Analysis of Materialist vs Post-materialist Values in Urban China : An Application of Inglehart's Theory*

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Abstract

Using data from four Chinese cities, namely, Beijing, Shanghai, Shijiazhuang, and Chengde; this research examines Inglehart's scarcity and socialization hypotheses regarding the adoption of materialist and post-materialist values. Consistent with previous studies related to Western countries, the well-educated people in China, espouse more materialist values than their counterparts. However, in contrast with other studies, persons with higher income levels and younger age groups tend to manifest materialist values. Implications of the study's findings for consumer and family economists are discussed.

Introduction

Materialists elevate the improvement of material resources to the zenith of human goals, seeking pleasure in the enhancement of material conditions. Conversely, post-materialists consider gratification of physical desires to be secondary to values of protecting freedoms, participating in civil governmental decisions, and improving aesthetic and intellectual aspects of life.

The past two decades have witnessed changes in major economic policies and reform aimed at transforming the central command economy to a market economy in China. The implications of such transformation are likely to be ample, including the need for steady economic growth, finding appropriate balance between governmental and private sectors, and perhaps, redefining gender roles of men and women.

Inglehart's works (1971, 1977, 1990) on post-materialist values is the most recognized and best-developed theory of new politics. Using Maslow's hierarchy of needs, he argued that once material needs are satisfied, individuals value post-materialist concerns. Such a shift in values should be of interest to consumer and family economists. As one might expect, this shift in values foreshadows changes in factors motivating consumer purchases (Mallus, 1980). On a broader scale, however, this shift in values may also signal changes in the components of an individual's life quality, a major area of concern to professional family economists. The purpose of this paper is to examine Inglehart's scarcity and socialization hypotheses regarding the adoption of materialist and post-materialist values in China.

Background

What factors influence value orientation? The theoretical basis for providing answers to this question can be related to the scarcity hypothesis and the socialization hypothesis (Inglehart, 1981). The former posits that one places the greatest subjective value on things that are relatively scarce. A complementary concept is Maslow's hierarchy of needs (Maslow, 1970). Once survival and safety needs are attained, one can pursue relationships with others and, finally, be self-actualized. Thus, scarcity is viewed relative to what one has already achieved. The needs that are yet to be met are valued most.

Focusing on the scarcity hypothesis, Inglehart (1981) suggested that persons with relatively low income would be more inclined to be materialists because, for them, securing physical survival and safety are preeminent needs. However, those with relatively high income already satisfied with material needs can turn attention to the nonmaterial aspects of life, and therefore tend to be post-materialists.

The socialization hypothesis, on the other hand, points out that the conditions prevailing during one's pre-adult years color one's perceptions regarding the access to resources and ability to satisfy material needs, influencing, in turn, one's value orientation. Thus, a post-materialist value orientation may be held not only by those who have currently met their material needs but also by those who grow up during a time of relative economic prosperity (Mallus, 1980). Several studies indicate that age has a significant effect on post-materialist value in many Western countries (De Graaf & De Graaf, 1988; Duch & Taylor, 1993; Rohrschneider, 1990). Age then serves as an important indicator of the historical context into which a person was born and has lived.

In addition to income and age, socialization involves educational level, gender, and place of residence. Education serves to shape and influence one's world view and value system. Previous studies show that education has a significant effect on the formation of the post-materialist values (De Graaf & De Graaf, 1988; Hellevik, 1993; Inglehart, 1977, pp.73 — 98; Knutsen, 1990; Rohrschneider, 1990).

Gender and place of residence may affect a person's access to resources via differences in opportunities offered or denied. Those who have found it relatively easy to satisfy the material needs may turn their attention to issues associated with post-materialist values. But those for whom discrimination, prejudice, or limited resource availability has denied access to the means of satisfying material needs may not be able to look beyond a materialistic value orientation.

Other factors that impact upon the adoption of post-materialist values that were examined by Inglehart (1997, pp.73 — 98) include current occupation,

church attendance, political participation, and union membership. In a recent study, Marks (1997) found that parental socialization, familial and societal formative security, higher education, and contemporary influences affect materialist and post-materialist values.

Methods

Data**

Data were obtained from four Chinese cities during the period, September to October 1994 (LI, 1997, 1999). Beijing data were collected using a quota sampling in random sampled area with the assistance of the resident management offices. The response rates were very high 99.8%: 529 received out of 530 samples. In Shanghai, data were collected using random sampling with the assistance of the city branches of the government statistical bureau. All 500 samples were collected. Shijiazhuang data were collected with the help of resident management offices, using quota sampling method. The response rates were 99.0%: 198 out of 200 samples. Chengde data were collected with the help of the city branches of the government statistical bureau, using a random sampling method. The response rates were 98.0%: 198 out of 200 samples. In Table 1, the profiles of the respondents are listed.

Table 1

The Profiles of the Respondents   (%)

	Beijing	Shanghai	Shijiazhuang	Chengde
Gender				
Male	34.9	43.8	50.2	54.5
Female	61.0	55.0	49.2	44.0
N.A.	4.2	1.2	0.5	1.5
Age				
Less than 20	2.6	2.0	6.0	7.0
21-29	12.9	17.4	42.2	31.5
30-39	22.9	36.4	19.1	28.5
40-49	21.3	31.6	18.1	21.5
50-59	19.9	5.2	9.1	7.5
60-	18.4	5.6	4.5	3.5
N.A.	2.1	1.8	1.0	0.5
Education				
Elementary school	6.8	1.8	4.0	11.5
Junior high school	24.8	26.4	14.1	16.5
High School	27.1	28.4	32.7	18.5
Technical school	14.2	15.8	14.6	25.5
College	22.4	25.0	33.2	22.5
N.A.	4.7	2.6	1.5	6.5
Income				
Less than 7,000	33.0	8.8	35.6	30.5
7,000-9,999	18.2	7.2	17.1	20.5
10,000-11,999	32.0	31.4	27.2	32.5
12,000 or more	13.4	51.0	16.6	14.5
N.A.	3.4	1.6	3.5	2.5

A brief description of the four cities is in order. Beijing is the capital of the People's Republic of China and one of the most famous historical and cultural cities in the world. According to the statistical data of 1994, Beijing has a population of 11,372,000 with an urban population of 10,572,000 and a working population of 6,278,000 (IMI Marketing Information Institute & International Advertising Institute, 1995). For the urban residents, the average per capita annual income was 3,294 yuan and annual expenditure was 2,330 yuan in 1994. Compared with other Chinese cities, Beijing has the largest proportion of university graduates and the lowest illiteracy rate. Furthermore, the levels of income and spending are the second highest in China after Shanghai (Institute

of China Research, 1991).

Shanghai, a world-famous metropolis and the largest city in China, is situated on the coast of the East China Sea and on the Changjian River, the third longest river in the world. In 1994, its total population is 12.947 million, with a working population of 7.564 million. For workers, the per capital annual income was 4,057 yuan and annual expenditure was 3,530 yuan. Shanghai has developed into an important base in China's industry, foreign trade, science and technology, as well as a center of culture and education in the country.

Sitting in the Lap of North China plain, Shijiazhuang is located in Hebei province. The city was called "the nation capital's suburb" in old times. With abundant agriculture, forestry, husbandry, and mining resources, Shijiazhuang has cultivated 0.595 million hectors of land, planting main produce including wheat, corn, and cotton. Apple, pear, peach, date and walnut are also bountifully produced. Whereas husbandry is advanced in the mountain and hill regions, rich mine resources are found in the west. Its total population is 8.36 million, of which 1.61 million reside in urban areas. In 1994, the per capita annual income for urban residents was 3,354 yuan and annual expenditure was 2,237 yuan.

Chengde is located in the northern part of Hebei province, 265 km. north of Beijing. It stands at the foot of Yanshan Mountain and on the West Bank of Wulie River, a tributary of the nearby Luanhe River. Mountains surround Chengde; to the east are the high Qingchui Peak and the rugged Jiguan Mountain. To the west looms the Guangren Ridge. To the north, Chengde nestles close to the extension of the towering Gold Mountains and to the south, rises the steep Sengguan Peak. It has a population of 397,000 inhabitants with

an urban population of 270,000. In 1994, the city's gross domestic product was 9.7 billion yuan, the eighth place among the ten cities in Hebei province.

Theoretical Model

The null hypothesis is that neither scarcity (as measured by income level) nor socialization (as measured by age, educational level, gender, and place of residence) has an impact on the probability that a person has a post-materialist value orientation. Value orientation, the dependent variable in this study, is a qualitative variable, measured as 0 if materialist, 1 if post-materialist. Therefore, logistic regression was employed.

The model can be presented as follows:

Prob (post-materialist) $= 1/(1 + e^{-z})$

Where Z is the linear combination:

$$Z = B_0 + B_1 \text{INCOME} + B_2 \text{AGE} + B_3 \text{EDUCATION} + B_4 \text{GENDER} + B_5 \text{RESIDENCE}$$

In this form, the dependent variable can be thought of as the probability of a person being a post-materialist. The probability of being a materialist is estimated as prob (materialist)= 1 — prob (post-materialist).

Taking the log of this probability yields:

Log {prob (post-materialist) / prob (materialist)} =

$$B_0 + B_1 \text{INCOME} + B_2 \text{AGE} + B_3 \text{EDUCATION} + B_4 \text{GENDER} + B_5 \text{RESEDINCE}$$

In this form, the dependent variable is called the log odds. Odds are defined as the ratio of the probability an event will occur (a person will be a post-

materialist) to the probability that it will not occur (a person will be a materialist). The B_i s are interpreted as measuring change in the log odds given a one unit change in the independent variable. Computational results for the log odds give both the sign and the level of statistical significance for each independent variable (Sharma, 1996, pp.317—341).

Since it is easier to think of odds instead of log odds, the antilog of the above equation could be taken, yielding:

Prob (post-materialist)/prob (materialist)=
$$e^{(B_0)} \times e^{(B_1 INCOME)} \times e^{(B_2 AGE)} \times e^{(B_3 EDUCATION)} \times e^{(B_4 GENDER)} \times e^{(B_5 RESIDENCE)}$$

In this form, e raised to the power B_i is the factor by which the odds change when the ith independent variable increases by one unit. For example, for a dichotomous independent variable, the factor indicates the number of times larger (or smaller) the odds are when the value of the independent variable is 1 versus 0, all else equal. When B_i is greater than zero, this factor is greater than one, indicating an increase in the odds of being a post-materialist. When B_i is less than zero, this factor is less than one, indicating a decrease in the odds of being a post-materialist. And, when B_i equals zero, this factor equals one, leaving the odds of being post-materialist unchanged. The direction of change in the odds is, of course, consistent with the sign of the coefficient of the log odds (Norusis, 1990, pp.44—69).

Dependent Variable

Participants in the survey were asked the question: What is the thing you want the most at the present time? They were instructed to mark one of the following choices: (1) To become a millionaire, (2) To establish a reputation as

an authority, (3) To spend time in recreational activities instead of making money or seeking the reputation, (4) To have a comfortable life without thinking of the future, (5) To live in a clean and tidy environment, and (6) To make contributions to the society. A materialist was one who selected the first answer: to become a millionaire. A post-materialist was one who selected any of the remaining answers. The dependent variable was coded 1 if materialist, 0 if post-materialist.

Independent Variables

The set of independent variables included income, age, education, gender, and place of residence. In the original survey, only categorical data were collected. For all independent variables other than gender, which was naturally dichotomous, dummy variables were constructed to permit comparison with an omitted category.

Total yearly family income was grouped into the following four categories: (1) Under 7,000 yuan, (2) 7,000 to 9,999 yuan, (3) 10,000 to 11,999 yuan, and (4) 12,000 yuan and more. The last category was the omitted category. Age was divided into four categories. The first age group was that of persons under 30 years of age. The second group was for person whose age ranged from 30 to 39. The third was for individuals whose age was between 40 and 49 years old. Those 50 or older were classified as the fourth group, and it was used as the omitted category.

Education was categorized as elementary school, junior high school, high school, technical school, and college. College was the omitted category. Gender was coded 1 if female, 0 if male. Place of residence was represented by four cities; Beijing, Shanghai, Shijiazhuang, and Chengde that was used as the

reference city. It should be noted that the first two are major large cities compared with the last two.

Findings and Discussion

Table 1 shows the percentage of materialists as well as post-materialists by the different independent variables used in the study. Since it is easier to comprehend changes in odds versus log odds, discussion will center on odds. Table 3 reports the factors by which odds of being materialist change when a given independent variable changes by one unit, all else equal. As explained in a previous section, these factors are the values of "e" raised to the power "B $_i$", and give the multiplicative change in odds that occurs when the value of a given independent variable changes by one unit, all else equal.

The odds of being a materialist are 0.53 times smaller for those with family income less than 6,999 yuan than for those with family income greater than 12,000 yuan. For individuals in the income category (7,000—9,999), the odds are 0.71 times smaller of being a materialist than those individuals in the highest income category. However, our results show that for those with incomes between 10,000—11,999 yuan, the odds of being a materialist are unchanged compared with those in the highest income category.

Table 2
Descriptive statistics of the sample

Variable	Value orientation	
	Post-materialist (n=931)	Materialist (n=496)
	Percent	
Income (yuan)		
Lsee than 7,000	30.6	20.6
7,000—9,999	26.6	23.2
10,000—11,999	19.9	21.0
12,000 or more	22.9	35.3
Age		
Less than 30	23.2	32.1
30—39	26.4	30.6
40—49	23.9	25.4
50 or older	26.4	11.9
Education		
Elementary school	5.5	5.6
Junior high school	23.5	23.8
High school	28.9	26.7
Technical school	15.0	20.9
College	27.2	23.0
Gender		
Male	43.1	42.5
Female	56.9	57.5
Place of residence		
Beijing	42.0	27.6
Shanghai	28.7	47.0
Shijiazhaung	15.9	10.3
Chengde	13.4	15.1

These results do not support Inglehart's scarcity hypothesis, which contends that individuals value things in short supply. According to the hypothesis, the odds of being a materialist for individuals in the lower income categories should be greater than individuals in the highest income group.

Our results, to the contrary, show that the odds of being a materialist for individuals in the lower income categories are smaller than their counterparts in the highest income category.

Table 3
Factors associated with the odds of being a materialist

Variable	Estimated odds
Income (yuan)	
Less than 7,000	.53***
7,000—9,999	.71*
10,000—11,999	.76
12,000 and more (omitted)	1.00
Age	
Under 30	3.29***
30—39	2.25***
40—49	1.88**
50 and over (omitted)	1.00
Education	
Elementary school	2.60**
Junior high school	1.57*
High school	1.18
Technical school	1.86***
College (omitted)	1.00
Gender	
Female	.99
Male (omitted)	1.00
Place of residence	
Beijing	.75
Shanghai	1.41
Shijiazhuang	.61*
Chengde (omitted)	1.00

*p< .05
**p< .01
***p< .001

The results in Table 3 show that younger people have greater odds of being materialists compared with older people. Compared with the oldest age group (older than 50 years of age), the younger age categories had odds of being materialists 3.29, 2.25, and 1.88 times greater, respectively.

These results are not consistent with previous studies. Inglehart (1990, p.90) concludes that in several European nations, post-materialist values are

more prevalent among the young. Also, other studies show that age has a significant negative effect on post-materialist values in many Western countries (De Graaf & De Graaf, 1988; Duch & Taylor, 1993; Rohrschneider, 1990).

For those with elementary school, junior high school, high school, and technical school education; the odds of being a materialist are 2.60, 1.57 and 1.86 greater than for those with college education. These results are consistent with the literature (De Graaf & De Graaf, 1988; Hellevik, 1993; Inglehart, 1977, pp.73―98; Knutsen, 1990; Rohrschneider, 1990).

Being male compared with being female was associated with no change in the odds of being a materialist. Compared with being a resident of Chengde, residents of Shijiazhuang, had smaller odds of 0.61, of being a materialist. However, the odds of being a materialist for Beijing and Shanghai residents are unchanged compared with those of Chengde.

Conclusions and Implications

The null hypothesis that neither scarcity (as measured by income level) nor socialization (as measured by age, educational level, gender, and place of residence) has an impact on the probability that a person has a materialist value orientation can be rejected. Consistent with previous studies related to Western countries, the well-educated people in China espouse post-materialist values compared with their counterparts. However, in contrast with other studies, persons with higher income levels and the younger age groups tend to manifest materialist values.

The focus and objectives of a materialist differ from those of a post-materialist. The materialist tends to be concerned with providing material goods for self and family. Purchasing behavior of this group tends to center on basic needs and functional items (Mallus, 1980), suggesting that the well being of materialists could benefit from consumer and family economics programs centered around effective resource use and development. Focus on the material aspects of life may contribute to diminished overall quality of life. Given a hierarchical structure of needs, helping this group satisfy material needs is also helping them to develop a fuller individual and family life.

Rather than material gain, the post-materialist values freedom of personal expression, involvement in improving the nonmaterial aspects of life quality for self and others. Members of this group are ready students for programs in public policy involvement that prepares them to be effective agents of change. Clearly, the components of life quality of the post-materialist are broader than that of a materialist. Purchasing behavior of this group tends to eschew fad, convention, and conspicuous consumption, while embracing esthetics, personal satisfaction, and ecological awareness (Mallus, 1980). Consumer and family economics educators may benefit by drawing on the energy, enthusiasm, and idealism of this group.

There is evidence in this study that a major portion of the Chinese population in the four cities studied can be classified as post-materialists. To the extent that these and others continue to seek satisfaction of needs beyond the material, the future will be increasingly shaped by those whose needs include the welfare of others as well as their own.

References

De Graaf, N. D. & De Graaf, P. M. (1988). Family background, postmaterialism and lifestyle. *Netherlands' Journal of Sociology*, 24, 50—64.

Duch, R. M. & Taylor, M. A. (1993). Postmaterialism and the economic condition. *American Journal of Political Science*, 37, 747—779.

Hellevik, O. (1993). Postmaterialism as a dimension of value change. *International Journal of Public Opinion Research*, 5, 211—233.

IMI Market Information Institute, & International Advertising Institute (1995). *IMI consumer behavior and life patterns yearbook*. China Press of Finance and Economics: Beijing.

Inglehart, R. (1971). The silent revolution in Europe: Intergenerational change in postindustrial societies. *American Political Science Review*, 65, 991—1017.

Inglehart, R. (1977). *The Silent revolution*. Princeton University Press, Princeton.

Inglehart, R. (1980). Postmaterialism in an environment of insecurity. *American Political Science Review*, 75, 880—900.

Inglehart, R. (1990). *Culture shift in advanced industrial society*. Princeton University Press, Princeton.

Institute of China Research. (1991). *China Yearbook*. Daishukan shoten: Tokyo.

Knutsen, O. (1990). Materialist and postmaterialist values and social structure in Nordic countries: A comparative study. *Comparative Politics*, 22, 85—104

LI, HaiFeng. (1997) Changes in Consumer Behavior in Modern Chinese Cities. *Proceedings of the 2nd Asian Consumer and Family Economics Association Conference*, In M.Abdel-Ghany (ed.) (U.S.A).

LI, HaiFeng. (1999) Research on Consumer Behavior and the Formation of Mass Consumption the Society in China. Hokkaido University. Japan.

Mallus, M. (1980). The shape of future consumer values. In *Proceedings of the 26th Annual Conference of the American Council on Consumer Interests*, pp. 5—11. American Council on Consumer Interests, University of Missouri, Columbia, Missouri.

Marks, G. N. (1997). The formation of materialist and postmaterialist values. *Social Science Research*, 26, 52—68.

Maslow, A. H. (1970). *Motivation and personality*, 2nd.Ed., Harper & Row, New York.

Norusis, M. J. (1990). *Logistic regression analysis: Procedure logistic regression*. In *SPSS advanced statistical user's guide*, pp.44—69.

Rohrschneider, R. (1990). The roots of public opinion toward new social movements: An empirical test of competing explanations. *American Journal of Political Science*, 34, 1—30.

Sharma, S. (1996). *Applied multivariate techniques.* John Wiley & Sons, Inc., New York.