income (RMB)

![Chart showing annual income distribution](chart.png)

**Figure 5. Annual Income (Beijing)**

| Option           | Amount | %   |
|------------------|--------|-----|
| Less than 0.1 million | 84     | 39.62% |
| 0.1-0.2 million   | 84     | 39.62% |
| 0.2-0.3 million   | 25     | 11.79% |
| 0.3-0.4 million   | 13     | 6.13%  |
| 0.4-0.5 million   | 2      | 0.94%  |
| 0.5-0.6 million   | 2      | 0.94%  |
| 0.6-0.7 million   | 0      | 0.00%  |
| 0.7-0.8 million   | 0      | 0.00%  |
| 0.8-0.9 million   | 0      | 0.00%  |
| 0.9-1 million     | 2      | 0.94%  |
| More than 1 million | 0      | 0.00%  |
| **Total**         | **212**| **100%** |

Based on the results of the questionnaire, there are 84 people of less than 0.1 million and it takes 39.62% of all total 212 people. There are 84 people of 0.1-0.2 million and it takes 39.62% of all total 212 people. There are 25 people of 0.2-0.3 million and it takes 11.79% of all total 212 people. There are 13 people of 0.3-0.4 million and it takes 6.13% of all total 212 people. There are 2 people of 0.4-0.5 million and it takes 0.94% of all total 212 people. There are 2 people of 0.5-0.6 million and it takes 0.94% of all total 212 people. There are 2 people of 0.9-1 million and it takes 0.94% of all total 212 people.
1.6 Current Residence District in Beijing

![Bar Chart](chart.png)

**Figure 6. Current Residence District (Beijing)**

| Option          | Amount | %   |
|-----------------|--------|-----|
| Changping District | 10     | 4.72% |
| Chaoyang District    | 58     | 27.36% |
| Daxing District     | 11     | 5.19% |
| Dongcheng District  | 15     | 7.08% |
| Fangshan District   | 7      | 3.30% |
| Fengtai District    | 24     | 11.32% |
| Haidian District    | 38     | 17.92% |
| Huairou District    | 4      | 1.89% |
| Mentougou District  | 1      | 0.47% |
| Pinggu District     | 1      | 0.47% |
| Shijingshan District| 6      | 2.83% |
| Shunyi District     | 8      | 3.77% |
| Tongzhou District   | 7      | 3.30% |
| Xicheng District    | 22     | 10.38% |
| **Total**          | **212**| **100%** |

Based on the results of the questionnaire, there are 10 people of Changping District and it takes 4.72% of all total 212 people. There are 58 people of Chaoyang District and it takes 27.36% of all total 212 people. There are 11 people of Daxing District and it takes 5.19% of all total 212 people. There are 15
people of Dongcheng District and it takes 7.08% of all total 212 people. There are 24 people of Fangshan District and it takes 11.32% of all total 212 people. There are 38 people of Haidian District and it takes 17.92% of all total 212 people. There are 4 people of Huairou District and it takes 1.89% of all total 212 people. There are 1 people of Mentougou District and it takes 0.47% of all total 212 people. There are 1 people of Pinggu District and it takes 0.47% of all total 212 people. There are 6 people of Shijingshan District and it takes 2.83% of all total 212 people. There are 8 people of Shunyi District and it takes 3.77% of all total 212 people. There are 7 people of Tongzhou District and it takes 3.30% of all total 212 people. There are 22 people of Xicheng District and it takes 10.38% of all total 212 people.

1.7 Number of Working Years

![Figure 7. Number of Working Years (Beijing)](image)

| Option          | Amount | %    |
|-----------------|--------|------|
| 0-5 Years       | 61     | 28.77% |
| 6-10 Years      | 55     | 25.94% |
| 11-15 Years     | 34     | 16.04% |
| 16-20 Years     | 22     | 10.38% |
| 21-25 Years     | 13     | 6.13% |
| 26-30 Years     | 10     | 4.72% |
| 31-35 Years     | 9      | 4.25% |
| 36-40 Years     | 8      | 3.77% |
| More than 40 Years | 0   | 0.00% |
| **Total**       | **212** | **100%** |
Based on the results of the questionnaire, there are 61 people of 0-5 Years and it takes 28.77% of all total 212 people. There are 55 people of 6-10 Years and it takes 25.94% of all total 212 people. There are 34 people of 11-15 Years and it takes 16.04% of all total 212 people. There are 22 people of 16-20 Years and it takes 10.38% of all total 212 people. There are 13 people of 21-25 Years and it takes 6.13% of all total 212 people. There are 10 people of 26-30 Years and it takes 4.72% of all total 212 people. There are 8 people of 36-40 Years and it takes 3.77% of all total 212 people. There are 0 people of More than 40 Years and it takes 0% of all total 212 people.

1.8 Marital Status

![Figure 8. Marital Statuses (Beijing)](image)

| Option  | Amount | %     |
|---------|--------|-------|
| Unmarried | 59    | 27.83%|
| Married  | 151   | 71.23%|
| Divorced | 2     | 0.94% |
| Total    | 212   | 100%  |

Based on the results of the questionnaire, there are 59 people of unmarried and it takes 27.83% of all total 212 people. There are 151 people of married and it takes 71.23% of all total 212 people. There are 2 people of divorced and it takes 0.94% of all total 212 people.
2. Family Situation

2.1 Number of Family Member

![Figure 9. Family Situation (Beijing)](image)

**Table 9. Number of Family Member (Beijing)**

| Option         | Amount | %   |
|----------------|--------|-----|
| 1 person       | 22     | 10.38% |
| 2 people       | 48     | 22.64% |
| 3 people       | 106    | 50.00% |
| 4 people       | 21     | 9.91% |
| 5 people       | 14     | 6.60% |
| More than 5 people | 1   | 0.47% |
| **Total**      | **212** | **100%** |

Based on the results of the questionnaire, there are 22 people of 1 person and it takes 10.38% of all total 212 people. There are 48 people of 2 people and it takes 22.64% of all total 212 people. There are 106 people of 3 people and it takes 50.00% of all total 212 people. There are 21 people of 4 people and it takes 9.91% of all total 212 people. There are 14 people of 5 people and it takes 6.60% of all total 212 people. There are 1 people of More than 5 people and it takes 0.47% of all total 212 people.
2.2 Number of Children

![Figure 10. Number of Children (Beijing)](image)

| Option         | Amount | %    |
|----------------|--------|------|
| 0 people       | 81     | 38.21% |
| 1 person       | 121    | 57.08% |
| 2 people       | 8      | 3.77%  |
| 3 people       | 2      | 0.94%  |
| 4 people       | 0      | 0.00%  |
| 5 people       | 0      | 0.00%  |
| More than 5 people | 0    | 0.00%  |
| **Total**      | **212** | **100%** |

Based on the results of the questionnaire, there are 81 people of 0 people and it takes 38.21% of all total 212 people. There are 121 people of 1 person and it takes 57.08% of all total 212 people. There are 8 people of 2 people and it takes 3.77% of all total 212 people. There are 2 people of 3 people and it takes 0.94% of all total 212 people.
2.3 Income of All Family Members

Figure 11. Income of All Family Members (Beijing)

| Option             | Amount | %    |
|--------------------|--------|------|
| Less than 0.1 million | 35     | 16.51% |
| 0.1-0.2 million    | 76     | 35.85% |
| 0.2-0.3 million    | 62     | 29.25% |
| 0.3-0.4 million    | 22     | 10.38% |
| 0.4-0.5 million    | 8      | 3.77%  |
| 0.5-0.6 million    | 5      | 2.36%  |
| 0.6-0.7 million    | 1      | 0.47%  |
| 0.7-0.8 million    | 1      | 0.47%  |
| 0.8-0.9 million    | 1      | 0.47%  |
| 0.9-1 million      | 0      | 0.00%  |
| More than 1 million | 1      | 0.47%  |
| **Total**          | **212**| **100%** |

Based on the results of the questionnaire, there are 35 people of Less than 0.1 million and it takes 16.51% of all total 212 people. There are 76 people of 0.1-0.2 million and it takes 35.85% of all total 212 people. There are 62 people of 0.2-0.3 million and it takes 29.25% of all total 212 people. There are 22 people of 0.3-0.4 million and it takes 10.38% of all total 212 people. There are 8 people of 0.4-0.5 million and it takes 3.77% of all total 212 people. There are 5 people of 0.5-0.6 million and it takes 2.36% of all total 212 people. There are 1 person of 0.6-0.7 million and it takes 0.47% of all total.
212 people. There are 1 people of 0.7-0.8 million and it takes 0.47% of all total 212 people. There are 1 people of 0.8-0.9 million and it takes 0.47% of all total 212 people. There are 1 people of More than 1 million and it takes 0.47% of all total 212 people.

3. Purchased the Housing Situation

3.1 Number of Houses Has Been Purchased

![Figure 12. Number of Houses Has Been Purchased (Beijing)](image)

Table 12. Number of Houses Has Been Purchased (Beijing)

| Option     | Amount | %    |
|------------|--------|------|
| 0 set      | 34     | 16.04% |
| 1 set      | 150    | 70.75% |
| 2 sets     | 27     | 12.74% |
| 3 sets     | 0      | 0.00%  |
| 4 sets     | 0      | 0.00%  |
| 5 sets     | 1      | 0.47%  |
| 6 sets     | 0      | 0.00%  |
| 7 sets     | 0      | 0.00%  |
| 8 sets     | 0      | 0.00%  |
| 9 sets     | 0      | 0.00%  |
| 10 sets    | 0      | 0.00%  |
| More than 10 sets | 0 | 0.00% |
| **Total**  | **212** | **100%** |
Based on the results of the questionnaire, there are 34 people of 0 set and it takes 16.04% of all total 212 people. There are 150 people of 1 set and it takes 70.75% of all total 212 people. There are 27 people of 2 sets and it takes 12.74% of all total 212 people. There are 1 people of 5 sets and it takes 0.47% of all total 212 people.

3.2 Total Area of House

![Figure 13. Total Area of House (Beijing)](image)

Table 13. Total Area of House (Beijing)

| Option          | Amount | %    |
|-----------------|--------|------|
| Less than 100 m²| 135    | 63.68% |
| 100-200 m²      | 62     | 29.25% |
| 200-300 m²      | 9      | 4.25%  |
| 300-400 m²      | 4      | 1.89%  |
| 400-500 m²      | 2      | 0.94%  |
| 500-600 m²      | 0      | 0.00%  |
| 600-700 m²      | 0      | 0.00%  |
| 700-800 m²      | 0      | 0.00%  |
| 800-900 m²      | 0      | 0.00%  |
| 900-1000 m²     | 0      | 0.00%  |
| More than 1000 m² | 0     | 0.00%  |
| **Total**       | **212**| **100%** |

Based on the results of the questionnaire, there are 135 people of less than 100 m² and it takes 63.68%
of all total 212 people. There are 62 people of 100-200 m² and it takes 29.25% of all total 212 people. There are 9 people of 200-300 m² and it takes 4.25% of all total 212 people. There are 4 people of 300-400 m² and it takes 1.89% of all total 212 people. There are 2 people of 400-500 m² and it takes 0.94% of all total 212 people.

### 3.3 Housing Price When Purchased (RMB/m²)

![Figure 14. Housing Price When Purchased (Beijing)](image)

**Table 14. Housing Price When Purchased (Beijing)**

| Option                  | Amount | %    |
|-------------------------|--------|------|
| Less than 5000          | 52     | 24.53% |
| 5000-0.1 million        | 54     | 25.47% |
| 0.1-0.2 million         | 39     | 18.40% |
| 0.2-0.3 million         | 30     | 14.15% |
| 0.3-0.4 million         | 25     | 11.79% |
| 0.5-0.6 million         | 7      | 3.30%  |
| 0.6-0.7 million         | 1      | 0.47%  |
| 0.7-0.8 million         | 2      | 0.94%  |
| 0.8-0.9 million         | 1      | 0.47%  |
| 0.9-1 million           | 1      | 0.47%  |
| More than 1 million     | 0      | 0.00%  |

**Total** 212 100%

Based on the results of the questionnaire, there are 52 people of less than 5000 and it takes 24.53% of all total 212 people. There are 54 people of 5000-0.1 million and it takes 25.47% of all total 212 people.
There are 39 people of 0.1-0.2 million and it takes 18.40% of all total 212 people. There are 30 people of 0.2-0.3 million set and it takes 14.15% of all total 212 people. There are 25 people of 0.3-0.4 million and it takes 11.79% of all total 212 people. There are 7 people of 0.5-0.6 million and it takes 3.30% of all total 212 people. There are 1 people of 0.6-0.7 million and it takes 0.47% of all total 212 people. There are 2 people of 0.7-0.8 million and it takes 0.94% of all total 212 people. There are 1 people of 0.8-0.9 million and it takes 0.47% of all total 212 people. There are 1 people of 0.9-1 million and it takes 0.47% of all total 212 people.

3.4 Current Housing Price (Second-Hand House Price) (RMB/m²)

![Figure 15. Current Housing Price (Beijing)](image)

| Option                  | Amount | %    |
|-------------------------|--------|------|
| Less than 0.1 million   | 26     | 12.26% |
| 0.1-0.2 million         | 37     | 17.45% |
| 0.2-0.3 million         | 45     | 21.23% |
| 0.3-0.4 million         | 49     | 23.11% |
| 0.4-0.5 million         | 21     | 9.91%  |
| 0.5-0.6 million         | 15     | 7.08%  |
| 0.6-0.7 million         | 9      | 4.25%  |
| 0.7-0.8 million         | 4      | 1.89%  |
| 0.8-0.9 million         | 1      | 0.47%  |
| 0.9-1 million           | 4      | 1.89%  |
| More than 1 million     | 1      | 0.47%  |
| **Total**               | **212** | **100%** |
Based on the results of the questionnaire, there are 26 people of less than 0.1 million and it takes 12.26% of all total 212 people. There are 37 people of 0.1-0.2 million and it takes 17.45% of all total 212 people. There are 45 people of 0.2-0.3 million and it takes 21.23% of all total 212 people. There are 49 people of 0.3-0.4 million and it takes 23.11% of all total 212 people. There are 21 people of 0.4-0.5 million and it takes 9.91% of all total 212 people. There are 15 people of 0.5-0.6 million and it takes 7.08% of all total 212 people. There are 9 people of 0.6-0.7 million and it takes 4.25% of all total 212 people. There are 4 people of 0.7-0.8 million and it takes 1.89% of all total 212 people. There are 1 person of 0.8-0.9 million and it takes 0.47% of all total 212 people. There are 4 people of 0.9-1 million and it takes 1.89% of all total 212 people. There are 1 person of more than 1 million and it takes 0.47% of all total 212 people.

3.5 Housing Purchase Mode

![Figure 16. Housing Purchase Mode (Beijing)](image)

Table 16. Housing Purchase Mode (Beijing)

| Option      | Amount | %   |
|-------------|--------|-----|
| Full payment| 91     | 42.92% |
| Loan        | 121    | 57.08% |
| Total       | 212    | 100% |

Based on the results of the questionnaire, there are 91 people of full payment and it takes 42.92% of all total 212 people. There are 121 people of loan and it takes 57.08% of all total 212 people.
4. Empirical Analysis

4.1 Descriptive Statistics

Table 17. Descriptive Statistics (Beijing)

| Variable                        | N   | Minimum | Maximum | Mean  | Std. Deviation |
|--------------------------------|-----|---------|---------|-------|----------------|
| Gender                         | 212 | 1       | 2       | 1.51  | 0.501          |
| Age                            | 212 | 1       | 5       | 2.00  | 1.028          |
| The only child                 | 212 | 1       | 2       | 1.51  | 0.501          |
| Academic qualifications        | 212 | 2       | 5       | 3.19  | 0.544          |
| Annual income (RMB)            | 212 | 1       | 10      | 1.99  | 1.267          |
| Number of working years        | 212 | 1       | 8       | 2.89  | 1.953          |
| Marital status                 | 212 | 1       | 3       | 1.73  | 0.465          |
| Number of family member        | 212 | 1       | 6       | 2.81  | 1.008          |
| Number of children             | 212 | 1       | 4       | 1.67  | 0.594          |
| Income of all family member    | 212 | 1       | 11      | 2.67  | 1.432          |
| Number of houses have been purchased | 212 | 1      | 6       | 1.99  | 0.604          |
| Total area of house            | 212 | 1       | 5       | 1.47  | 0.75           |
| Housing price when purchased (RMB/m²) | 212 | 1      | 10      | 2.86  | 1.689          |
| Current housing price (Second-hand house price) (RMB/m²) | 212 | 1      | 11      | 3.68  | 2.007          |
| Housing purchase mode          | 212 | 1       | 2       | 1.57  | 0.496          |
| Valid N (listwise)             | 212 |         |         |       |                |

The minimum of Gender is 1, the maximum is 2, and the mean value of Gender is 1.51. The minimum of Age is 1, the maximum is 5, and the mean value of Gender is 2.00. The minimum of The only child is 1, the maximum is 2, and the mean value of The only child is 1.51. The minimum of Academic qualifications is 2, the maximum is 5, and the mean value of Academic qualifications is 3.19. The minimum of Annual income (RMB) is 1, the maximum is 10, and the mean value of Annual income (RMB) is 1.99. The minimum of Number of working years is 1, the maximum is 8, and the mean value of Number of working years is 2.89. The minimum of Marital status is 1, the maximum is 3, and the mean value of Marital status is 1.73. The minimum of Number of family member is 1, the maximum is 6, and the mean value of Number of family member is 2.81. The minimum of Number of children is 1, the maximum is 4, and the mean value of Number of children is 1.67. The minimum of Income of all family member is 1, the maximum is 11, and the mean value of Income of all family member is 2.67. The minimum of Number of houses have been purchased is 1, the maximum is 6, and the mean value of Number of houses have been purchased is 1.99. The minimum of Total area of house is 1, the
maximum is 5, and the mean value of Total area of house is 1.47. The minimum of Housing price when purchased (RMB/m²) is 1, the maximum is 10, and the mean value of Housing price when purchased (RMB/m²) is 2.86. The minimum of Current housing price (Second-hand house price) (RMB/m²) is 1, the maximum is 11, and the mean value of Current housing price (Second-hand house price) (RMB/m²) is 3.68. The minimum of Housing purchase mode is 1, the maximum is 2, and the mean value of Housing purchase mode is 1.57. The minimum of Down payment ratio is 1, the maximum is 9, and the mean value of Down payment ratio is 4.73. The minimum of Ratio of own funds in down payment is 1, the maximum is 12, and the mean value of Ratio of own funds in down payment is 7.05. The minimum of Sources of funds outside of own funds in down payment is 1, the maximum is 4, and the mean value of Sources of funds outside of own funds in down payment is 2.08.

4.2 Cross Analysis

Table 18. Cross Table of Annual Income and Housing Price When Purchased (Beijing)

| Annual income (RMB) | Total |
|---------------------|-------|
| 1       | 2     | 3     | 4     | 5     | 6     | 10    |      |
| Housing price when purchased (RMB/m²) |       |
| 1       | 36    | 13    | 2     | 0     | 0     | 1     | 0     | 52    |
| 2       | 28    | 21    | 2     | 2     | 0     | 1     | 0     | 54    |
| 3       | 5     | 21    | 9     | 2     | 2     | 0     | 0     | 39    |
| 4       | 6     | 13    | 4     | 7     | 0     | 0     | 0     | 30    |
| 5       | 6     | 12    | 7     | 0     | 0     | 0     | 0     | 25    |
| 6       | 3     | 3     | 0     | 0     | 0     | 0     | 1     | 7     |
| 7       | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 1     |
| 8       | 0     | 1     | 0     | 1     | 0     | 0     | 0     | 2     |
| 9       | 0     | 0     | 0     | 1     | 0     | 0     | 0     | 1     |
| 10      | 0     | 0     | 0     | 0     | 0     | 0     | 1     | 1     |
| Total   | 84    | 84    | 25    | 13    | 2     | 2     | 2     | 212   |

Table 19. Chi-Square Tests of Annual Income and Housing Price When Purchased (Beijing)

| Chi-Square Tests                  | Value   | df | Asymp. Sig. (2-sided) |
|-----------------------------------|---------|----|-----------------------|
| Pearson Chi-Square                | 228.192 | 54 | 0                     |
| Likelihood Ratio                  | 108.6   | 54 | 0                     |
| Linear-by-Linear Association      | 36.786  | 1  | 0                     |
| N of Valid Cases                  | 212     |    |                       |

a. 58 cells (82.9%) have expected count less than 5. The minimum expected count is .01.
Table 18 and Table 19 show the relationship between the Cross table of the Annual income and Housing price when purchased based on the method of cross analysis. The value of significant is lower than 5%. The result shows that people who live in Beijing became to buy houses when their annual income was not very high.

**Table 20. Cross Table of Number of Working Years and Housing Price When Purchased (Beijing)**

| Number of working years | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Total |
|-------------------------|---|---|---|---|---|---|---|---|-------|
| Housing price when purchased (RMB/m²) |   |   |   |   |   |   |
| 1                       | 20| 6 | 7 | 4 | 3 | 3 | 3 | 6 | 52    |
| 2                       | 19| 14| 8 | 3 | 2 | 4 | 2 | 2 | 54    |
| 3                       | 6 | 12| 7 | 7 | 6 | 1 | 0 | 0 | 39    |
| 4                       | 4 | 12| 9 | 0 | 2 | 1 | 2 | 0 | 30    |
| 5                       | 9 | 7 | 2 | 7 | 0 | 0 | 0 | 0 | 25    |
| 6                       | 2 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | 7     |
| 7                       | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1     |
| 8                       | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2     |
| 9                       | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1     |
| 10                      | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1     |
| Total                   | 61| 55| 34| 22| 13| 10| 9 | 8 | 212   |

**Table 21. Chi-Square Tests of Number of Working Years and Housing Price When Purchased (Beijing)**

| Chi-Square Tests                  | Value   | df | Asymp. Sig. (2-sided) |
|-----------------------------------|---------|----|-----------------------|
| Pearson Chi-Square                | 96.736a | 63 | 0.004                 |
| Likelihood Ratio                  | 86.266  | 63 | 0.027                 |
| Linear-by-Linear Association      | 1.145   | 1  | 0.285                 |
| N of Valid Cases                  | 212     |    |                       |

a. 65 cells (81.2%) have expected count less than 5. The minimum expected count is .04.

Table 20 and Table 21 show the relationship between the Cross table of the Number of working years and Housing price when purchased based on the method of cross analysis. The value of significant is lower than 5%. The result shows that people who live in Beijing became to buy houses when they just work for few years.
Table 22. Cross Table of Income of All Family Member and Housing Price When Purchased

(Beijing)

| Housing price when purchased (RMB/m²) | Income of all family member | Count |
|--------------------------------------|----------------------------|-------|
|                                      | 1  | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 11  | Total |
| 1                                    | 16 | 27  | 7   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 52   |
| 2                                    | 13 | 22  | 14  | 2   | 0   | 2   | 1   | 0   | 0   | 0   | 54   |
| 3                                    | 1  | 11  | 16  | 8   | 1   | 1   | 0   | 1   | 0   | 0   | 39   |
| 4                                    | 3  | 7   | 13  | 6   | 1   | 0   | 0   | 0   | 0   | 0   | 30   |
| 5                                    | 2  | 7   | 9   | 2   | 5   | 0   | 0   | 0   | 0   | 0   | 25   |
| 6                                    | 0  | 1   | 3   | 1   | 0   | 1   | 0   | 0   | 0   | 1   | 7    |
| 7                                    | 0  | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 1   | 1    |
| 8                                    | 0  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2    |
| 9                                    | 0  | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1    |
| 10                                   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 1    |
| Total                                | 35 | 76  | 62  | 22  | 8   | 5   | 1   | 1   | 1   | 1   | 212  |

Table 23. Chi-Square Tests of Income of All Family Member and Housing Price When Purchased

(Beijing)

| Chi-Square Tests                   | Value  | df | Asymp. Sig. (2-sided) |
|------------------------------------|--------|----|-----------------------|
| Pearson Chi-Square                 | 360.073| 81 | 0                     |
| Likelihood Ratio                   | 112.252| 81 | 0.012                 |
| Linear-by-Linear Association       | 39.954 | 1  | 0                     |
| N of Valid Cases                   | 212    |    |                       |

a. 85 cells (85.0%) have expected count less than 5. The minimum expected count is .00.

Table 22 and Table 23 show the relationship between the Cross table of the Income of all family member and Housing price when purchased based on the method of cross analysis. The value of significant is lower than 5%. The result shows that People who live in Beijing became to buy houses when their annual income of all family members was not very high.
Table 24. Cross Table of Number of Houses Have Been Purchased and Current Housing Price (Beijing)

| Number of houses have been purchased | 1 | 2 | 3 | 6 | Total |
|-------------------------------------|---|---|---|---|-------|
| Current housing price (Second-hand house price) (RMB/m²) | 1 | 16 | 8 | 2 | 0 | 26 |
| 2 | 4 | 30 | 3 | 0 | 37 |
| 3 | 3 | 35 | 7 | 0 | 45 |
| 4 | 6 | 35 | 7 | 1 | 49 |
| 5 | 2 | 18 | 1 | 0 | 21 |
| 6 | 2 | 12 | 1 | 0 | 15 |
| 7 | 0 | 8 | 1 | 0 | 9 |
| 8 | 0 | 1 | 3 | 0 | 4 |
| 9 | 0 | 1 | 0 | 0 | 1 |
| 10 | 1 | 1 | 2 | 0 | 4 |
| 11 | 0 | 1 | 0 | 0 | 1 |
| Total | 34 | 150 | 27 | 1 | 212 |

Table 25. Chi-Square Tests of Number of Houses Have Been Purchased and Current Housing Price (Beijing)

| Chi-Square Tests | Value | df | Asymp. Sig. (2-sided) |
|------------------|-------|----|-----------------------|
| Pearson Chi-Square | 74.084<sup>a</sup> | 30 | 0 |
| Likelihood Ratio | 57.484 | 30 | 0.002 |
| Linear-by-Linear Association | 10.501 | 1 | 0.001 |
| N of Valid Cases | 212 |

<sup>a</sup> 32 cells (72.7%) have expected count less than 5. The minimum expected count is .00.

Table 24 and Table 25 show the relationship between the Cross table of the Number of houses have been purchased and Current housing price based on the method of cross analysis. The value of significant is lower than 5%. The result shows that the first or the second house which bought in Beijing has the biggest increase in price.
4.3 Correlations Analysis

**Table 26. Correlations (Beijing)**

|                      | Gender Age | The only child | Academic qualifications | Annual income (RMB) | Number of working years | Number of marital status | Number of family member | Number of children member | Income of all family member | Number of houses purchased | Total house area | Housing price (RMB) | Current Housing purchase price (RMB) |
|----------------------|------------|----------------|-------------------------|---------------------|-------------------------|-------------------------|-------------------------|--------------------------|-----------------------------|-----------------------------|----------------|----------------|---------------------|
| Pearson Correlation  | 1          | -0.087         | -0.057                 | -0.128              | -0.197                  | -0.074                  | -0.121                  | -0.118                   | -0.141                      | -0.081                      | 0.008           | -0.1            | -0.133               |
| Sig. (2-tailed)      |             |                |                         |                     |                         |                         |                         |                          |                             |                             |                 |               |                     |
| Pearson Correlation  | -0.057     | 0.382          | 1                       | -0.128              | -0.138                  | 0.011                   | -0.005                  | 0.283                    | 0.078                       | 0.085                       | 0.237           | 0.905           | 0.146               |
| Sig. (2-tailed)      |             |                |                         |                     |                         |                         |                         |                          |                             |                             |                 |               |                     |
| Pearson Correlation  | -0.128     | -0.227         | -0.128                  | 0.187               | -0.315                  | -0.315                  | -0.002                  | -0.121                   | -0.146                      | -0.906                      | 0.107           | -0.096          | -0.322               |
| Sig. (2-tailed)      |             |                |                         |                     |                         |                         |                         |                          |                             |                             |                 |               |                     |
| Pearson Correlation  | -0.106     | -0.136         | -0.183                  | 0.028               | 0.376                   | -0.199                  | 0.169                   | 0.791                    | 0.013                       | 0.311                       | 0.418           | 0.289           | 0.02                |
| Sig. (2-tailed)      |             |                |                         |                     |                         |                         |                         |                          |                             |                             |                 |               |                     |
| Pearson Correlation  | -0.107     | 0.011          | -0.156                  | 0.183               | 1                       | 0.028                   | 0.376                   | -0.199                   | 0.169                       | 0.791                       | 0.013           | 0.311           | 0.418               |
| Sig. (2-tailed)      |             |                |                         |                     |                         |                         |                         |                          |                             |                             |                 |               |                     |
| Pearson Correlation  | -0.074     | 0.495          | -0.326                  | -0.315              | 0.026                   | 1                       | 0.515                   | 0.12               | 0.496                       | 0.085                       | 0.212           | 0.122          | -0.074              |
| Sig. (2-tailed)      |             |                |                         |                     |                         |                         |                         |                          |                             |                             |                 |               |                     |
| Pearson Correlation  | 0.283      | 0.064          | 0                       | 0.076               | 0                       | 0.216                   | 0.002                  | 0.075                    | 0.286                       | 0.004                       | 0.014           | 0.06           | -0.074              |
| Sig. (2-tailed)      |             |                |                         |                     |                         |                         |                         |                          |                             |                             |                 |               |                     |
| Pearson Correlation  | -0.121     | 0.505          | -0.184                  | -0.173              | -0.178                  | -0.515                  | 1                       | 0.366                   | 0.676                       | 0.229                       | 0.290           | 0.154          | 0.06                |
| Sig. (2-tailed)      |             |                |                         |                     |                         |                         |                         |                          |                             |                             |                 |               |                     |

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| Correlation | Sig. | 0.078 | 0.007 | 0.012 | 0.009 | 0 | 0 | 0 | 0.001 | 0 | 0.051 | 0.385 | 0 | 0.19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (2-tailed) | N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| Pearson | Number of family | Sig. | 0.085 | 0.075 | 0.826 | 0.256 | 0.014 | 0.076 | 0 | 0 | 0 | 0 | 0.83 | 0.024 | 0.07 |
| (2-tailed) | N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| Pearson | Correlation | | -0.118 | -0.125 | -0.015 | -0.082 | 0.122 | 0.396 | 1 | 0.485 | 0.282 | 0.299 | 0.269 | 0.015 | -0.125 |
| | Number of family member | Sig. | 0.041 | 0 | 0.001 | 0.01 | 0.044 | 0 | 0 | 0 | 0.027 | 0 | 0.01 | 0.573 | 0 | 0.123 |
| (2-tailed) | N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| Pearson | Correlation | | -0.081 | 0.079 | -0.121 | 0.172 | 0.795 | 0.085 | 0.229 | 0.252 | 0.452 | 0.152 | 1 | 0.247 | 0.375 | -0.455 | -0.046 |
| | Number of children | Sig. | 0.237 | 0.25 | 0.079 | 0.012 | 0 | 0.216 | 0.001 | 0 | 0.023 | 0 | 0 | 0 | 0 | 0.502 |
| (2-tailed) | N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| Pearson | Correlation | | 0.008 | 0.214 | -0.146 | -0.021 | 0.13 | 0.217 | 0.299 | 0.122 | 0.134 | 0.209 | 0.375 | 0.496 | 1 | 0.128 | 0.223 | -0.099 |
| | Number of house | Sig. | 0.005 | 0.002 | 0.031 | 0.765 | 0.059 | 0.002 | 0 | 0 | 0 | 0 | 0 | 0 | 0.063 | 0.001 | 0.149 |
| (2-tailed) | N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| Pearson | Correlation | | -0.1 | 0.107 | -0.1 | 0.013 | 0.311 | 0.122 | 0.134 | 0.209 | 0.375 | 0.176 | 0.375 | 0.496 | 1 | 0.236 | 0.144 | -0.009 |
| | Total area of house | Sig. | 0.146 | 0.119 | 0.146 | 0.849 | 0 | 0.075 | 0.051 | 0 | 0.01 | 0 | 0 | 0 | 0.003 | 0.037 | 0.191 |
| (2-tailed) | N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| Pearson | Correlation | | -0.133 | -0.096 | -0.127 | -0.230 | 0.418 | -0.024 | 0.06 | 0.015 | 0.039 | 0.435 | 0.128 | 0.286 | 1 | 0.521 | 0.131 |
| | Housing price when purchased | Sig. | 0.055 | 0.164 | 0.084 | 0.001 | 0 | 0.236 | 0.385 | 0.83 | 0.573 | 0 | 0.085 | 0.001 | 0 | 0.057 |
| (2-tailed) | N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| Pearson | Correlation | | -0.094 | 0.325 | 0.034 | 0.072 | 0.289 | 0.325 | 0.274 | 0.155 | 0.299 | 0.485 | 0.225 | 0.144 | 0.521 | 1 | 0.125 |
| | Current housing price | Sig. | 0.174 | 0 | 0.627 | 0.295 | 0 | 0 | 0 | 0.024 | 0 | 0 | 0.001 | 0.057 | 0 | 0.075 |
| (2-tailed) | N | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
Based on the result of the correlations, the result between the age and the number of working years is 0.895, because the older people would work for longer time. The result between the age and the marital status is 0.503, because the older the divorce ratio would higher. The result between the number of working years and the marital status is 0.515, because the older people would have higher divorce ratio. The result between the marital status and the number of children is 0.676, because people who have experienced marriage would have more children. The result between the housing price when purchased (RMB/m²) and the current housing price (Second-hand house price) (RMB/m²) is 0.676, the price of house which bought before almost increase now. Based on the result of the correlations analysis, it shows that the price of house which bought before almost increase now.

5. Conclusion

People who live in Beijing became to buy houses when they just work for few years, they and their all family members’ annual income were not very high.

Everyone has a strong sense of buying house in Beijing. They try to buy houses as soon as possible after them and their family have a little income.

The first or the second house which bought in Beijing had the biggest increase in price during these 10 years.

The price of house which bought after 2006 almost increased until 2016.

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