

# ***THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT***

## **Network Consumer Behavior Research of New-Generation Migrant Workers Based on the Data of Shanghai**

**Shen Lei**

Professor, Glorious Sun School of Business and Management, Donghua University, Shanghai, China

**XU Gui-Ping**

Ph. D. Candidate, Glorious Sun School of Business and Management, Donghua University, Shanghai, China

### ***Abstract:***

*Based on the AIO Scale survey of New-generation Migrant Workers in Shanghai, found that New-generation Migrant Workers can be subdivided into five types, network consumer behavior factors can be divided into four types; Eight significant correlation exist between lifestyle factors and network consumer behavior factors, and proved that the influence of lifestyle to their Internet consumption behavior. Comparing with the discovery of other scholars, found the more positive lifestyle the healthier network consumption. With the common classification results, lifestyle and Internet consumption behavior between New-generation Migrant Workers and E- generation, the effectiveness of AIO scale as people groups divided tools is further verified.*

***Keywords:*** *New-generation migrant workers, lifestyle, network consumption, AIO scale*

### **1. Introduction**

Research report on 2010 China Federation of trade unions shows: the total amount of China migrant workers was 230 million, the number of outside migrant workers was 150 million, in which about 100 million were the new-generation migrant workers, accounting for about 66.7 percent, and the numbers were increasing year by year. The central government clearly stated that "measures should be adopted to solve the problem of the new-generation migrant workers" in the file. The new-generation migrant workers as the highlights of the century power, the problems caused by them were getting high attention. Then scholars in different fields conducted a comprehensive study of the new-generation migrant workers, in which Zhou DH and Lu SHN(2010) study showed that: the network penetration rate of new-generation migrant workers in Shanghai was 75.4%, significantly higher than the average level of Shanghai citizens and national public; their first time online were in 1995, the average net age were 6 years; their average time of surfing were 3.4 days per week, the average daily online time was about 2 hours; Among them, the average monthly online cost more than 50 yuan RMB accounted for 37% (including 14.2% spent more than 100 yuan); they used network mainly for communication and entertainment, mainly network services were QQ and Baidu(www.baidu.com). Especially QQ was the core of their network living life, mainly for meeting new friends and maintaining with old friends in a strange city, but also the entry of information and entertainment. Baidu was used to search for all kinds of information, solve work and life problems. In short, the new-generation migrant workers used QQ and Baidu as the representative of the network services to meet their needs

According to the report of China Internet Network Information Center (CNNIC), Chinese teenage netizens accounted for 45.1 percent of total netizens, their online time reached 16.5 hours a week. Teenage netizens were active in the network entertainment, communication and online shopping, while the mobile phone had become the most important device, teenagers' usage of internet was high, impacted on their entertainment, communication, shopping and other lifestyle. The new-generation migrant workers as Chinese youth groups born and grow up under historical background of the reform and opening up and fast social transformation, showed significant differences with their parents. The new-generation migrant workers grew with internet technology together, 95% had a mobile phone, the number of regular surfing internet accounted for more than 70%, proportion of the cost of mobile phones and network communications in total consumption was high, the internet had become an important way for the new-generation migrant workers to get knowledge and all kinds of information, and also had a profound impact on their learning, life and even their concept of consumption.

Network changed people's lifestyle. Is there a certain correlation between the network consumer behavior and everyday lifestyle? Can new-generation migrant workers groups' lifestyle in the AIO dimensions be distinguished? How different lifestyle types groups had their different kinds of network consumer behavior? In this paper, Based on research on the new-generation migrant workers' lifestyle in Shanghai according to AIO, a thorough interpretation of their consumer behavior online, to explore the differences between different groups of the consumer behavior online and the relevance between lifestyle, and compared with the existing authority conclusions, to prove the correctness and validity of the divided groups with AIO tool, provide a new perspective for the subdivision of the new generation of migrant workers groups.

## 2. Research Design

The data in this study mainly contains three parts: demographic characteristics, lifestyle AIO scale and network life items. We chose AIO scale to measure lifestyle, which is one of the instruments of the most popular and the most widely used by current western scholars. A (Activities) represents the concept of how individuals use available time, refers to work, entertainment, sports, and interest activities; I (Interests) refers to the interest and excitement level be inspired through the continuously participate, specifically for housework, occupation, family, fashion and food choice. O (Opinions) refers to the importance for the correct things in people eyes, which are social events, political activities, education, business and the view about future development. AIO scale contains total 27 items, set to level 5 Likert scale form. The network life behavior preference part also adopted level 5 Likert scale, contains total 19 items, and increased network experience, internet media and the average online time items.

This research according to the principle of randomly, used stratified sampling organization form, according to vocation and sex ratio of the new-generation migrant workers in Shanghai, taking face to face interview type investigation. Through 2011 Shanghai City Statistical Yearbook, the proportion of male and female of the new generation migrant workers in Shanghai to obtain 1.17:1, the manufacturing industry and the service industry in proportion to 1.43:1. According to the sampling method, determine the number of effective samples more than 415 copies, 245 copies about manufacturing industry, 170 about service industry, 224 about male and 191 about female. In the actual process of investigation, investigation team visited 7 districts of Shanghai, visited the manufacturing industries and service industries in total 15 enterprises, the actual 455 questionnaires, 445 questionnaires were returned, 427 valid questionnaires were obtained. The recovery rate of the questionnaire was 97.8%, efficiency of 95.96%, 214 of manufacturing industry, 213 of service industry, the ratio of 1:1, the ratio of male to female was 0.89:1. The questionnaires were issued, filled and recycled on the spot, so recycling rate and the effective rate of the questionnaires are relatively high. And with the strong similarity of manufacturing industry in each Shanghai district, and the wide variety of service industry, so in the final questionnaire we appropriate aggravated the proportion of service industry.

## 3. Research Results

### 3.1. Analysis of the Questionnaire

The reliability of the questionnaire is used to reflect the measuring the stability and reliability. This study used the internal consistency reliability to test the questionnaire reliability and stability, measured the scale reliability by calculating the Cronbach' alpha coefficient. Using SPSS software test lifestyle AIO scale and network consumption behavior of the questionnaire respectively, obtains the Cronbach alpha coefficient is 0.707 and 0.963. According to the criteria of reliability: lifestyle AIO scale's reliability was good, and the reliability of network consumer behavior scale was very ideal. This due to lifestyle scale for the new-generation migrant workers group was the first developed, and the network of consumer behavior scale was reference to a mature scale. From the above data measuring, we can see the tools of the questionnaire had good consistency and stability.

KMO value was used to measure the validity of questionnaire. SPSS software calculation results show that: the KMO value of lifestyle AIO scale is 0.717, the chi square test of spherical Bartlett value is 1815.698, 351 degrees of freedom, reached significant level in 0.000 (<0. 05), indicating no much difference in the degree of correlation between the variables; In the network consumer behaviour scale, this paper aims to study online consumption life of the new-generation migrant workers , 15 consumer behavior items selected as the analysis of the statement, obtained the KMO value is 0.946, the chi square test of spherical Bartlett value is 4381.931 and 105 degrees of freedom, achieve the level of significance in 0.000 (<0. 05), indicating no much difference in the degree of correlation between the variables. According to the criteria of KMO indicator values, lifestyle AIO scale's KMO value is greater than 0.70, suitable for factor analysis; network consumption behavior scale KMO value is greater than 0.90, is very suitable for factor analysis.

### 3.2. Lifestyle Factor Analysis and Cluster Analysis

To the lifestyle of the new-generation migrant workers, the study first use the principal component analysis method of varimax on 27 descriptive statements, it is found that there is a statement's factor loadings less than 0.35, needs to be deleted. After delete the statement, analysis the reliability and validity, Cronbach 'alpha coefficient is 0.702, the KMO value is 0.707, the chi square test of spherical Bartlett value is 1723.166, 325 degrees of freedom, reach significant level in 0.000(<0.05), and this shows that the factor analysis of the 26 remain statement variables is still suitable.

Use Vferirtax orthogonal rotation, carry out the factor analysis on 26 lifestyle items, according to the principle of feature values greater than 1, obtained 8 factors that feature values greater than 1, load of each factor is greater than 0.40, and the cumulative variance contribution rate of 8 factors is 53.716%. In the field of social science, after extraction, if the joint explained variation of retained factors can reach more than 60%, it is quite good, if all the variables can account for above 50%, also can be accepted, and the new-generation migrant workers' lifestyle scale was developed for the first time, that keeps 8 factors is very suitable. So the research select 8 factors as the basis for further clustering analysis, variance explained of the total variance shown in Table 1, statistics of statement and load of each factor shown in table 2.

factor	Rotating square and load		
	total	variance %	cumulative %
factor1	1.946	7.483	7.483
factor2	1.913	7.356	14.839
factor3	1.840	7.078	21.918
factor4	1.769	6.804	28.722
factor5	1.720	6.615	35.337
factor6	1.681	6.464	41.801
factor7	1.632	6.279	48.080
factor8	1.465	5.636	53.716

Table 1: Total variance explained variance

Factor Name	Variable Description	Variable Load	Factor Name	Variable Description	Variable Load
extrovert and social factor	care outside	0.690	pragmatic and tradition factor	Respect older	0.708
	health	0.685		Believe fate	0.639
	Enjoy life	0.485		practical	0.619
	communication	0.476	family responsibility factor	responsibility	0.764
	Make friends	0.434		family	0.705
struggle and share factor	motivated	0.680	internet information factor	traditional	0.686
	unscrupulous	-0.629		expression	0.779
	lack of pursue	-0.490		fashion	0.679
	share	0.465		money	0.438
conscientiously and progress factor	price	0.663	fashion factor	Enjoy life	0.778
	knowledge	0.578	boring factor	Fashion	0.656
	wide interest	0.528		money	0.733
	work hard	0.430		Dull life	0.683

Table 2: factor analysis and load value statistics

According to tested statement of each factor, the 8 factors were named. Factor 1 is extrovert and social factor, the performance are caring outside, making friends, touching closely with social, nice family relationships, and having their own hobbies; Factor 2 is struggle and share factor, the performance are having a hard-working spirit, work hard, self-motivated and willingness to share in the pursue of goals; Factor 3 is conscientiously and progress factor, the performance are progress, believe that knowledge can change destiny, pay attention to the goods price and quality of entertainment life; Factor 4 is pragmatic and tradition factor, the performance are focus on life experience and the actual results, respect elders and authority, not rigidly in reality secular and slightly lack self-confidence; factor 5 is family and responsibility factor, the performance are undertaking the social and family responsibilities, focus on the family, love the hometown culture tradition, often recall the beautiful memories; Factor 6 is internet information factor, performance are expressing themselves online, love new technologies and new applications of network, but also pursue money; factor 7 is fashion factor, performance are pursue quality of life, willing to try a fashionable things, a positive attitude towards life; factor 8 is boring factor, performance are dissatisfied of life situation, feel boring, too care about money, neglect pursue the spirit and the entertainment.

Based on factor analysis, 8 factor dimensions as clustering variables, using the K-Means analysis method of clustering, cluster analysis different consumer life styles. After several times of clustering analysis, the final choice is 5 categories in clustering, it has ideal effect. This study divided the new-generation migrant workers in Shanghai samples into 5 groups, use One- Way ANOVA analysis after determining the number of groups, found that the P value of the 8 factors is less than 0.05, it shows that there exists a significant difference between the 5 groups. The distance of 5 groups' factors and their names is shown in table 3.

Factor	Distance of factor				
	Pursue Success	Happy life	Self contradiction	Active struggle	Never change
extrovert and social factor	-0.25047	-0.29984	-0.50718	0.66913	-0.05006
pragmatic and tradition factor	0.35497	0.70292	-0.95906	-0.35995	-0.14736
Family responsibility factor	0.17377	0.34915	0.40219	0.1371	-1.21251
struggle and share factor	0.39494	0.10248	0.11048	-0.09247	-0.65022
Internet information factor	-0.7527	0.34611	1.27928	-0.05526	-0.05115
Fashion factor	-0.69594	0.52461	-0.74469	0.72361	-0.32547
conscientiously and progress factor	0.31875	-0.62604	0.31085	0.40512	-0.61981
Boring factor	0.33408	-0.62367	-0.02683	0.09237	0.12306

Table 3: the clustering center table

3.3. Analysis of Network Consumption Behavior Factor

Network lifestyle of the new-generation migrant workers, analyze 15 sentences reflected the current network consumption life. Use Vferirtax orthogonal rotation, according to the principle of feature values greater than 1, obtained 4 feature values greater than 1, absolute value of each factor load is greater than 0.40, and the cumulative variance contribution rate of 8 factor is 54.39%. According to the corresponding relationship between the item and scale factor to name, factor analysis results are shown in table 4. The results are in agreement with the results of original idea, network consumption behavior types are divided into four dimensions, each dimension measured by the corresponding scale project, the validity of measurement meet the research requirement.

Factor	Project	Factor load	Feature value	Variables explanatory (%)	Variables cumulative (%)
Network transaction	Online mall	0.478	3.770	17.140	17.140
	Network bank	0.807			
	Game business	0.687			
	Pay to download	0.643			
Information acquisition	Micro-blog browse	0.426	1.761	13.718	30.858
	Search engine	0.436			
	Browse news	0.645			
	Occupation site design space	0.692 0.652			
Communication	QQ chat	0.807	1.462	12.356	43.215
	Space message	0.816			
	E-mail	0.421			
Entertainment and leisure	game	0.666	1.166	11.175	54.390
	Browse video	0.725			
	Entertainment online	0.588			

Table 4: factor load analysis table

3.4. Correlation Analysis of the Network Consumer Behavior and Lifestyle of New-Generation Migrant Workers

For the correlation between online consumer behavior and lifestyle of new-generation migrant workers, this research firstly use Person correlation coefficient to preliminarily analyze the relations between each factor, found that among 32 correlations between the network consumer behavior and lifestyle of new-generation migrant workers, 13 pairs showed a significant correlation. The factor correlation coefficient between online consumer behavior and lifestyle shown in table 5.

	Extrovert and social	Pragmatic & tradition	Family responsibility	Struggle and share	Internet information	Fashion	conscientiously and progress	boring
Communication	0.192**	0.164	0.101	0.218**	0.305	0.255	0.202**	0.11
Entertainment and leisure	0.249**	0.196**	-0.089	0.210	0.178	0.248**	0.34	0.136*
Information acquisition	0.348	0.189	0.125**	0.223**	0.337**	0.222	0.240**	0.145
Network transaction	0.276*	0.069	-0.028	0.238	0.254**	0.280**	0.153	0.103

Table 5: the coefficient of correlation factor table

Note: \* represents double tailed test reached significant at 0.05 level; \*\* double tail test reached significant at 0.01 level.

On basis of network consumption behavior, regression analysis on each factor of new-generation migrant workers' lifestyle can be measured significant standard regression analysis results at 0.05 level, the detailed data shown in table 6.

	Communication	Entertainment and leisure	Information acquisition	Network transaction	R <sup>2</sup>	F value	Sig value
extrovert and social	0.187 (0.001***)	0.169 (0.01**)			0.143	28.688	0.00**
pragmatic and tradition							
Family responsibility							
struggle and share	0.15 (0.007**)				0.101	10.341	0.00**

Internet information			0.193 (0.001*)		0.207	18.317	0.00**
Fashion		0.159 (0.005**)		0.152 (0.009**)	0.139	14.315	0.00**
Conscientiously and progress			0.195 (0.001*)		0.179	10.457	0.01**
boring		0.16 (0.004**)			0.18	7.179	0.008*

Table 6: the results of the regression analysis on lifestyle

It is seen from table 6, lifestyle factors in addition to the pragmatic tradition and family responsibilities have no significant correlation, the remaining six lifestyle factors influence the network consumption behavior of new-generation migrant workers, and there are significant relationships between 8 factors, the result is consistent with the above correlation analysis.

## 4. Results and Discussion

### 4.1. Network Consumer Behavior Characteristics of New-Generation Migrant Workers

From the above analysis that new-generation migrant workers can be subdivided into five groups, their lifestyle and network consumption characteristics of various groups as follows:

The first category is "pursuit of success", this kind of new-generation migrant workers' ratio was 24.8% in the whole. They have the diligent spirit, ideals, pursuit, willing to share and good interpersonal relationship; they believe the success requires hard work, struggle, but they will stick to principles in the pursuit of success, not cross the line for the goal, so their ideas are relatively conservative, not excessively pursued for fashionable things; Entertainment and communicative activities are relatively less, life state is monotonous. On the whole, they pursue success, conservative self-control, diligence. The group use less network, aim to obtain information from net, 75.4% of them often browse news to control the social dynamic, 76.2% of them use search engines to solve doubts, 63.2% of them browsing the occupation or employment website to know the industry changes, network help them to realize their goal.

The second category is "happy life", their ratio was 20.1% in the whole. They are pragmatic, care results, respect knowledge and experience, have certain enterprising spirit, but they believe in fate, has a certain "fatalism" point of view, lack of courage and guts to take action to change their living situation and realize their dreams. But they are easy to accept new things, pursue fashion things, and they enjoy themselves, always have fun with their life. Overall, their work and life state are calm. The group use much network, network consumption aims to entertainment and make friends, 76% of them regular chat online and use space message, 60% of them often use mailbox, 82% of them often download and play video, 75% of them often visit e-book website, 53.7% of them often play network game, network are the media for them to enjoy life .

The third category is "self contradictory", their ratio is 11%. They are traditional and conservative, although they live in the modern cities, but they still follow the hometown customs. They reject fashionable things, lack of interest hobby or amateur activities; indifferent to external changes, not sociable or willing to make new friends, so their life is closed; and they have strong pursuit in chasing money. They do not believe in fate, ignore the role of knowledge and experience, do not pay effort to achieve success. On the whole, the group has less life pursuit, only have worship of money, but lack of action, so their target is too far away, in the contradiction of the huge contrast between the ideal and the reality. The group use much network in the weekend, network consumption is the purpose of entertainment and trading, online shopping is the preferred activities, 76.1% of them often surf online mall, 54.6% of them use the bank on the net, 75.8% of them often download and play audio or video, the 50% of them often play network game, network are platform for them to kill time.

The fourth category is "positive and struggle", their ratio is 27.9%. They have positive attitude toward life, widespread interest hobby, always concerned about the world change, willing to accept new things, good at communication, actively participate in the activities of the organization and friends; also agree that knowledge can change the destiny, work seriously and responsibly. On the whole, they are active at work and life, amateur life is rich and colorful. The group use the network reasonably, network consumption purpose is entertainment, communication and achieve information, like taking opinion online, 78% of them often visit space, 85% of them regular network chat, 73% of them often browse news, 81% of them often download and play audio or video, 63% of them often play network game, network is tool for them to communicate with the outside world and the space to relax.

The fifth category is "never change" type, their ratio is 16.2%. They lack recognition of the value of knowledge, lack the spirit of hard-working and self-motivated; unwilling to pay efforts to achieve success, to achieve the target may use unscrupulous tactics; no longer pay attention to home tradition, also appears indifferent to family and kinship, communication range is small, life is relatively dry. Overall, they have less pursuit of quality of life, as long as the day to be able to accept, without the intention to pay effort to get a better life. This kind of group use the network most on working day, the only purpose of network consumption is entertainment, they indulge in fantasy worlds, 83% of them often play online games, 76% of them often visit the e-book website, 72% of them often download and play audio or video, network are ideal world for them to escape from the reality.

### 4.2. The Relationship Between Lifestyle and Network Consumer Behavior of New-Generation Migrant Workers

From the analysis of factor correlation between lifestyle and network consumer behavior, we can get social, struggle and share, network information, the fashion, earnest and boring 6 factors in lifestyle, be significant correlation between 8 pairs of network

consumer behavior: There is a significant correlation between extroversion social life and consumer behavior of communication online and entertainment online; There is a significant correlation between fashionable life and the consumer behavior of transaction and entertainment online; There is a significant correlation between online information lifestyle, earnest way of life and information acquisition; There is a significant correlation between struggle and share lifestyle and consumer behavior of communication online; There is a significant correlation between boring lifestyle and consumer behavior of entertainment online.

Hou Lin (2007) study the changes of people's life influenced by network consumption from six dimensions as work/study, leisure and entertainment, interpersonal communication, information search, the media preference and shopping preferences. It shows that people's lifestyle under the influence of network consumer behavior has undergone significant changes. Study of Hou Lin reflects the relationship between life style and network consumption behavior, the conclusion of this paper from the data also confirmed the existence of significantly related between lifestyle and consumer behavior online.

There are significant differences between different lifestyles of new-generation migrant workers' network consumer behavior, more positive and healthy lifestyle, the more positive and reasonable the network consumer behavior. Such as pursuit of success groups and happiness life groups, tend to have the ideal, love, struggle, positive attitude towards life, spend less and reasonable time on the Internet, network consumption behavior is also dominated by information, making friends and entertainment, the network can be used as an auxiliary tool for them to realize the ideal, and occasionally as a entertainment playground. Never change group, have no ideal pursuit, not hard, life attitude tends to be negative, online time focus on much entertainment, indulging in unreal world of online games and e-books, enjoy the virtual space from the reality.

Lu Hongtai (2005) in the "China consumer behavior report", consumers are born in 1978-1988 years, grown with the development of the Internet, and influenced by computer and internet factors of as the research object, divided Chinese E-generation consumers into 5 categories from the three aspects of value, network view and leisure activities: lonely hard type, happy stimulation type, muddle along type, network survival type and traditional rookie type. A large part of new-generation migrant workers in this study are in accordance with the characteristics of E-generation, divided new generation migrant workers into 5 groups from the perspective of lifestyle, study their consumer behavior online, the results is confirmed with lifestyle and the network behavior description of E-generation group by Lu Hongtai.

Compared new-generation migrant workers with the E-generation consumer group, we can find the pursuit of success type and lonely hard type is quite similar, use less network, but the former make networks as a tool to upgrade them; happy life type and survival type is quite similar, use much Internet, but the latter is more dependent on the network; muddle along type and self contradiction type is relatively close, rebellious and do not care about the outside world; survival type is very close to the struggle type in the outgoing personality and the pursue accomplishment, but there are certain differences in the use of the network; traditional rookie type is similar to never change type in the not pursue achievement or chase fun.

Despite the development of Internet technology and widespread application, increase rich variety of network products, network consumption behavior has gradually diversified, but from the separate characteristics of the E-generation and new-generation migrant workers groups, the life attitude and network consumption behavior of each groups divided by lifestyle are general quite consistent, which demonstrates a close relationship between lifestyle and network consumer behavior, groups of positive and healthy lifestyle, their network consumer behavior also tends to be positive and reasonable; on the other hand, it also explained the AIO scale as a division of new-generation migrant workers group is correct, on basis of it, to further study other consumer behavior of new-generation migrant workers have the scientific feasibility, this also laid a starting point to refine new-generation migrant workers.

## 5. References

1. All-China Federation of Trade Unions. (2010, June 21). About new-generation migrant workers report. Workers' daily
2. China Internet network information center (CNNIC).(2012). China youth Internet behavior survey in 2011. 8:7-11.
3. Hou Lin. (2007) .Empirical analysis of online consumption behavior impact on lifestyle. Zhejiang University.
4. Lu Hongtai.(2005) Chinese consumer behavior report. China social sciences press,(2):10-12.
5. Michiana R D, Mazze E M, Greco A J,(2003) Lifestyle Marketing: Reaching the new American Consumer. Greenwood Publishing Group. 3(2):53-54
6. The CPC central committee and the state council.(2009,December 31).About increase the intensity of urban and rural development as a whole to consolidate several opinions of the agriculture rural development foundation.
7. Wu Ming-lung. (2010). Questionnaire -- SPSS statistic analysis and practice operation and application (1rd ed.). Chongqing university press.
8. Zhou Baohua, Lv Shuning. (2011). The media use and evaluation empirical study of New-generation migrant workers in Shanghai. Journalism quarterly. 108(2), 145-150.